Center for the Protection of Intellectual Property

2015 Fall Conference

The IP Platform:

Supporting Invention & Inspiration

September 30 – October 1, 2015

#cpip2015

GEORGE MASON UNIVERSITY

Where Innovation Is Tradition

Panel 1 *Making Music: IP & The Creative Process*

- **Matthew Barblan**, *Director*, Center for the Protection of Intellectual Property, George Mason University School of Law
- **Marc Beeson**, *Staff Songwriter*, Downtown Music Publishing
- **Jackie Campbell**, *Director*, *Partnership Marketing*, *Big Machine Label Group*
- **Prof. Sean O'Connor**, University of Washington School of Law
- ***Moderator*: Prof. Chris Newman**, George Mason University School of Law

#cpip2015

Copyright as a Platform for Artistic & Creative Freedom in the Music Industry

Matthew Barblan

CPIP 2015 Fall Conference

The IP Platform: Supporting Invention & Inspiration

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GEORGE MASON UNIVERSITY

Where Innovation Is Tradition

Copyright & Artistic Freedom

- Copyright's economic freedom increases artistic and creative freedom
- Why *"commercial"* shouldn't be a dirty word

Copyright's Economic Freedom

- Marketable property right to the fruits of your creative labor
  - You own the music that you create
- Ownership = Options
  - Freedom to decide how you want to capture the economic value you create

Why Is Economic Freedom Good for Artistic & Creative Freedom?

- Music is not created in a vacuum
  - Musicians are real people
  - Doing it “for the money” vs. being realistic about what the money makes possible
- Copyright supports a *professional* class of musicians

Artistic & Creative Benefits of Copyright & *Professional Class* of Musicians

Time:

- Freedom to spend more of your time (i.e. your day job) creating your art
- Freedom to sustain and nurture works over a long period of time

Artistic & Creative Benefits of Copyright & *Professional Class* of Musicians

Resources:

- Freedom to find partners to help create large-scale, expensive works

Skills:

- Freedom to develop the underlying skills required for your art

There's Nothing Wrong with "Commercial"

An efficient commercial market:

- Allows musicians to successfully market their work to the best audience for them
- Allows for both mainstream and niche works that have enduring cultural and artistic value
- More likely to be relevant

Enforcement & Strong Property Rights

- You only get the benefits of copyright if it's actually enforced and not watered down
  - Widespread infringement = weaker property rights
  - Broad exceptions and/or compulsory licenses = weaker property rights

Limitations & “Freedom”

- “Freedom” does not mean the absence of all limitations
- Comparison should be to other real-world alternatives
- Despite restrictions, copyright is still the best platform for promoting artistic and creative freedom

Conclusion

Copyright promotes artistic and creative freedom through:

- Economic freedom
- Professional class of musicians
- Healthy commercial marketplace for music

Questions, Comments

Matthew Barblan

Director, Center for the Protection of Intellectual Property

George Mason University School of Law

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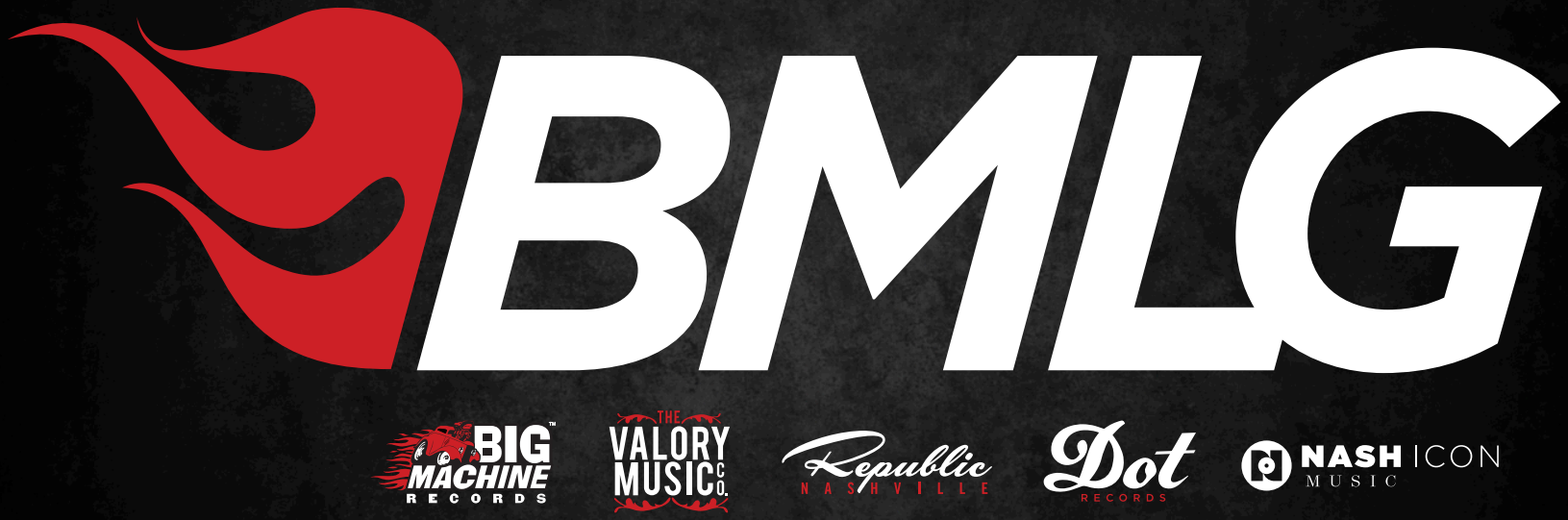

BMLG
BIG MACHINE RECORDS
THE VALORY MUSIC CO.
Republic NASHVILLE
Dot RECORDS
NASH ICON MUSIC

WHO WE ARE

billboard MAGAZINE'S

#1 INDEPENDENT ALL-GENRE LABEL GROUP IN THE WORLD

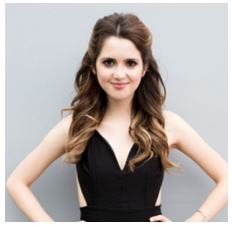
BMLG artists



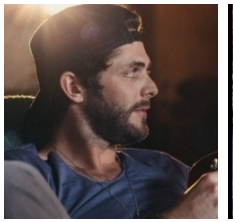






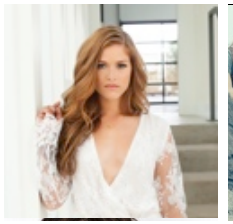

















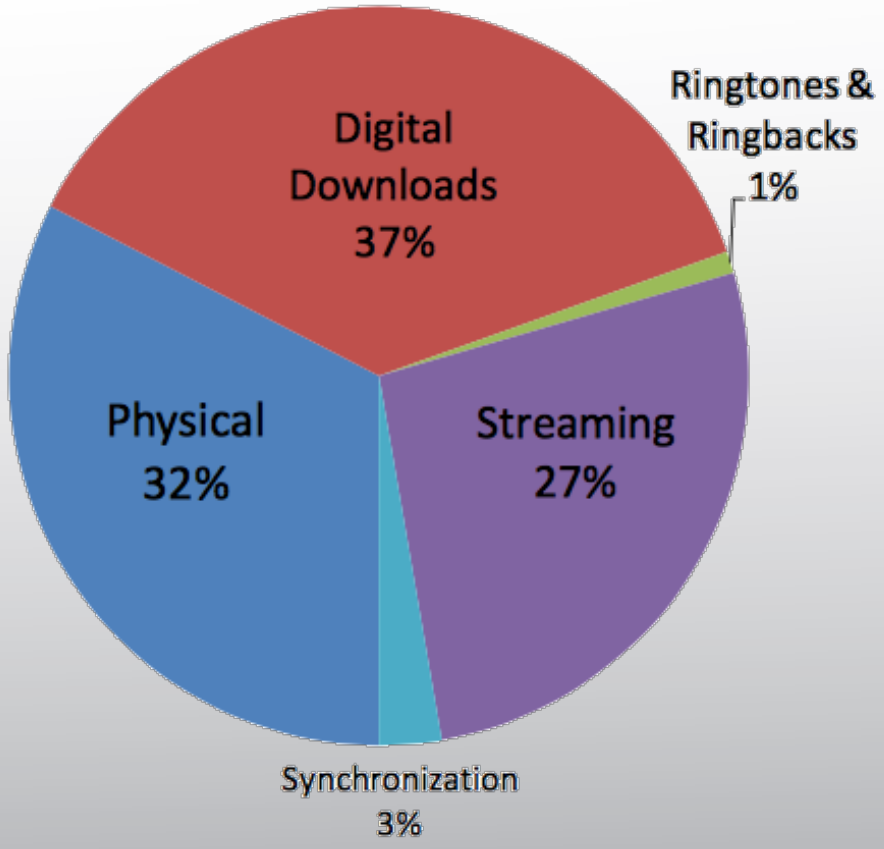

THE STATE OF THE INDUSTRY

THE FACT:

MORE PEOPLE ARE CONSUMING MUSIC THAN EVER BEFORE.

Growth is coming from streaming services, not album sales. **Digital downloads are dying.** Vinyl records are making a major comeback (51.8% gain in 2014 over 2013). **Brand Partnerships in Music are becoming a bigger and bigger part of the marketing mix.** Disruption and transparency in music business is the future.

US MUSIC INDUSTRY REVENUES



2014 Year-End Data:

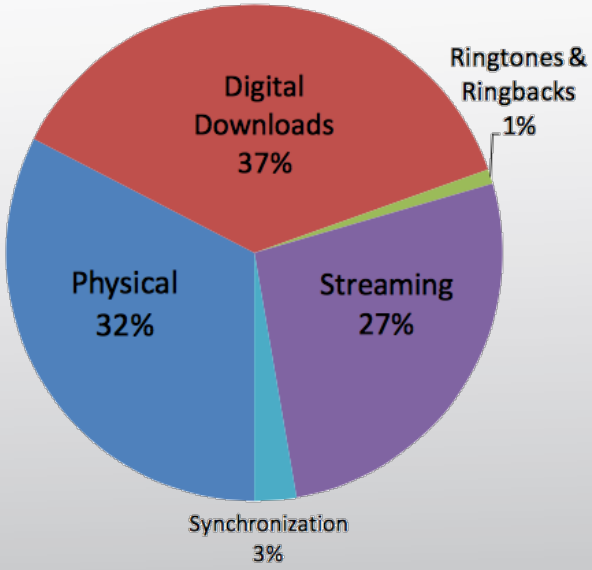
The number of paid subscriptions to on-demand music services in the United States more than tripled since 2011.

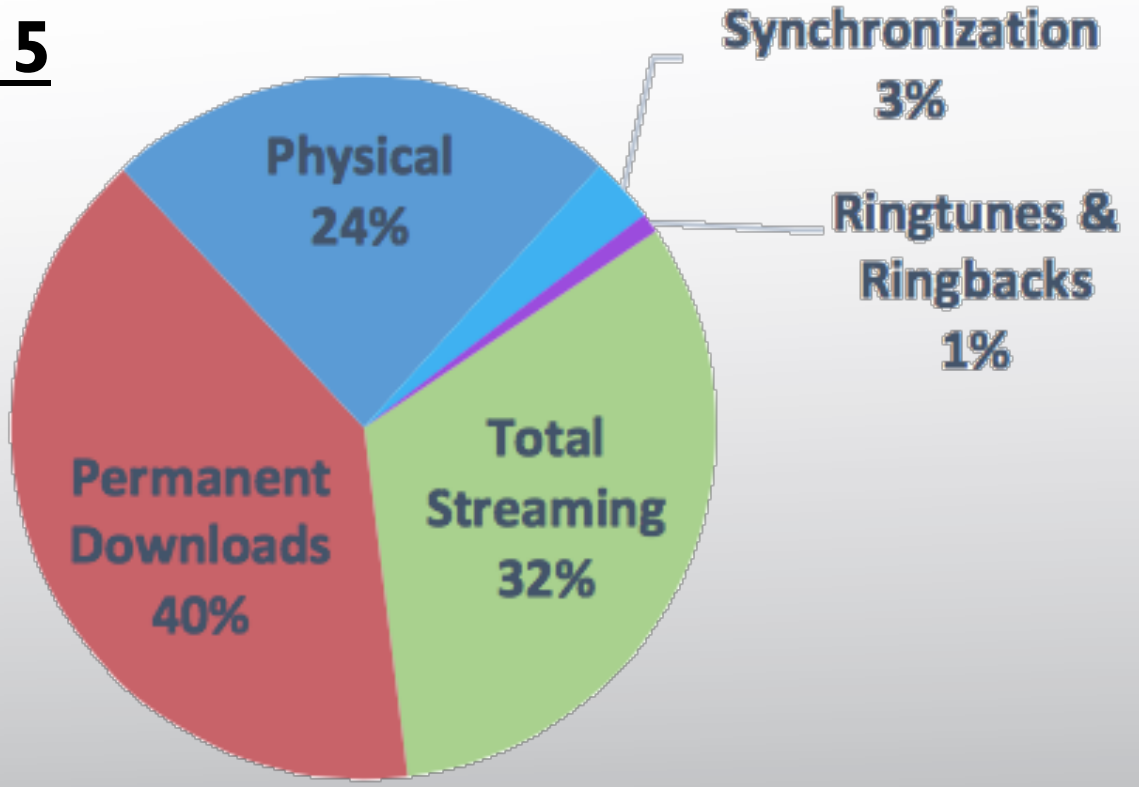
In 2014, **paid subscriptions grew 26% year-over-year** to 7.7 million.

SOURCE: RIAA

US MUSIC INDUSTRY REVENUES

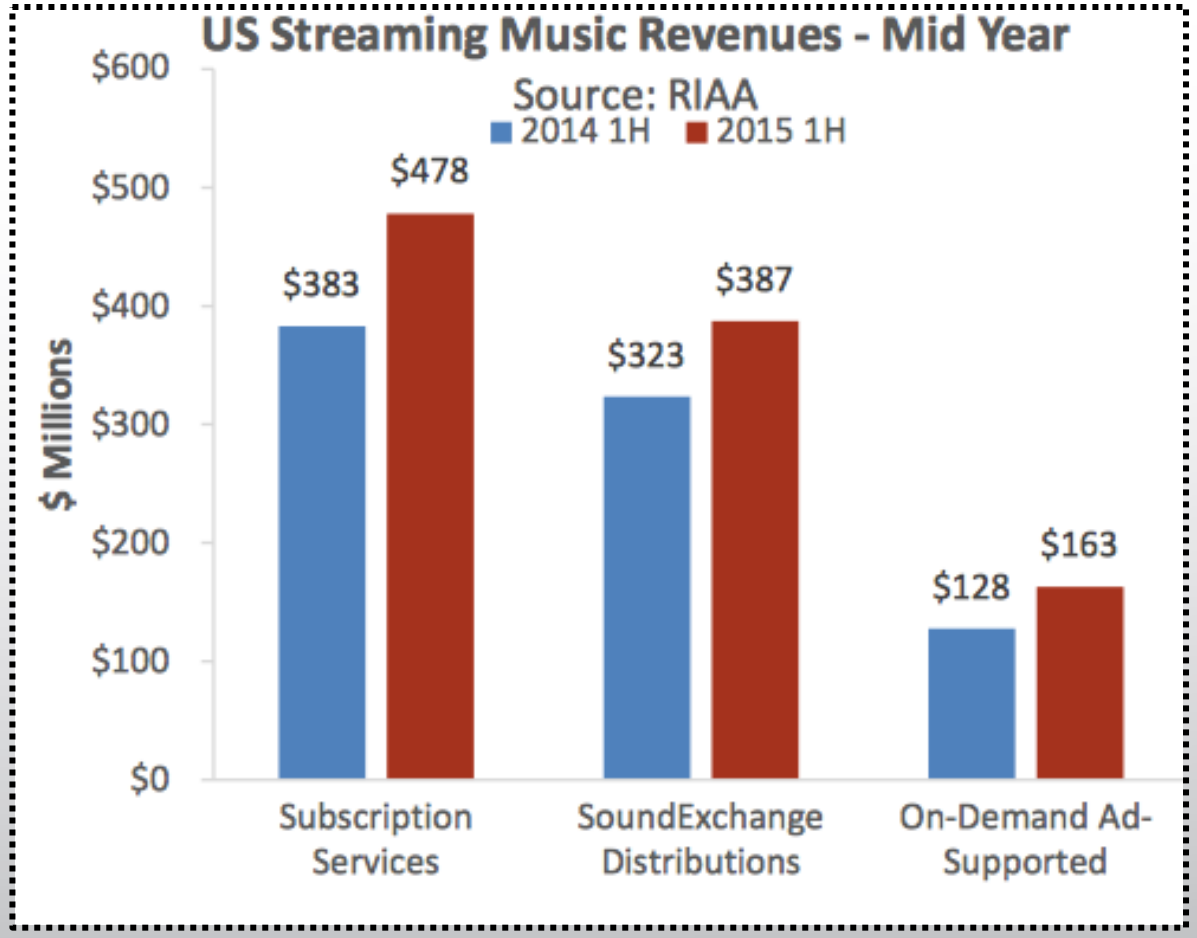
2014 vs. 1st Half 2015





SOURCE: RIAA

US MUSIC INDUSTRY REVENUES



Revenues from permanent digital downloads fell 8.7% in 2014… but the growth from streaming services more than offset that decline.

Total digitally distributed formats grew 3.2%, a new all-time high, and **accounted for 66% of the market** at retail by value.

SOURCE: RIAA

Spotify

PANDORA

MUSIC

“

As far as the talent, as far as strategy…part of it is,

GET ME THAT LANE NOBODY ELSE IS RACING IN AND WE’LL FIND A WAY TO WIN IT.”

Scott Borchetta

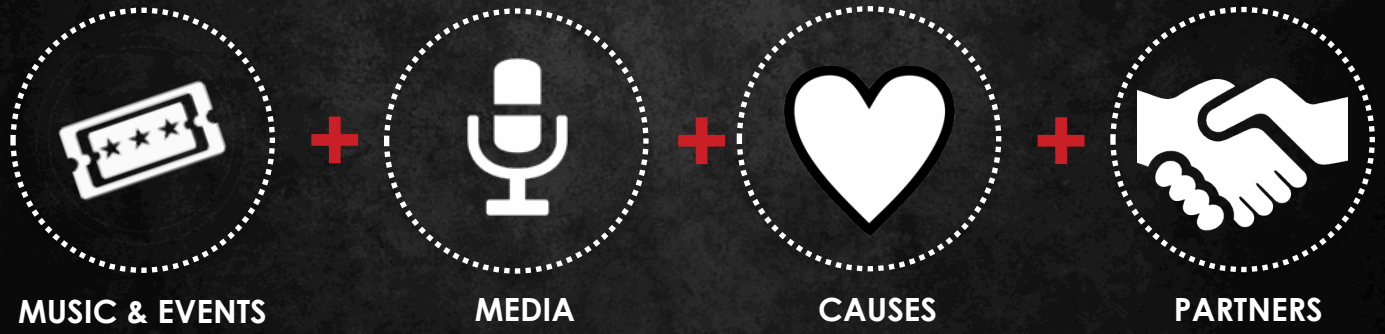
Forbes Magazine, July 2013

PARTNERSHIP MARKETING

THE BMLG STRATEGY

BIG MACHINE LABEL GROUP

INTEGRATED PARTNERSHIPS – COMBINING **EVENTS**, **MEDIA**, **RETAIL** – PROVIDE MORE WAYS TO TOUCH CONSUMERS + FANS.



=WIN

{BIGGER REACH THAN CAN BE ACHIEVED ALONE}

“

We have a saying at the label,

START AT CRAZY AND WORK BACKWARDS.”

Scott Borchetta
President/CEO, Big Machine Label Group

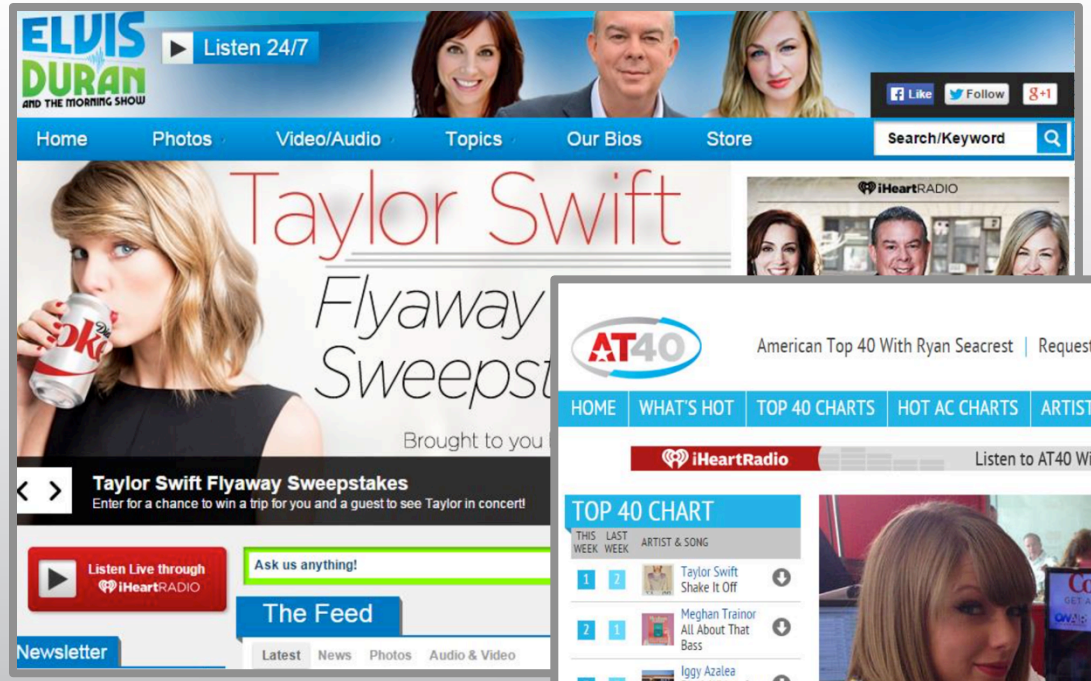
LET’S DISCUSS CRAZY

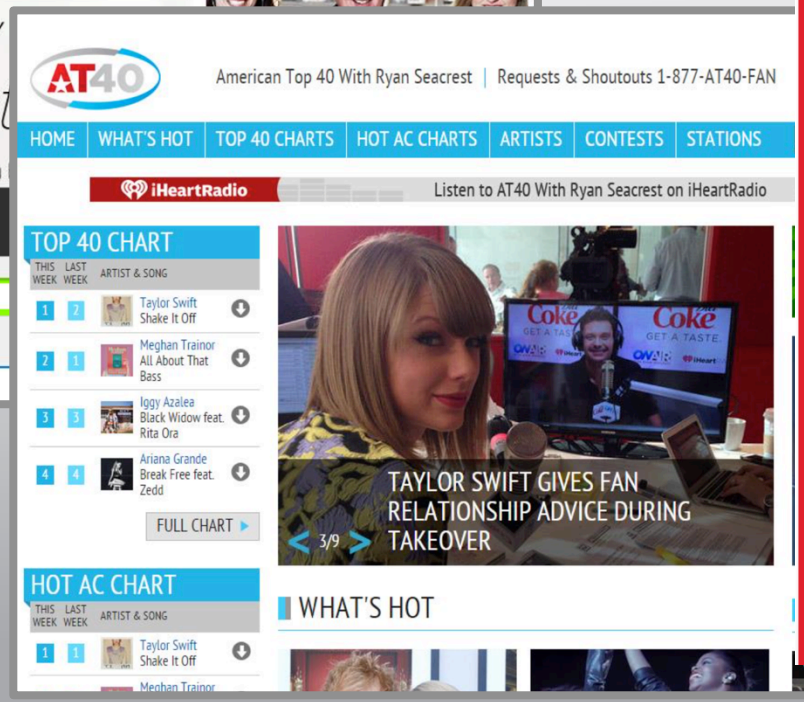
iHeart
MEDIA

TAYLOR SWIFT / Diet Coke iHeart Media Takeover

PROGRAM EXTENTIONS: iHeartRadio, AT40, Elvis Duran Morning Show, On Air with Ryan Seacrest, Club Kane, Johnjay and Rich, local stations

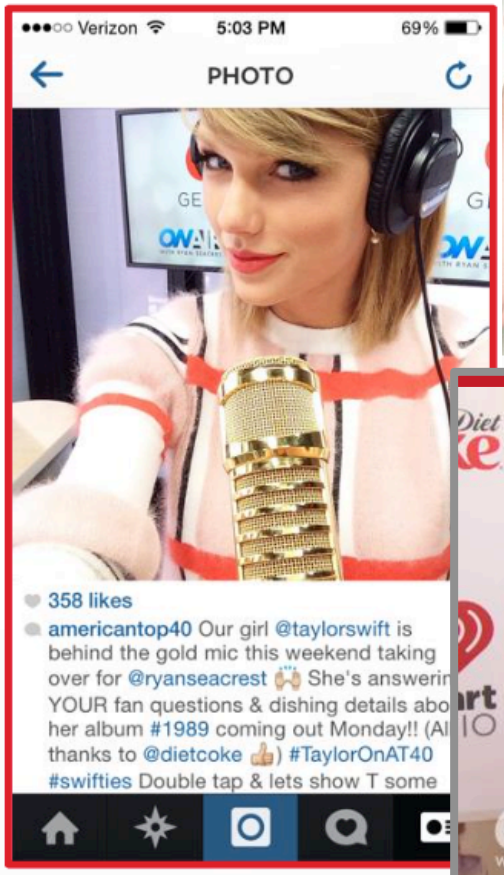
4,595,865 digital impressions and **15,783 total entries** over the one-week period.





TAYLOR SWIFT / Diet Coke iHeart Media Takeover

- In-show teaser spots promoting Taylor's guest-hosting
- Promotional Ryan Seacrest voiced spots
- Social Posts encouraging tune-in
- Taylor Swift flyaway sweepstakes



TAYLOR SWIFT / Diet Coke iHeart Media Takeover

To generate excitement and tune-in, ON AIR WITH RYAN SEACREST promoted the show through social platforms and viral videos before, during and after!


HELP FEED
OUTNUMBER
HUNGER®
LOCAL FAMILIES

OUTNUMBER HUNGER / General Mills & BMLG

OVER 35 MILLION MEALS SECURED SINCE 2011

OUTNUMBER HUNGER / General Mills & BMLG

OUTNUMBER HUNGER / General Mills & BMLG

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Music Icon Reba Joins the Fight to "Outnumber Hunger"

General Mills, Big Machine Label Group and Feeding America kick off year four of campaign aimed at fighting hunger in America

Mar 20, 2015, 10:34 ET from General Mills

MINNEAPOLIS, March 20, 2015 /PRNewswire/ -- General Mills, Big Machine Label Group (BMLG) and Feeding America® today announced the launch of its fourth annual Outnumber Hunger campaign, which has helped secure more than 35 million meals to people facing hunger in America. This spring, superstar entertainer Reba will be the face of the initiative to help raise awareness of the 49 million individuals struggling with hunger in America and will kick off the campaign with a special concert event, "Reba and Friends Outnumber Hunger," featuring songs from her forthcoming album *LOVE SOMEBODY*.

"I was raised to treat others with compassion. Knowing that one in six Americans struggle with hunger means my fans and people I see every day need help," said Reba. "The Outnumber Hunger campaign is such a simple way to help your neighbors, so how could you not? I'm so proud to lead the charge with Big Machine Label Group, General Mills and Feeding America."

Billboard

TODAY

USA TODAY®

MULTI-MEDIA PLATFORM

OUTNUMBER HUNGER / General Mills & BMLG

- Digital Takeovers
- On air messaging
- Social Media Pushes
- High Profile Visibility at Red Carpet at the ACM's

OUTNUMBER HUNGER / General Mills & BMLG

CMT
Get country.

GANNETT
It's all within reach.

iHeart MEDIA

LIVE EVENT / 1 HOUR NETWORK SPECIAL

BRAND PARTNERSHIP OPPORTUNITIES

EVENTS + TOUR MARKETING

Tour marketing + sponsorship opportunities

Album launch events in major media markets

The Brickyard 400 at Indy Motor Speedway

The HOTTEST Award Show After Parties in the Industry

MUSIC + RETAIL INTEGRATIONS

Artist(s) featured on packaging and in point-of-sale displays

GWP and Sweepstakes Promotions

Non-traditional music retailer opportunities

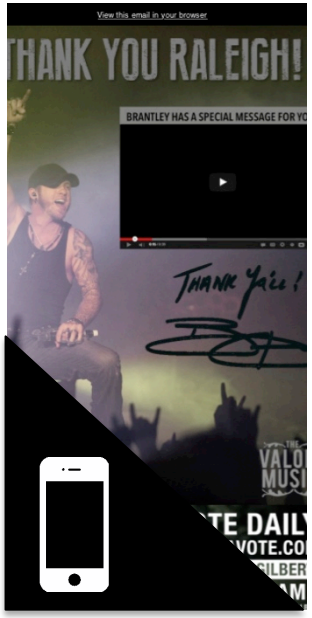
Music licensing and songwriting

RADIO PROMOTION

National & Local Sweepstakes and Contesting Opportunities

LIVE Broadcast Events from the most unique locations in the country

Traditional media campaigns with artist + programming integrations



DIGITAL

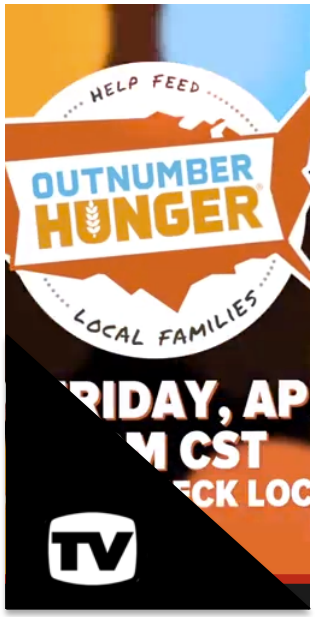
Database marketing with access to 900,000 BMLG fans

Microsite design and promotion execution and fulfillment

Social Media Marketing

Artist Websites

BigMachineRecords.com + Big Machine Radio



TV + VIDEO

Music Video Product Placement

Branded Content Series

Artist Media Appearances and Brand Integrations

Fully-produced music-centric TV Specials

BMLG

BIG MACHINE RECORDS

THE VALORY MUSIC CO.

Republic NASHVILLE

Dot RECORDS

NASH ICON MUSIC

CONTACT:

JACKIE CAMPBELL

DIRECTOR | PARTNERSHIP MARKETING

JACKIE.CAMPBELL@BMLG.NET

Patented Electric Guitar Pickups and the Birth of Rock and Roll

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Boeing International Professor of Law
University of Washington, School of Law
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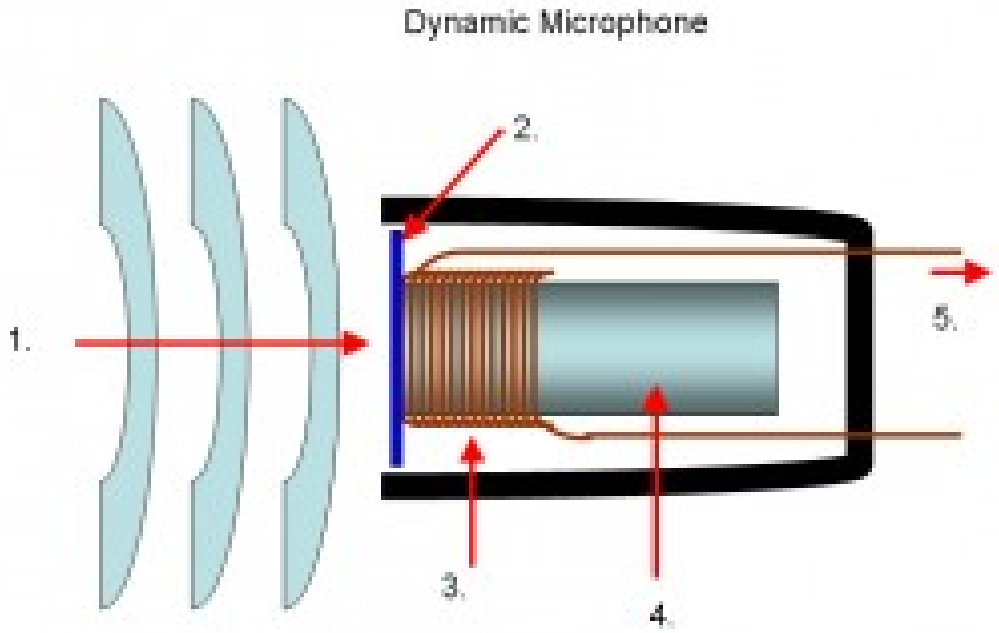
Seattle USA

UNIVERSITY *of* WASHINGTON

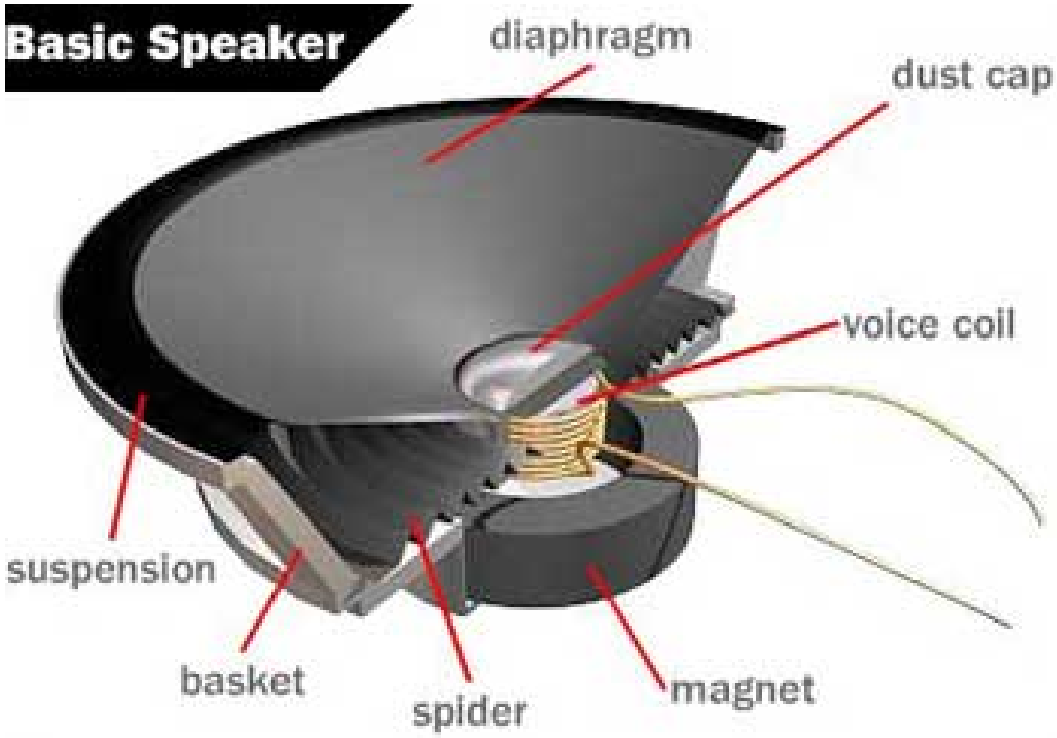
Context: The origins of audio amplification

- The heart of the new telephone in the late 1800s was the *transducer* that translated mechanical vibration into variable analog electric signals; also known as the *microphone*



Context: The origins of audio amplification

- Electric signals from the microphone could then be sent through a vacuum tube amplifier circuit, which in turn could send this much stronger signal to drive a loudspeaker (effectively reversing the process to transform electric signals bank into sound waves)



Challenge

- Quieter instruments like acoustic guitars could not drive a microphone as strongly as more powerful or focused sound instruments like horns or even the human voice
- Especially true for early microphones that were not as sensitive as later ones
- “Feedback” is a problem when mics are turned up too high; or placed too close to a closed source
- Further, early mics were “omnidirectional” and so trying to mic a particular instrument in a band, such as acoustic guitar in a dance orchestra, amplified all the other sounds around it too (mic or instrument “bleed”)

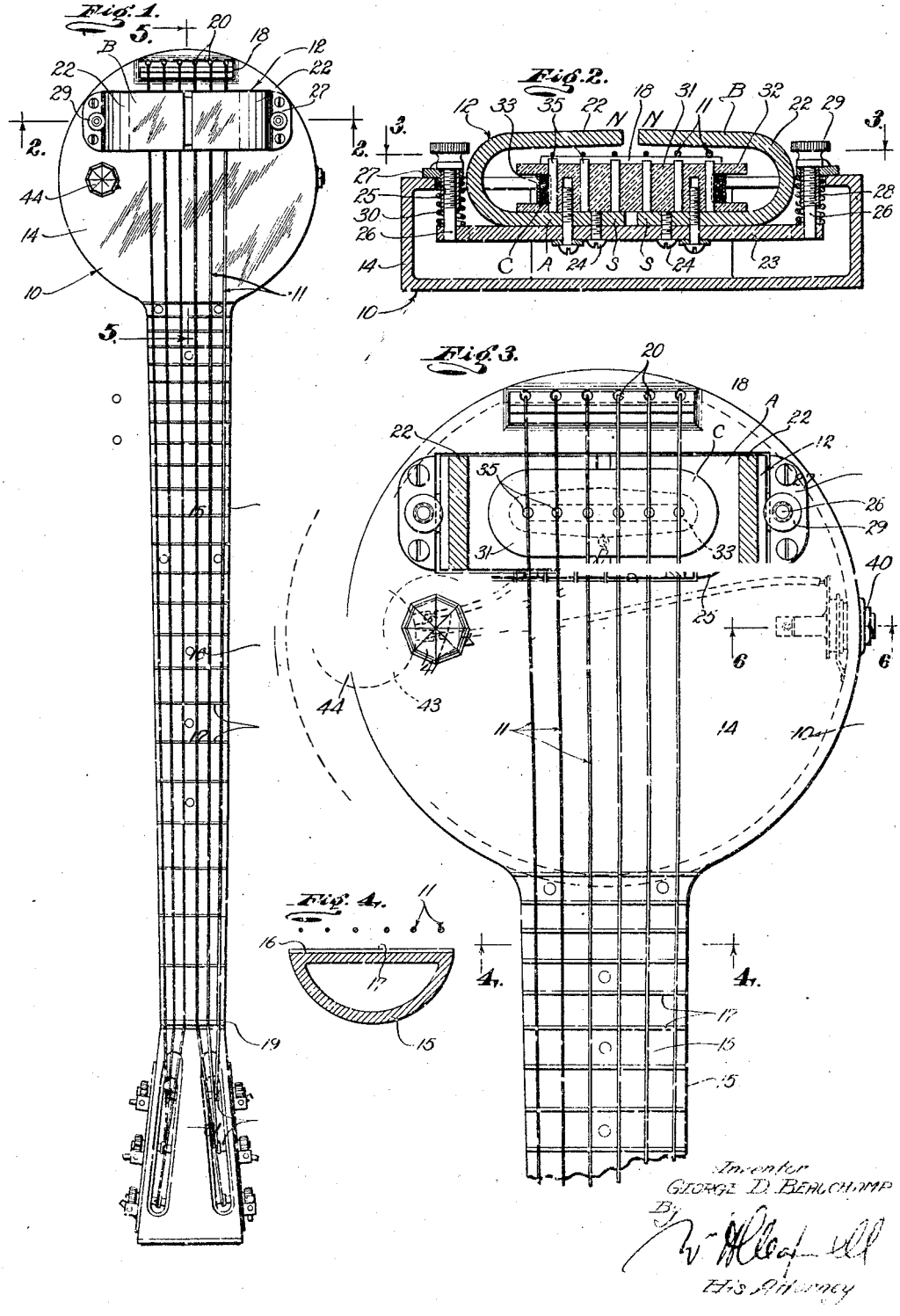
Solution: the “electro-magnetic pick-up”

- George Beauchamp took a fundamentally different approach in 1934: because many guitars (and other instruments) were using steel strings, the strings themselves could be like the vibrating coil and induce a signal in an electro-magnetic field
- In particular, big horseshoe magnets would surround the strings, which would sit above a wire coil surrounding magnetic pole pieces each positioned directly under a string that could “focus” the induced current being created
- Patent No. 2,089,171 “Electrical Stringed Musical Instrument”

Aug. 10, 1937. G. D. BEAUCHAMP 2,089,171

ELECTRICAL STRINGED MUSICAL INSTRUMENT

Filed June 2, 1934 3 Sheets-Sheet 1



Aug. 10, 1937. G. D. BEAUCHAMP 2,089,171

ELECTRICAL STRINGED MUSICAL INSTRUMENT

Filed June 2, 1934 3 Sheets-Sheet 2

Fig. 5.

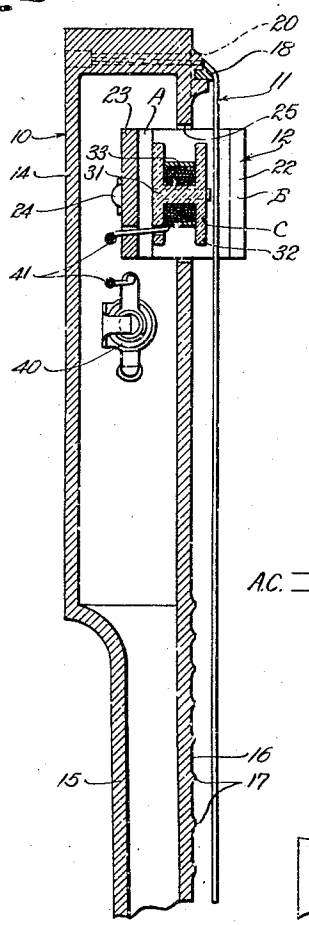
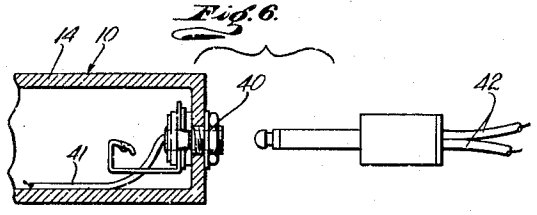


Fig. 6.



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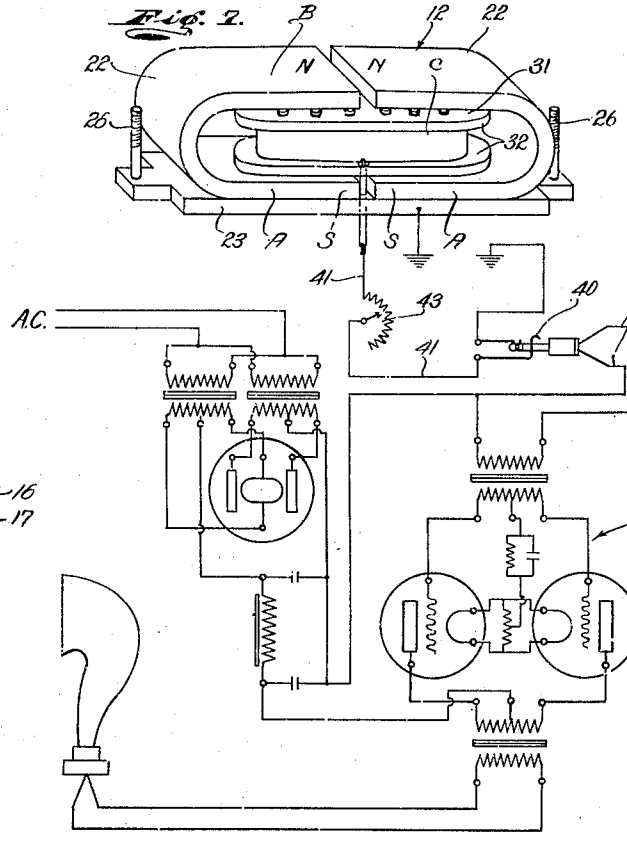
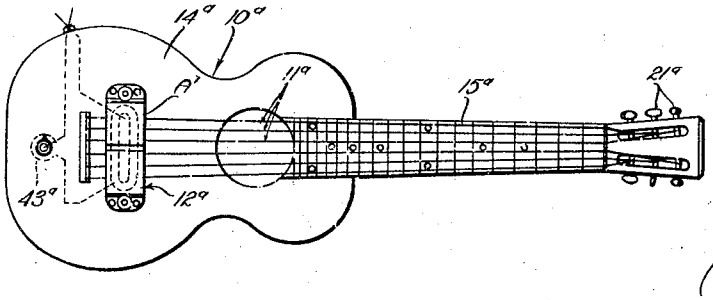


Fig. 8.



Inventor
GEORGE D. BEAUCHAMP
By
His Attorney

Aug. 10, 1937. G. D. BEAUCHAMP 2,089,171

ELECTRICAL STRINGED MUSICAL INSTRUMENT

Filed June 2, 1934 3 Sheets-Sheet 3

Fig. 9.

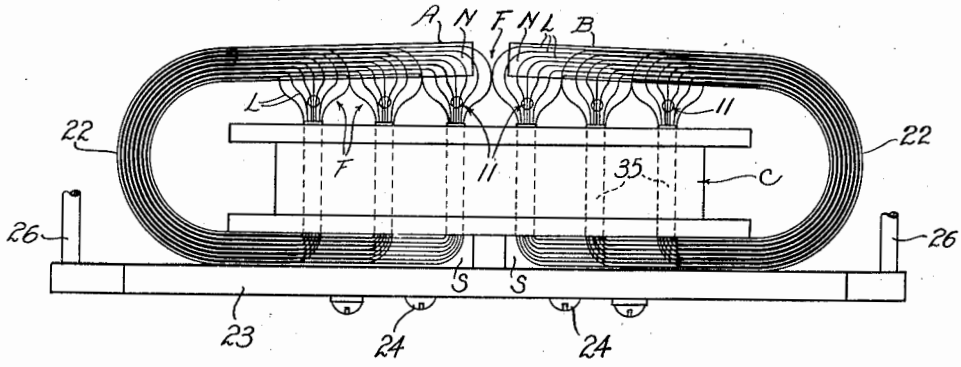
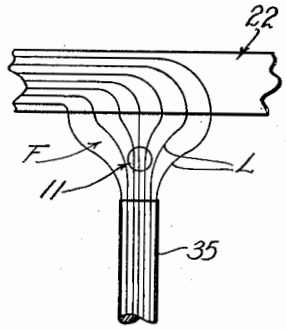


Fig. 10.



Inventor
GEORGE D. BEAUCHAMP
By W. H. Maxwell
His Attorney

Patented Aug. 10, 1937 2,089,171

UNITED STATES PATENT OFFICE

2,089,171

ELECTRICAL STRINGED MUSICAL INSTRUMENT

George D. Beauchamp, Los Angeles, Calif., assignor to Electro String Instrument Corporation, Los Angeles, Calif., a corporation of California

Application June 2, 1934, Serial No. 728,717

21 Claims. (Cl. 84—1)

This invention relates to musical instruments and it is a general object of the invention to provide a simple, practical and improved electrical stringed musical instrument.

This application for Letters Patent is a continuation in part of my application entitled Electrical stringed musical instrument, Serial No. 615,995, filed June 8, 1932.

An object of this invention is to provide a musical instrument in which the vibrations of the sound producing elements or strings directly vary the reluctance of a magnetic circuit to induce an electric current in a coil within the magnetic field, which current is suitably amplified and transformed into sounds as true reproductions of the sounds produced by the vibrations of the strings. In the present invention the true sound of the vibratory string with all its characteristics is accurately reproduced without the extraneous sounds and vibrations produced by instruments or devices in which a mechanical part is made to vibrate through its mechanical association with the vibratory string.

Another object of the invention is to provide an electrical musical instrument of the character mentioned including a novel, simplified and particularly effective electro-magnetic pick-up unit for converting the vibrations of the strings into an electric current having the characteristics of the string vibrations.

Another object of the invention is to provide an electrical musical instrument of the character mentioned including a single electro-magnetic pick-up unit for transforming the vibrations of the several strings of the instrument into an electric current. In the device of the present invention the vibrations of each of the several strings affect or vary the reluctance of the magnetic circuit of a single permanent magnet unit to induce an electric current in a coil superimposed on the magnet, and the single unit is not subject to the variations necessarily inherent in devices involving a plurality of electro-magnetic units.

Another object of the invention is to provide an electrical musical instrument that does not depend upon a sound board, resonance box, or the like in the production or propagation of the sound of the desired quality, whereby the body of the instrument may be of simple, inexpensive construction.

Another object of the invention is to provide a musical instrument of the character mentioned having tensioned vibratory strings of different diameters and including a single electro-magnetic pick-up unit constructed and designed to deliver an electric current to an amplifier which current is properly and truly characteristic of the vibrations of the several strings.

Another object of the invention is to provide an electrical stringed musical instrument that is adapted to be played manually in any typical or desired manner and electrically reproduce the sound or music at a remote point.

Another object of the invention is to provide an electrical musical instrument of the character mentioned that may be easily and conveniently adjusted by the musician or player to vary the volume of the music or sound produced.

Another object of the invention is to provide an improved electro-magnetic pickup unit capable of embodiment in stringed musical instruments of various characters with little or no modification.

A further object of the invention is to provide an electrical stringed musical instrument of the character mentioned that is small and compact and easy and convenient to play.

Other objects and features of the invention will be better and more fully understood from the following detailed description of typical forms and applications of the invention, throughout which description reference may be had to the accompanying drawings, in which:

Fig. 1 is a top or plan view of one typical embodiment of the present invention. Fig. 2 is an enlarged, transverse, detailed sectional view of the pickup unit and body taken as indicated by line 2—2 on Fig. 1. Fig. 3 is an enlarged plan elevation of the main portion of the body with the magnets in cross-section, being a view taken as indicated by line 3—3 on Fig. 2. Fig. 4 is a transverse detailed sectional view taken as indicated by line 4—4 on Fig. 3. Fig. 5 is an enlarged fragmentary detailed sectional view taken as indicated by line 5—5 on Fig. 1. Fig. 6 is a fragmentary detailed sectional view of the body showing the socket and illustrating the plug in position to enter the socket. Fig. 7 is a wiring diagram of the circuit involved in the present invention. Fig. 8 is an elevation view of the present invention embodied in a stringed musical instrument having a wooden body. Fig. 9 is a diagrammatic view illustrating the non-uniform magnetic fields of the pick up unit and Fig. 10 is an enlarged fragmentary diagrammatic view illustrating a portion of one pole portion of the magnet and a portion of one core member with a string passing through the field provided thereby.

Charlie Christian and the Gibson ES-150: Moving the guitar out of the rhythm section

- Despite the new solid body instruments, guitarists still wanted hollow body guitars with pick-ups attached
- Charlie Christian became famous in the late ‘30s and early ‘40s with his Gibson ES-150, with its patented pickup that became known as the “Charlie Christian pickup”

July 13, 1937. G. HART 2,087,106

ELECTRICAL MUSICAL INSTRUMENT

Filed Feb. 8, 1936 2 Sheets-Sheet 1

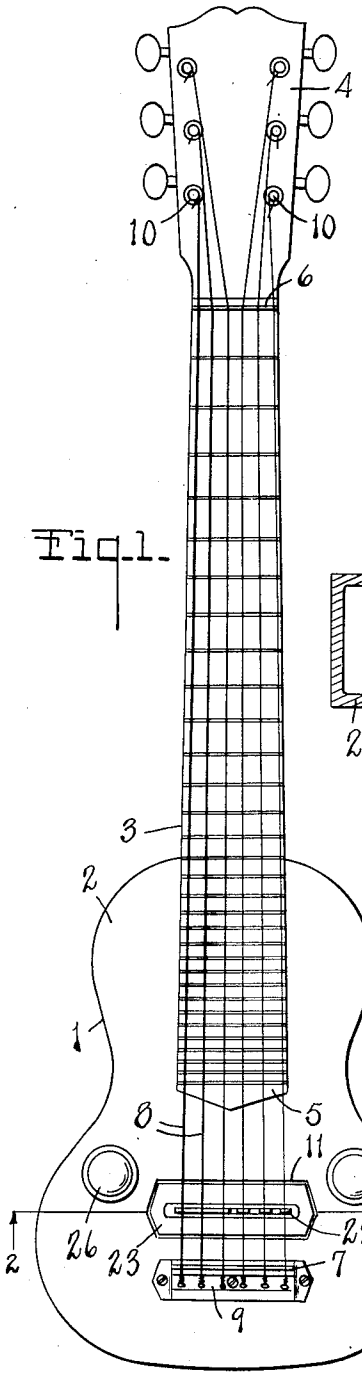


Fig. 1.

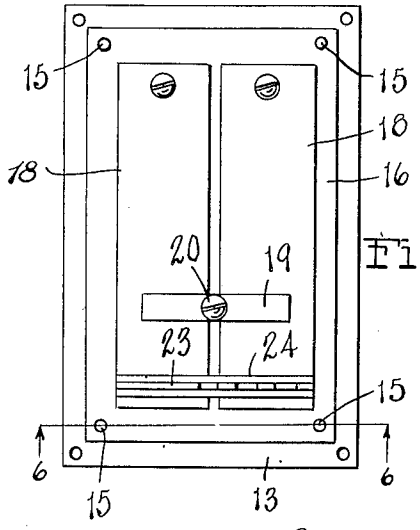


Fig. 3.

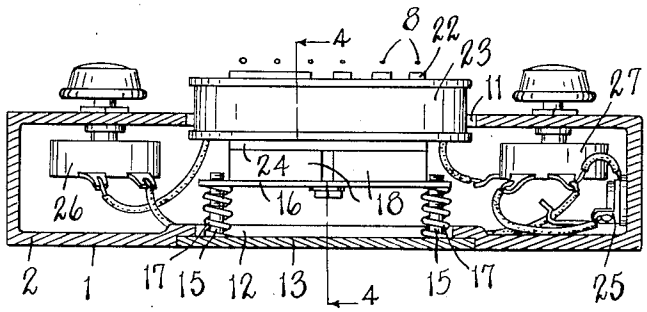
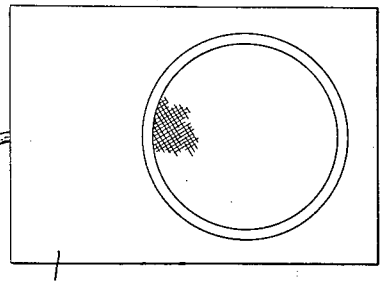


Fig. 2.



INVENTOR.
Guy Hart

BY
Chappell, Earl T. Chappell
ATTORNEYS

July 13, 1937. G. HART 2,087,106

ELECTRICAL MUSICAL INSTRUMENT

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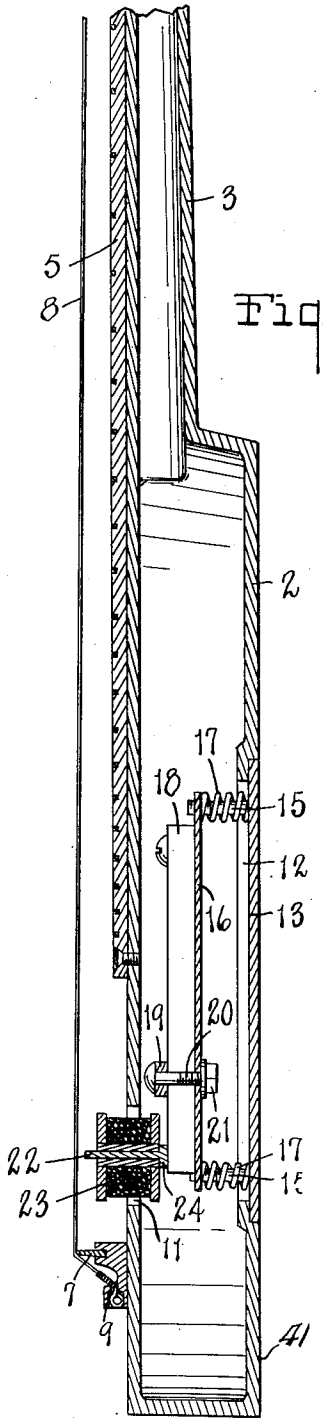


Fig. 4.

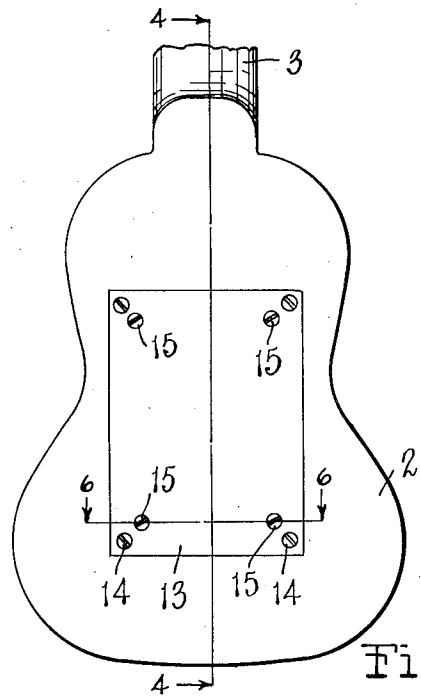


Fig. 5.

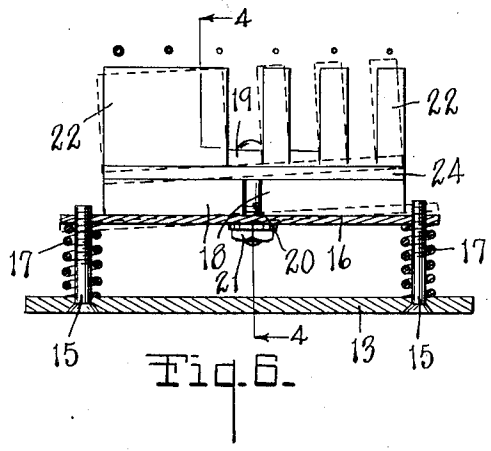


Fig. 6.

INVENTOR.
Guy Hart

BY
Chappell, Earl & Chappell
ATTORNEYS

Patented July 13, 1937 2,087,106

UNITED STATES PATENT OFFICE

2,087,106

ELECTRICAL MUSICAL INSTRUMENT

Guy Hart, Kalamazoo, Mich., assignor to Gibson, Inc., Kalamazoo, Mich.

Application February 8, 1936, Serial No. 62,950

11 Claims. (Cl. 84—1)

The main objects of this invention are:

First, to provide an electrically amplified stringed instrument embodying a body member which is substantially non-resonant and means for amplifying music produced thereon to any desired degree.

Second, to provide an instrument of the class described, which is amplified solely due to the effect of variations in an air gap produced by the vibrating strings.

Third, to provide an instrument of the type described, which is handsome in appearance and capable of producing tones of great beauty in a great number of degrees of amplification.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined in the claims.

A preferred embodiment of the invention is illustrated in the accompanying drawings, in which:

Fig. 1 is a front view of the instrument of the invention, illustrating the manner of using the same in connection with an amplifier.

Fig. 2 is an enlarged sectional view on the line 2—2 of Fig. 1.

Fig. 3 is a view illustrating part of the operating mechanism, comprising magnets and support plate therefor.

Fig. 4 is a fragmentary sectional view taken on line 4—4 of Figs. 2, 5 and 6.

Fig. 5 is a fragmentary view showing the side of the instrument which is the reverse of that shown in Fig. 1.

Fig. 6 is a sectional view taken on the line 6—6 of Figs. 3 and 5.

Instruments of the type in which a vibrating string is employed to impart vibrations to an armature, whereby through variations in an air gap a current is induced in a coil, are well known. For the most part such instruments consist of conventional stringed instruments which are modified by the addition of suitable electrical amplifying means thereto and the amplified sounds produced by the instrument itself and amplified in the sounding box thereof. It is an object of this invention to produce a device which does not rely on the resonance of the instrument itself, the entire audible effect being due to the electrical amplifying means connected thereto. To this end, I have designed the body of the instrument with a relatively thick wall of hard wood or of metal which is substantially lacking in the quality of resonance. Aside from the sounds emanating from the amplifier designed to be employed in connection with my device, the only audible effect produced is that of the vibrating strings themselves unamplified by a sounding box effect of the body of the instrument.

I have illustrated the invention as embodied in a type of plucked instrument. However, it will be apparent that other embodiments may be in the form of any known type of stringed instrument adapted to be played by setting the strings vibrating.

In the drawings, reference numeral 1 indicates broadly a stringed instrument of the guitar type comprising a hollow body member 2, neck 3 and tongue bar 4. The walls 41 of the body member are relatively thick, with the result that the instrument is deprived of the quality of resonance. The instrument is provided with a suitable fretted keyboard 5 extending longitudinally thereof in conventional manner. Bridges 6, 7 are mounted on the instrument, and the metal strings 8 anchored to a tailpiece 9 are adjustably tensioned over the frets by tongue pegs 10. The body member 2 is cast at the upper side thereof with an opening 11 underneath the strings and extending widthwise thereof. The opposite or bottom face of the body member is apertured at 12 to form an opening which is normally covered by the closure plate 13, screws 14 extending through the closure 13 and being threaded into the body member. Screws 15 likewise extend through the closure plate and are threaded into a spaced support plate 16 whereby the support plate may be adjusted inside the body member by turning screws 15 from the outside.

Springs 17 surround the screws 15 and resiliently space the support plate.

I secure a pair of bar magnets 18 on the support plate 16 by means of a clamping strip 19 and a bolt 20 extending through the strip and support plate and between the magnets, a nut 21 being screwed on the bolt to hold the parts in assembled relation. The bar magnets 18 carry at one end thereof magnetic extensions or fingers 22 which extend at right angles to the bar magnets upwardly through an elongated coil 23. The coil is supported by the base 24 on the magnets 22, being maintained centrally of the opening 11. The magnetic fingers 22 extend through the coil to a point adjacent but spaced from the strings 8.

The body member 2 has inserted therein a jack 25 to which the ends of the coil 23 are connected. I preferably mount suitable volume and tone controls 26, 27 on the body member 2 for ready manipulation by the player, the controls being placed in the coil circuit in a manner which will

Country-Western and the Lap Steel Guitar

- Country and western swing musicians were willing to try all-electric, no sound box, guitars, in the form of lap steel instruments
- Beauchamp incorporated his seminal electro-magnetic pickup in the famed Bakelite B lap steel guitar, which was patented for its innovative mechanical tremolo
- He formed the Ro-Pat-In Company (Elect**RO**-**PAT**ent-**IN**struments) with Adolph Rickenbacker; renamed Electro String Instrument Corporation, and later simply the Rickenbacker International Corporation, maker of famed electric basses and 12-string guitars

April 4, 1939 G. D. BEAUCHAMP 2,152,783

STRINGED MUSICAL INSTRUMENT

Filed May 26, 1936 2 Sheets-Sheet 1

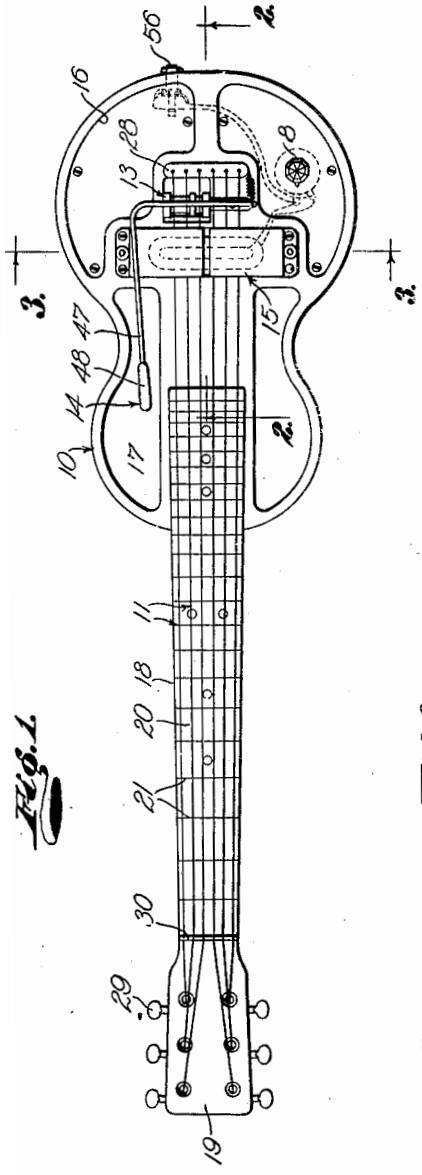


Fig. 1.

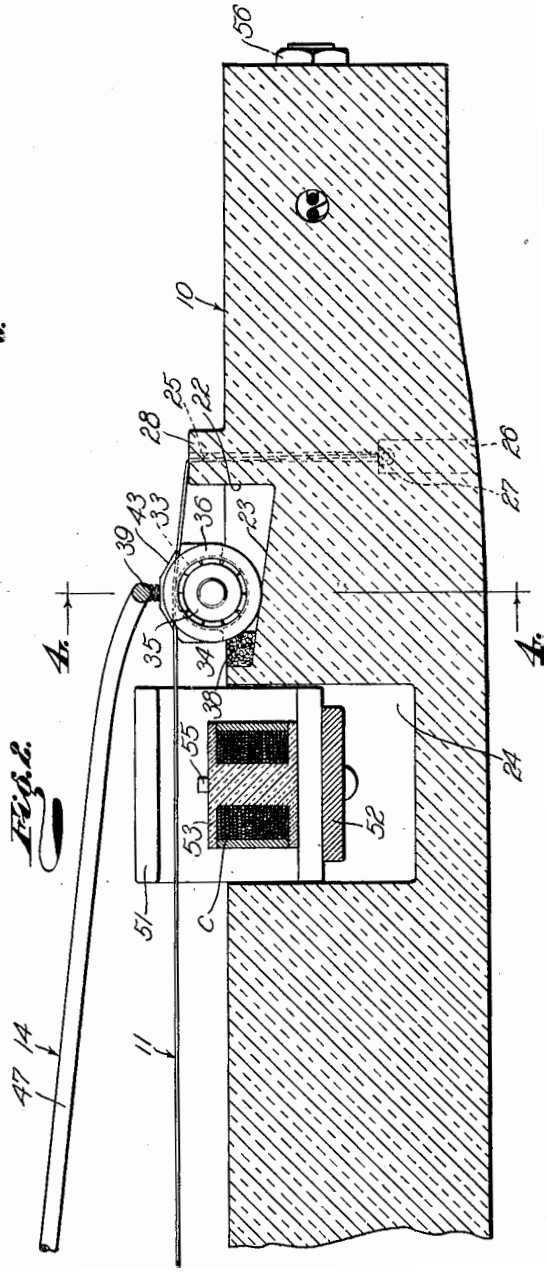


Fig. 2.

Inventor
GEORGE D. BEAUCHAMP
By W. H. Hall
His Attorney

April 4, 1939. G. D. BEAUCHAMP 2,152,783

STRINGED MUSICAL INSTRUMENT

Filed May 26, 1936 2 Sheets-Sheet 2

Fig. 3.

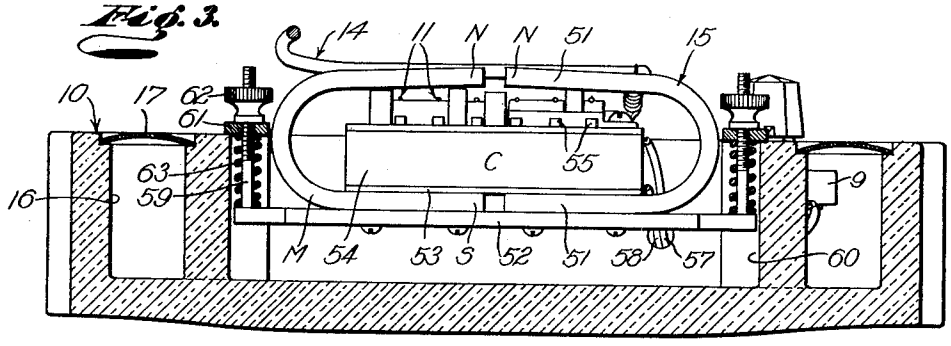


Fig. 4.

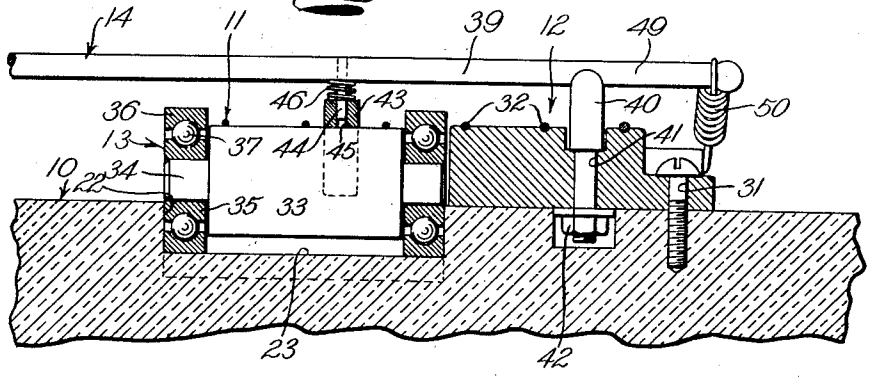


Fig. 5.

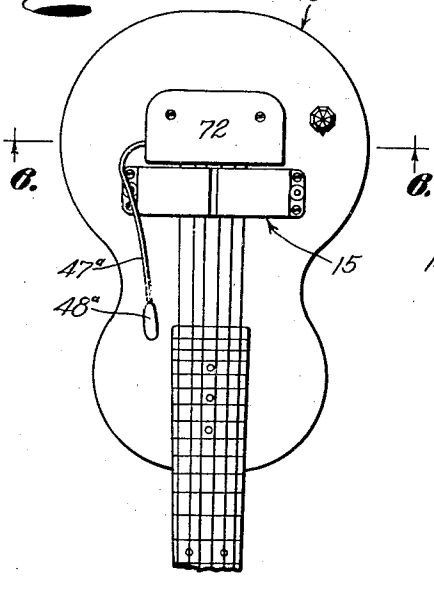


Fig. 6.

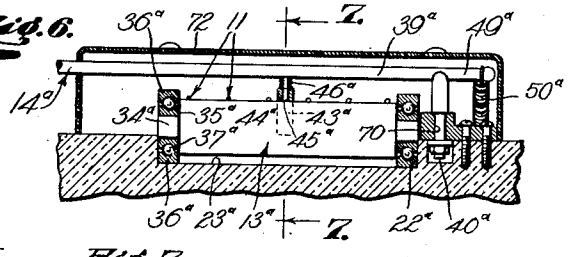
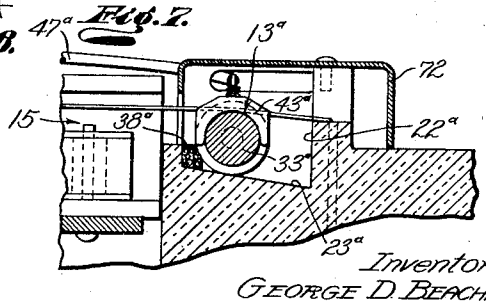


Fig. 7.



Inventor
GEORGE D. BEACHAMP
By
His Attorney

Patented Apr. 4, 1939

2,152,783

UNITED STATES PATENT OFFICE

2,152,783

STRINGED MUSICAL INSTRUMENT

George D. Beauchamp, Los Angeles, Calif., assignor to Electro String Instrument Corporation, Los Angeles, Calif., a corporation of California

Application May 26, 1936, Serial No. 81,826

15 Claims. (Cl. 84—313)

This invention relates to musical instruments and relates more particularly to stringed musical instruments. A general object of this invention is to provide a practical stringed musical instrument embodying simple, novel means for producing a tremolo effect.

Another object of this invention is to provide a stringed musical instrument embodying a shiftable bridge on which the vibratory strings bear and means for shifting the bridge to create quavering or tremulous tones.

Another object of this invention is to provide a stringed musical instrument of the character mentioned in which the shiftable bridge is movable longitudinally or in the direction of the strings as well as in a direction transverse of the strings to produce a pleasing tremolo effect with little or no variation in the tension on the strings.

Another object of this invention is to provide a stringed musical instrument embodying an effective means for producing a tremolo effect that may be conveniently operated or manipulated by the musician's hand employed to pluck or vibrate the strings.

Another object of this invention is to provide a stringed musical instrument of the character mentioned that is operable to produce a pleasing tremolo effect without noise and rattle and without varying the pitch of the vibratory strings beyond a desirable range of variation.

Another object of this invention is to provide a means for creating a tremolo effect in a stringed musical instrument that is suitable for embodiment in or application to an instrument embodying an electro-magnetic pick-up.

Another object of this invention is to provide a stringed musical instrument embodying means for varying the effective lengths of the several strings to create a tremolo effect on the several strings of the instrument.

A further object of this invention is to provide a device or appliance for producing a tremolo effect in a stringed instrument that is compact and inexpensive and that may be easily embodied in or applied to various types of stringed instruments.

The various objects and features of my invention will be fully understood from the following detailed description of typical preferred forms and applications of the invention, throughout which description reference is made to the accompanying drawings in which:

Fig. 1 is a plan elevation of an instrument embodying one form of the invention. Fig. 2 is an enlarged fragmentary vertical detailed sectional view taken as indicated by line 2—2 on Fig. 1. Fig. 3 is a transverse detailed sectional view taken as indicated by line 3—3 on Fig. 1. Fig. 4 is an enlarged fragmentary detailed sectional view taken as indicated by line 4—4 on Fig. 2. Fig. 5 is a fragmentary plan elevation of an instrument embodying another form of the invention. Fig. 6 is an enlarged transverse or vertical detailed sectional view taken as indicated by line 6—6 on Fig. 5, and Fig. 7 is an enlarged fragmentary vertical detailed sectional view taken as indicated by line 7—7 on Fig. 6.

The means or apparatus provided by the present invention for creating a tremolo effect may be embodied in or applied to stringed musical instruments of various characters, for example, it may be used on banjos, guitars, mandolins, harps, pianos, etc., with or without pick-up means. In the following detailed description I will describe two typical forms of the invention as embodied in a guitar having an electro-magnetic pick-up of the character described and claimed in my co-pending application entitled Electrical stringed musical instrument, Serial No. 728,717, filed June 2, 1934. It is to be understood that the invention is not to be construed as limited or restricted to the specific forms or applications about to be described.

The instrument of the present invention illustrated in Figs. 1 to 4, inclusive, of the drawings, includes generally, a body 10, a plurality of vibratory strings 11 on the body 10, a stationary inner bridge 12 for certain of the strings 11, a movable inner bridge 13 for the other strings 11, means 14 for moving the bridge 13 to produce a tremolo effect, and an electromagnetic pick-up 15 responsive to or influenced by the strings 11 and operable to impose electrical modulations on an amplifying and speaker circuit to produce the tones of the vibratory strings 11.

The body 10 may be varied in construction and design without departing from the invention. In the typical embodiment of the invention illustrated in the drawings the body 10 is formed of Bakelite or the like, and has the general configuration of the usual guitar type of instrument. In practice the body 10 may be solid or integral and may be provided with several cavities 16 closed by ornamented or ornamental plates 17. The usual neck 18 projects from the body 10 and is provided at its outer end with a peg box portion 19. A suitable fingerboard 20 is provided on the neck 18 and has the usual frets 21. In accordance with the invention an opening or recess 22 is provided in the upper side of the body.

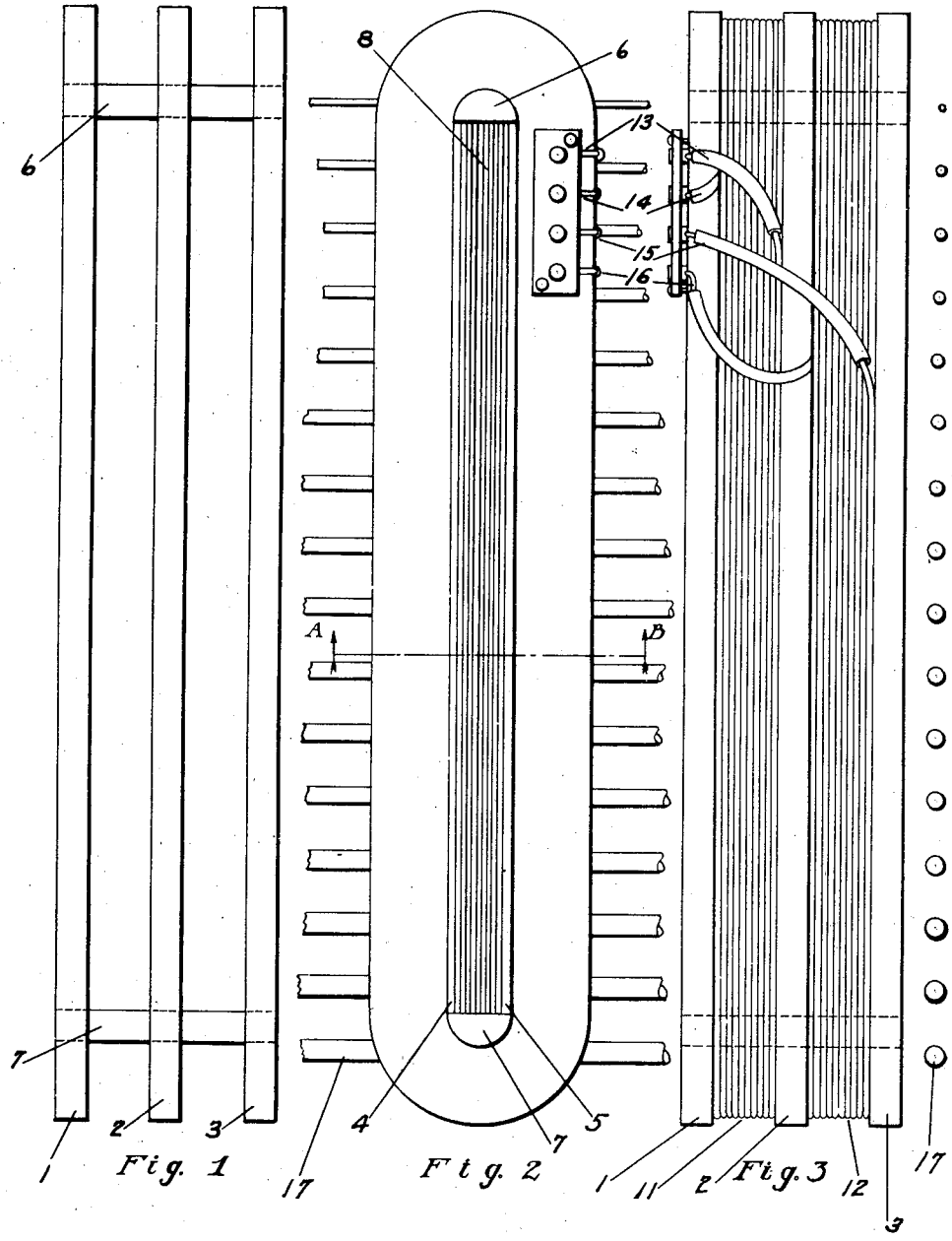
Ahead of their time: Knoblaugh, Baldwin Company, and a “humbucking” pickup

- While electro-magnetic pickups had major power and sound advantages over microphone or other mechanical vibration systems, they were susceptible to picking up interference from nearby electrical devices/power
- This translated into loud humming, buzzing, or even RF sounds coming through the player’s amplifier
- In mid-’30s, Armand Knoblaugh addressed this through a dual coil pickup which cancelled interference
- But he designed and assigned it to Baldwin primarily for *pianos* and it appears not to have been applied to guitars

June 7, 1938. A. F. KNOBLAUGH 2,119,584

PICK-UP DEVICE FOR ELECTRICAL MUSICAL INSTRUMENTS

Filed Dec. 9, 1935 2 Sheets-Sheet 1



INVENTOR

ARMAND F. KNOBLAUGH

per Neuchel E. Power

ATT'Y.

June 7, 1938. A. F. KNOBLAUGH 2,119,584

PICK-UP DEVICE FOR ELECTRICAL MUSICAL INSTRUMENTS

Filed Dec. 9, 1935 2 Sheets-Sheet 2

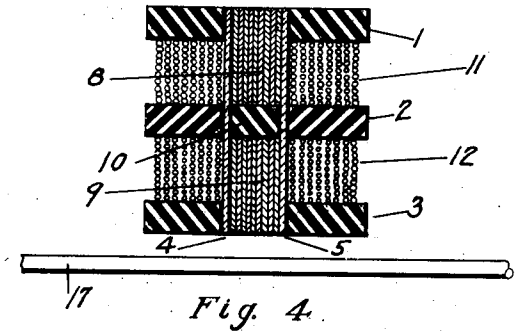


Fig. 4

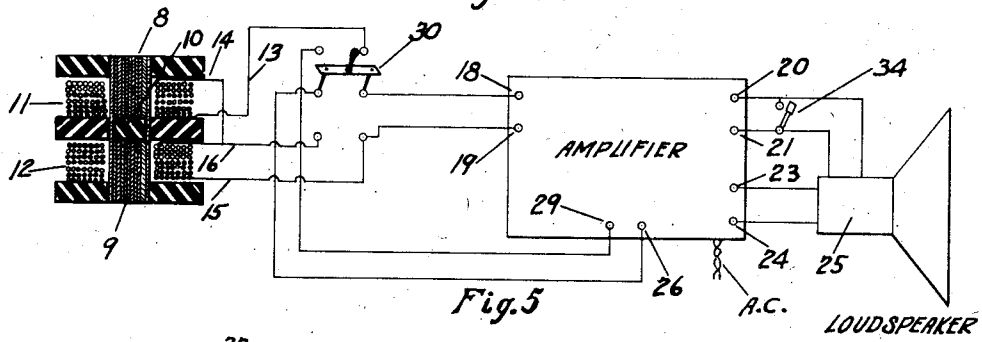


Fig. 5

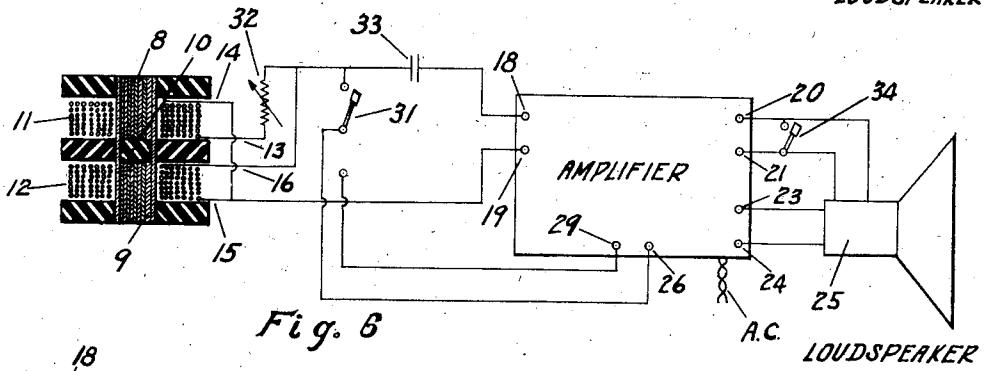


Fig. 6

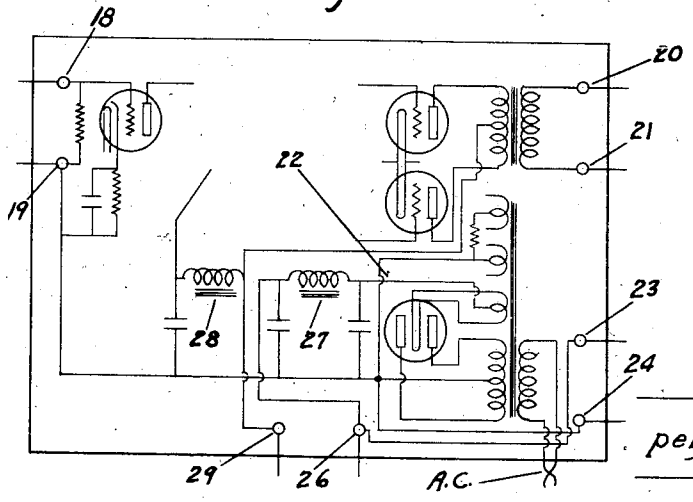


Fig. 7

INVENTOR
ARMAND F. KNOBLAUGH
per Herschel C. Towne
ATTY.

Patented June 7, 1938

2,119,584

UNITED STATES PATENT OFFICE

2,119,584

PICK-UP DEVICE FOR ELECTRICAL MUSICAL INSTRUMENTS

Armand F. Knoblaugh, Cincinnati, Ohio, assignor to The Baldwin Company, Cincinnati, Ohio

Application December 9, 1935, Serial No. 53,589

5 Claims. (Cl. 84—1)

My invention relates to features of an electromagnetic pick-up structure for an electrical musical instrument; namely, the producing of magnetic poles on tuned vibrators of magnetic material, the translation of the motion of the vibrators into corresponding electromotive forces, and the provision of a structure of such a nature as to be insensitive to stray electric and magnetic fields.

The electromotive forces generated in an electromagnetic pick-up device of an electrical musical instrument employing tuned vibrators have been found to be very small. In order to hear these induced electrical vibrations reproduced as musical tones from a loudspeaker of conventional type, some form of amplification involving thermionic vacuum tubes is necessary.

In general, the supply of electrical power for an amplifier can be furnished most economically and conveniently when a commercial source of supply is used; batteries require frequent inspection and replacement and there are obvious disadvantages in the use of other types of purely local power sources.

In an electrical musical instrument for use in a home, there are often advantages in placing the amplifier and loudspeaker in the case or cabinet of the instrument proper. When this is done, however, the amplifier and speaker will have been placed rather near the pick-up device. Since commercial electric mains usually supply alternating current, the pick-up device will be exposed to stray alternating electric and magnetic fields, due mainly to the leakage flux from the amplifier power transformer, to a lesser degree to flux from the choke coils of the amplifier filter system and from the loudspeaker field coil (in which structures there are usually some residual alternating currents flowing) and from any other sources in the vicinity. These stray fields act upon the pick-up device to produce an alternating electromotive force, which is amplified and reproduced as an objectionable hum.

The effect of the stray electric fields can be reduced satisfactorily by an electrostatic shield enclosing the pick-up structure. Magnetic shielding, however, has not been found to be so effective, and is not convenient to employ in my invention, as will be obvious in my future description. Therefore, another principle must be used to minimize the effect of the stray magnetic fields; the employment of this principle is the main object of this invention. This and other objects which will be evident to those reading this specification, I shall now explain and shall describe my invention in detail.

In the drawings which form a part hereof:

Fig. 1 is a side view of the form on and in which are placed the elements of the pick-up device to be described.

Fig. 2 is a plan view of the assembled structure, showing in proximity the tuned vibrators, exemplarily indicated here as tuned strings.

Fig. 3 is a side view, showing the adjacent strings, in section.

Fig. 4 is a cross-section taken on A—B of Fig. 2.

Figs. 5 and 6 are wiring diagrams, showing two schematic arrangements for connecting the device to an amplifier.

Fig. 7 is a partial wiring diagram of an amplifier.

In making a pick-up device in accordance with my invention, holders 1, 2 and 3, of insulating material and having in each a central lengthwise slot, are properly spaced on two insulating strips 4 and 5, inserted and spaced apart in the slots of holders 1, 2 and 3. At the ends of the strips 4 and 5 are inserted half-round pieces 6 and 7, thus completing smooth forming surfaces.

In the space between the strips 4 and 5 and end pieces 6 and 7, two sets of silicon steel laminations 8 and 9 are fit tightly and spaced apart therein by an insulating, non-magnetic piece 10.

In the space between holders 1 and 2, on the smooth surface formed by strips 4 and 5 and half-round pieces 6 and 7, and around the laminated steel core 8, is placed a coil 11 of fine, insulated copper wire. In a similar manner a coil 12 of the same kind of wire is placed in the space between holders 2 and 3 on the surface formed by strips 4 and 5 and half-round pieces 6 and 7, and around the laminated steel core 9. The end wires 13 and 14 of the coil 11 and the end wires 15 and 16 of the coil 12 may be conveniently attached to terminal posts set in an insulating plate, as clearly shown in Figs. 2 and 3. An electrostatic shield of metal, not shown, can be used to enclose the device.

The structure thus formed can be mounted adjacent to a set of tuned strings 17 in any suitable manner (for example, as shown in my U. S. Patent No. 2,015,363 issued September 24, 1935) and can be employed to magnetize the strings, as I shall later describe. The strings can be tuned to the pitches of a musical scale and can be set in motion by the impact of hammers as is done in instruments of the piano type, or can be excited in any other well known manner.

The motions of the magnetized strings (and

Epiphone and the adjustable pole pickup

- Also in late’30s, Herb Sunshine invented the adjustable pole configuration so that pickup can be fine tuned for different string power
- Without this, one string could sound quieter than others due to differences in how the strings would induce current in the pick-up coil and magnet.
- Note that after Beauchamp’s first horseshoe magnet pickup, inventors were able to create powerful enough pickups without the external magnets which were bulky and got in the way of playing (especially string damping)

Oct. 10, 1939. H. S. SUNSHINE 2,175,325

MAGNETOELECTRIC PICK-UP DEVICE FOR STRINGED MUSICAL INSTRUMENTS

Filed Nov. 10, 1937

Fig. 1

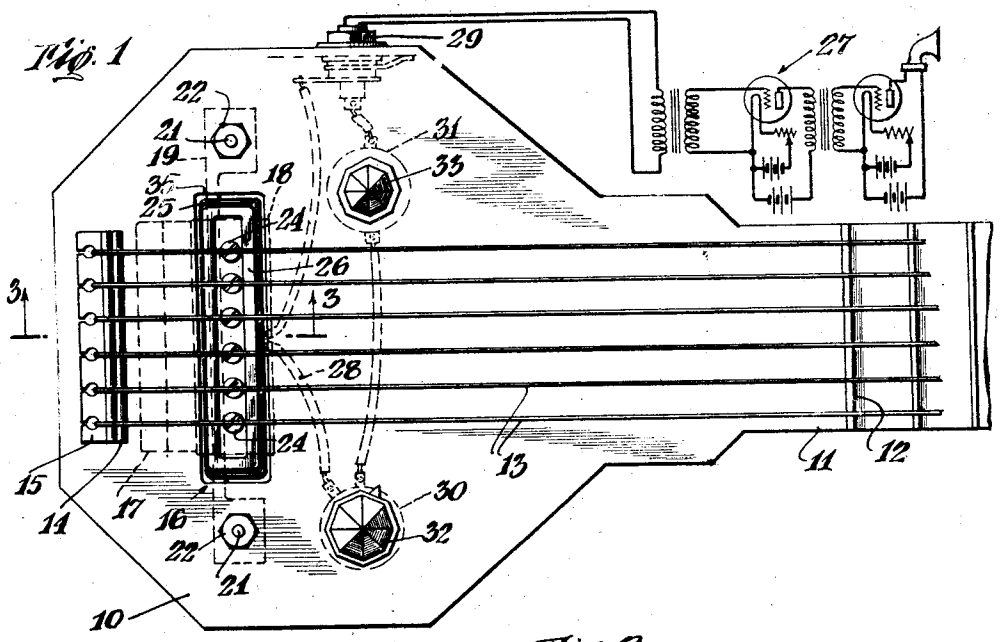


Fig. 2

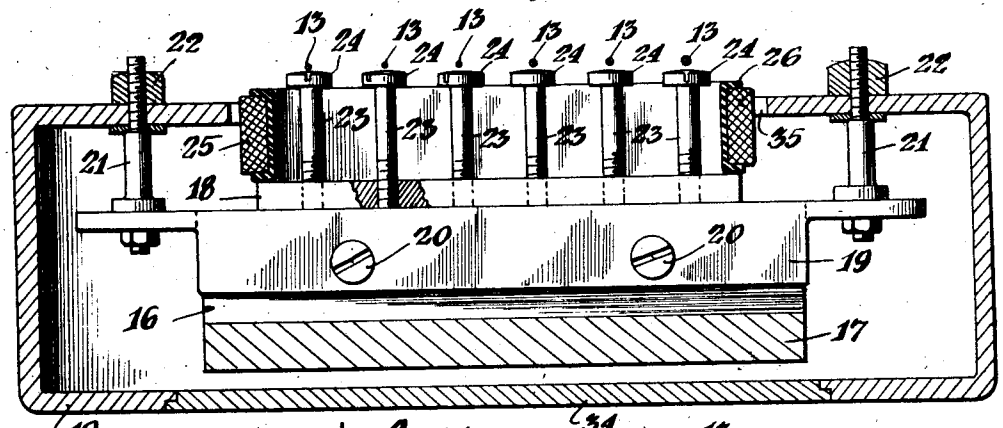
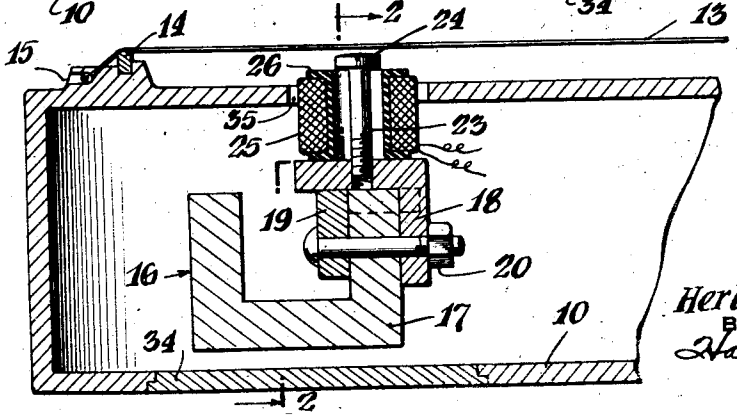


Fig. 3



INVENTOR
Herbert S. Sunshine
BY
Harold Kaplan
ATTORNEY

Patented Oct. 10, 1939

2,175,325

UNITED STATES PATENT OFFICE

2,175,325

MAGNETOELECTRIC PICK-UP DEVICE FOR STRINGED MUSICAL INSTRUMENTS

Herbert S. Sunshine, New York, N. Y., assignor to Epiphone, Inc., New York, N. Y., a corporation of New York

Application November 10, 1937, Serial No. 173,758

2 Claims. (Cl. 84—1.16)

The present invention relates to stringed musical instruments such as the guitar, banjo, mandolin and the like, and more particularly to a magneto-electric pick-up device adapted to be incorporated in such musical instruments whereby the vibrations of the strings are translated into a pulsating electric current which is amplified and transformed into sounds corresponding in pitch and quality to the sounds produced by the vibrations of the strings.

The principal object of the present invention is to provide in a stringed musical instrument, an improved type of magneto-electric pick-up unit which will faithfully and accurately reproduce the characteristic tones of the instrument. Another object of the invention is to provide in a stringed musical instrument, a pick-up unit which is adjustable for each string of the instrument. A further object of the invention is to provide in a stringed musical instrument having strings of different diameters, a pick-up unit including a plurality of individually adjustable core-members adjacent respective strings which are adapted for adjusting the air gaps therebetween, to compensate for the ordinary spacing variation which is due to the difference in the diameters of the strings. A still further object of the invention is to provide in a stringed musical instrument a magneto-electric pick-up unit of the character described, which is simple in construction, economical to manufacture and efficient in use. Other objects and advantages of the present invention will in part be pointed out hereinafter and will in part be apparent to those skilled in the art to which the present invention relates.

With the above and other objects in view, the present invention consists of the novel features of construction and arrangement of parts hereinafter set forth and illustrated in the accompanying drawing wherein there is shown the preferred embodiment of my invention.

In the accompanying drawing which forms an integral part of this specification,

Fig. 1 is a top plan view of the body portion of a stringed musical instrument showing the embodiment of my invention together with an ampifying circuit associated therewith;

Fig. 2 is an enlarged sectional view of the instrument taken on the line 2—2 of Fig. 3; and

Fig. 3 is an enlarged fragmentary sectional view of the instrument taken on the line 3—3 of Fig. 1.

Referring now to the drawing wherein like reference characters indicate corresponding parts throughout the several views 10 represents the body of the instrument which preferably has a hollow interior and which may be made in any desired shape or size. The body 10 is preferably constructed of non-resonant material such as metal or hard wood of substantial thickness, for the present invention contemplates the reproduction of the tones produced solely by the vibrations of the strings without any resonant effects which may be produced by the body of the instrument. Extending from the body 10, in the conventional manner, is the neck of the instrument 11 which may be attached to the body or may be constructed integral therewith. The upper side of the neck 11 forms a fingerboard which is provided with spaced frets 12. Strings 13, which are preferably made of magnetic material and which are, in the conventional practice, of unequal diameters, are tensioned over the body and neck of the instrument in parallel arrangement, and lie in substantially a common plane. The strings 13 pass over a bridge 14 which is secured to the upper side of the body 10 and is situated toward the outer end thereof, and over a similar bridge (not shown) on the fingerboard, situated near the outer end of the neck 11. The strings 13 are secured at one end to a tail-piece 15 and at the other end they are engaged by keys or pegs (not shown) which are adapted for tensioning of the strings. The strings are in this manner adapted to be manually plucked or otherwise manipulated by the player to produce the desired vibrations.

The pick-up unit which is designated in general by numeral 16, comprises a permanent magnet 17 of U-shape or horse-shoe design. Mounted over one of the poles of the magnet 17 is an angular plate 18 which is constructed of magnetic material having a lesser degree of hardness than the magnet 17 to make it adaptable for tapping in order to receive the threaded core-members which will be referred to hereinafter. The magnet 17 and the anguar pole-plate 18 are together attached to an elongated supporting bar or bracket 19 by means of suitable studs or bolts 20. The pick-up unit is mounted within the interior of the body 10 by means of suitable studs or bolts 21 which project upwardly from the ends of the supporting bar or bracket 19 and extend through openings in the upper side of the body. Nuts 22 are threaded over the outer ends of the bolts 21 for securing the unit 16 to the upper side of the body.

The pick-up unit includes a plurality of core-members 23 of magnetic material which are

1940s: Gibson and the P-90 pickup

- Gibson was already a dominant guitar manufacture, and competed with the smaller Epiphone
- Adjustable pole pickups were trending and Gibson developed its own version to compete with Sunshine's Epiphone pickup: the P-90, which became a legendary single coil, debuted in 1946
- But Gibson filed late and Patent No. 2,911,871 was issued to Charles F. Schultz <licensed to Gibson?>

1940s & 1950s: The Fender revolution

- Leo Fender and his company became a premier inventor and manufacturer of electric instruments
- Embracing the fully electric solid-body instrument enabled by the pickup, Fender popularized this format synergistically with the emergence of swing bands, jump bands, electric blues, electric country, and proto-rock and roll
- Through the power, clarity, and ease of playing, the Broadcaster, Telecaster, and later Stratocaster, began appearing as lead instruments in all manner of music formats

1940s & 1950s: The Fender revolution

- Especially important, but not unique to Fender, was the compression of pickups and amps; this made the electric guitar more nuanced than traditional lead instruments in that quiet picking could still be quite audible, while forceful playing would be clipped or limited so as not to be deafening; sustain was also greatly increased
- Fender also introduced the solid body electric bass that revolutionized composers' and players' approach to the bottom end: notably the Precision Bass (P Bass) and Jazz Bass
- Leo received many patents, although there is controversy over novelty for some

1940s & 1950s: Key Fender inventions

- Integrated pickups and tail pieces
- Wax potted pickups (to reduce vibration and microphonic interference)
- Angled and positioning of pickups
- “Modular” instruments in which major components such as neck, pickup/tailpiece combos, etc. could be unbolted and replaced; less a single intrinsically integrated instrument than a bolted together assemblage of interchangeable parts
- In essence, Fender captured the progressive, futuristic, and technology based Post-War culture

Oct. 30, 1951

C. L. FENDER

2,573,254

COMBINATION BRIDGE AND PICKUP ASSEMBLY
FOR STRING INSTRUMENTS
Filed Jan. 13, 1950

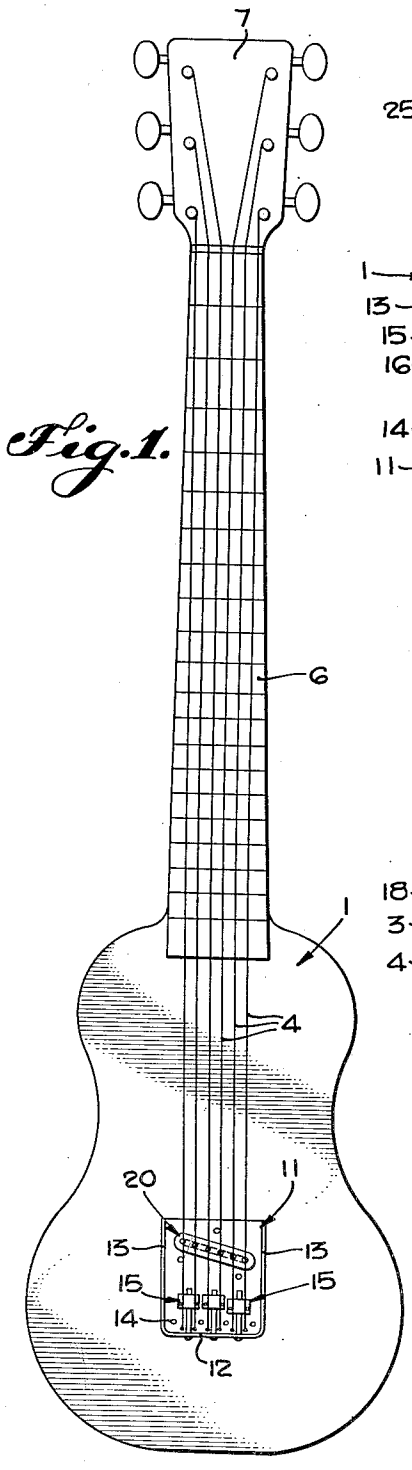


Fig. 1.

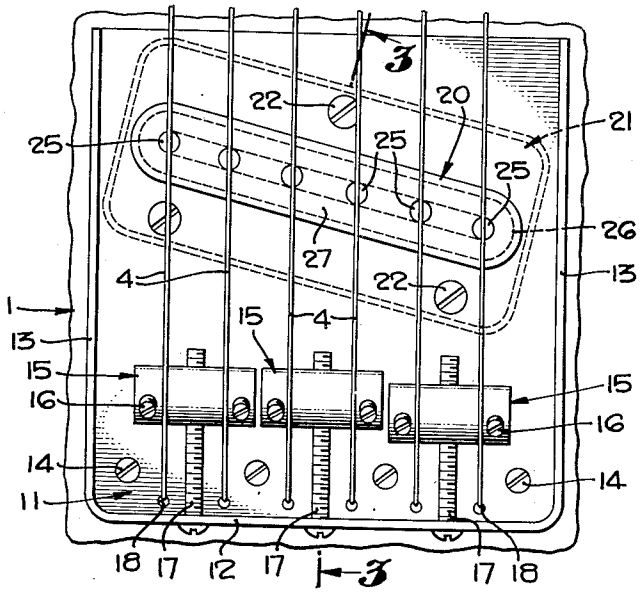


Fig. 2.

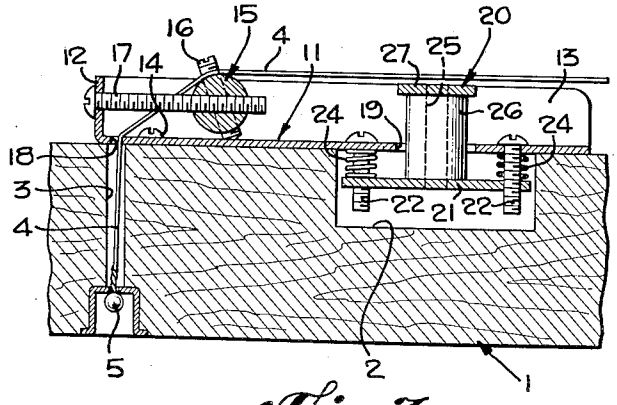


Fig. 3.

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Patented Oct. 30, 1951

2,573,254

UNITED STATES PATENT OFFICE

2,573,254

COMBINATION BRIDGE AND PICKUP ASSEMBLY FOR STRING INSTRUMENTS

Clarence L. Fender, Fullerton, Calif.

Application January 13, 1950, Serial No. 138,305

6 Claims. (Cl. 84—1.16)

1

My invention relates to combination bridge and pickup assemblies for string instruments, and included in the objects of my invention are:

First, to provide a device of this class which is particularly suitable for electrically amplified guitars or similar musical instruments and which incorporates a novel sectional bridge permitting individual adjustment of the strngs.

Second, to provide a device of this class wherein the pickup unit may be accurately adjusted relative to the strings of the instrument.

Third, to provide on the whole, a compact assembly which although economical of manufacture and installation is particularly dependable and effective in operation.

With the above and other objects in view as may appear hereinafter, reference is made to the accompanying drawings, in which:

Figure 1 is a top view of a guitar incorporating my invention.

Figure 2 is an enlarged top or plan view of my combination bridge and pickup assembly, the adjacent portions of the guitar body being shown fragmentarily.

Figure 3 is a sectional view through 3—3 of Figure 2.

My invention is shown in conjunction with a guitar which involves a body 1. The body may be solid except for a recess 2 to receive a portion of the pickup unit and vertical holes 3 which receive the strings 4 of the instrument. The underside of the body 1 is provided with suitable anchor fittings 5 in which the ends of the strings are secured. The strings pass over my bridge and pickup assembly, to be described hereafter, and extend in a conventional manner over the neck 6 of the guitar and are conventionally secured to the head 7 thereof.

My bridge and pickup assembly includes a plate 11, preferably formed of sheet metal and provided with an end flange 12 and side flanges 13. The plate 11 is positioned over the recess 2 and holes 3 and is secured in place by screws 14.

Mounted on the plate 11 are three bridge members 15, which form the parts of a sectional bridge. Each bridge member 15 is in the form of a short cylinder adapted to underlie two strings 4. Each bridge member is provided near its extremities with diametrically extending elevation set screws 16 the lower ends of which protrude through the bridge member and bear against the plate 11. Each bridge member 15 is also provided with one tension set screw 17, which extends horizontally therethrough and is journaled in the end flange 12. The strings 4 pass

2

over their respective bridge members and enter the holes 3 through mating perforations 18.

The plate 11 is provided with a clearance slot 19 in registry with the recess 2. Mounted in the clearance slot 19 and extending particularly in the recess as well as projecting in the plate 11, is a pickup unit 20. The pickup unit includes a base plate 21 of nonmagnetic material mounted within the recess 2 and adjustably suspended from the plate 11 by screws 22. Surrounding the screws 22, between the plate 11 and the base plate 21, are coil springs 24. The base plate 21 supports upstanding permanent magnet armatures 25 adapted to be located in alignment with the strings 4 of the guitar. The armatures are surrounded by a solenoid coil 26. Suitable leads (not shown) electrically connect the solenoid coil to a conventional amplifier. The upper extremities of the armatures 25 are retained in a head plate 27, also of nonmagnetic material.

The pickup unit is preferably suspended by three screws, so positioned that the pickup unit may be tilted slightly either about an axis traversing the strings or about an axis parallel with the strings, so that each armature may be brought into the proper relationship with its corresponding string. Furthermore, it has been found desirable to set the pickup unit in acute angular relation with the strings rather than at right angles thereto.

It has been found advantageous to place the elevation set screws 16 into the bridge members 15 at an angle to the vertical, as shown best in Figure 3. Also, the bridge members are disposed, at sufficient distance from the end flange 12, and the tension set screws 17 are journaled sufficiently loosely in the end flange to allow the necessary elevation adjustment of the bridge members. It will be noted that each bridge member 15 may be tilted about the axis of the tension screw 17, so that one of the strings supported by the bridge member 15 may be adjusted differently than the other. It will be observed that by reason of the adjustment of the set screws 17, the distance between the length of the string may be adjusted for proper noting of the frets.

Having fully described my invention, it is to be understood that I do not wish to be limited to the details herein set forth, but my invention is of the full scope of the appended claims.

I claim:

1. A bridge assembly for stringed musical instruments, involving: a plate member adapted to be secured to the body of a stringed musical instrument and apertured to receive the ends of

1950s: Gretsch's Filtertron ("**FILTER**s out elec**Tron**ic hum") and HiLotron

- Gretsch emerged as a major electric guitar, bass, and drum manufacturer in the 1950s
- It relied on in-house and outsourced pickups (DeArmond) to develop a singular sound that became enormously popular with jazz, country, and the emerging rockabillly and rock n' roll players; the sound was somewhere between the thin bright electric sound of Fender and the warm round sound of Gibson
- Crucially, it raced with Gibson to issue a humbucker to address the continuing concern over hum and interference

June 30, 1959 J. R. BUTTS 2,892,371

PICKUP

Filed Jan. 22, 1957

FIG. 1.

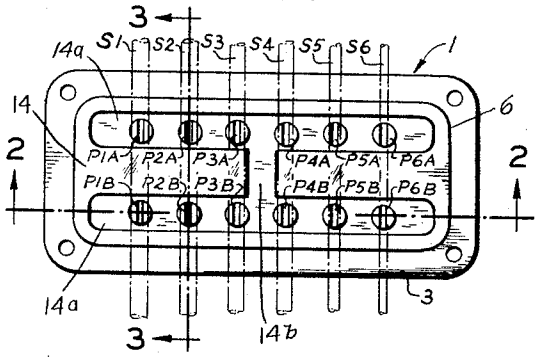


FIG. 3.

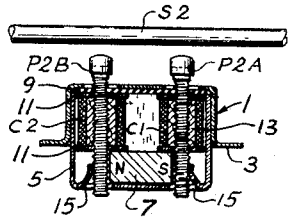


FIG. 2.

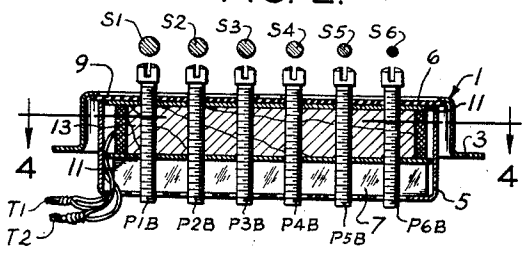


FIG. 4.

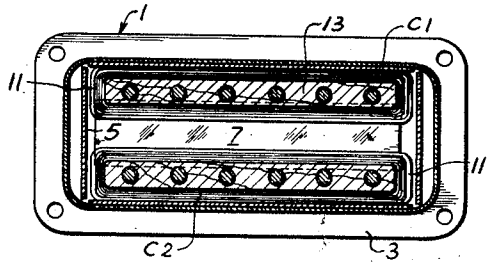


FIG. 5.

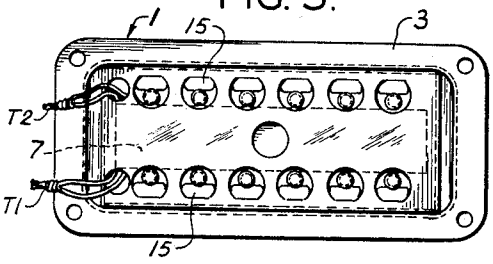
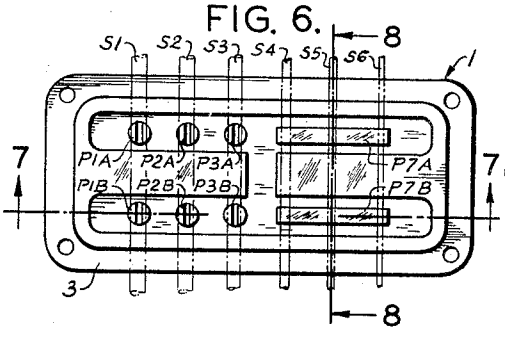


FIG. 6.



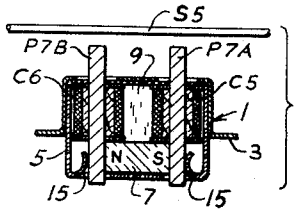


FIG. 8.

FIG. 7.

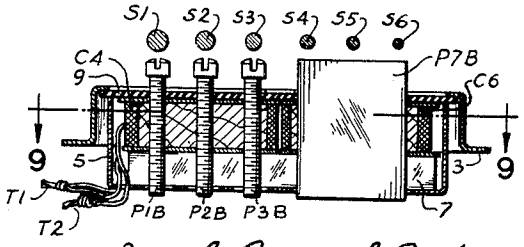
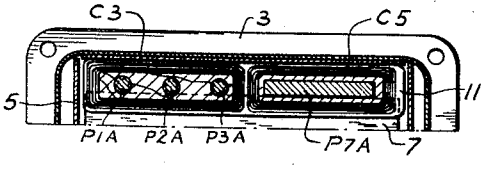


FIG. 9.



Joseph Raymond Butts,
Inventor.
Koenig and Pope,
Attorneys.

United States Patent Office 2,892,371
Patented June 30, 1959

2,892,371

PICKUP

Joseph Raymond Butts, Cairo, Ill.

Application January 22, 1957, Serial No. 635,296

7 Claims. (Cl. 84—1.16)

This invention relates to a pickup and more particularly to a pickup for musical instruments of a type having a plurality of vibrating magnetic members.

Among the several objects of this invention may be noted the provision of pickups which have an increased magnetic coupling with vibrating musical members, thereby producing a higher amplitude output voltage; the provision of such pickups which have a smooth linear response over the audible range; the provision of pickups of the class described which have an electrical output which is unaffected by external hum and noise pulses; the provision of pickups of the class described which are capable of a wide variety of tonal effects; the provision of pickups in which the relative volume of each vibrating musical member can be independently adjusted over wide latitudes; the provision of such pickups which have a resonant frequency greater than 20 kc.; and the provision of pickups of the class described enclosed in a metal casing without undesirable frequency discrimination effects. Other objects and features will be in part apparent and in part pointed out hereinafter.

The invention accordingly comprises the constructions hereinafter described, the scope of the invention being indicated in the following claims.

In the accompanying drawings, in which several of various possible embodiments of the invention are illustrated,

Fig. 1 is a plan view of a pickup of the present invention positioned relative to the steel strings of a musical instrument;

Figs. 2 and 3 are longitudinal and transverse sections respectively taken on lines 2—2 and 3—3 of Fig. 1;

Fig. 4 is a section taken on line 4—4 of Fig. 2;

Fig. 5 is a bottom view of the pickup illustrated in Fig. 1;

Fig. 6 is a plan view of a second embodiment of the present invention positioned relative to the steel strings of a musical instrument;

Figs. 7 and 8 are longitudinal and transverse sections respectively taken on lines 7—7 and 8—8 of Fig. 6; and,

Fig. 9 is a half section taken on line 9—9 of Fig. 7.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

It has been the practice in the past few years to amplify the sound produced by various musical instruments which have vibrating members of magnetic material, such as steel strings or reeds, by positioning a pickup near the vibrating musical members and thereby transforming the mechanical movement of the members into an electrical signal which is amplified and fed to an electro-acoustic transducer or loudspeaker. This is particularly true in regard to steel stringed instruments such as guitars and mandolins. However, there have been a number of disadvantages to this arrangement. For example, the pickups used were not only relatively inefficient but they produced electrical signals which were not an accurate representation of the acoustical output of the musical instrument. Thus, the ranges of these prior-art pickups were much more limited than that of the acoustical output of the musical instruments, and had response characteristics with peaks and valleys. Moreover, these pickups were notoriously susceptible to external magnetic disturbances such as A.C. hum and noise pulses which would be electrically reproduced and sometimes even override musical signals.

In accordance with the present invention pickups may be constructed which electrically reproduce the acoustical output of the vibrating musical members with full fidelity because they have response characteristics that are linear over a frequency range at least as great as that of the audible range of musical instruments. The resonant frequency of these pickups, in contradistinction to prior-art devices, which usually had a resonance within the audible range, is in the order of 20 kc. or more. Also, the electrical parameters of the new pickups of my invention are such that the linear response normally will provide the desirable constant velocity response characteristic, i.e., rises evenly and smoothly at 6 db per octave. Moreover, the extremely undesirable effect of external magnetic disturbances such as hum and noise is eliminated because any electrical signals thereby produced in the pickup are automatically cancelled. Additionally, the frequency discrimination effects normally attendant upon the usual enclosing of the electrical pickup components within a metallic shield or casing (due to the shunting effect of currents induced therein) are avoided in the pickups described herein.

One of the most important advantages of the pickups of this invention is their remarkable flexibility. By various convenient adjustments and the selection of particular embodiments of this invention, a practically unlimited range of tonal and coloration effects is available to the musician.

Referring now to the drawings, and more particularly to Figs. 1–5, reference numeral 1 indicates an elongate sheet metal case which partially encloses the various components of a unitary pickup of the present invention. This case comprises an elongate rectangular cup-shaped bottom 5 and a top 6 of inverted cup shape provided with a flange 3 including mounting holes whereby the pickup may be conveniently mounted under the steel strings S1–S6 of a guitar.

Disposed within the case 1 is an elongate permanent magnet 7 of Alnico or any similar high coercive force magnet material, polarized as indicated. A number of pairs of individual pole pieces P1A, P1B—P6A, P6B are positioned in two rows along opposite sides of the magnet 7, so that their lower portions touch or are in close proximity to the sides of the magnet. Each of these pole pieces is preferably constituted by bolts which are threaded in holes through a flat top insulator cover plate 9, a pair of insulated coil flanges 11 and a coil core 13 of nonmagnetic material. The top wall 14 of the top 6 of the case is provided with a pair of slots 14*a* extending parallel to one another lengthwise of the case in the planes of the rows of pole pieces. A slot 14*b* extending between slots 14*a* in the top wall 14 constitutes a gap for inhibiting circulating currents in top wall 14 around slots 14*a*. The pole pieces P1A—P6A extend out of the case through one of the slots 14*a*, and the pole pieces P1B—P6B extend out of the case through the other slot 14*a*. The bottom 5 includes an array of holes positioned in alignment with the pole pieces, and formed by partly cutting away and angling portions of the bottom wall of the bottom 5 to form tabs 15. These tabs engage the lower ends of the respective pole pieces and serve (1) to prevent rotation thereof which might otherwise be caused by vibration, (2) to insure maximum physical

Rock guitar watershed: Gibson's PAF pickup

- Competing with Gretsch in the humbucker race, Gibson commissioned Seth Lover to create a dual coil pickup
- Filed in 1955, but not issued until 1959, Patent No. 2,896,491 covered a humbucker pickup that changed music; its "tone of tones" was both warm and rich in the neck position for jazz and blues playing, and biting and aggressive in the bridge position, ideal for the new rock and roll
- But what the PAF enabled, no one could have fully foreseen; its hum cancellation and high output allowed for high gain overdrive (pre and post) not even remotely possible with microphones or early pickups

Rock guitar watershed: Gibson's PAF pickup

- Loaded into the new Les Paul and SG guitars of the late 50s and early 60s, the PAF was integral to the late 60s and 70s classic rock sounds of the The Who, Cream, Led Zeppelin, ZZ Top, AC/DC, and more
- It encouraged amp manufacturers such as James Marshall to push pre and post overdrive gain to new heights, in turn requiring ever quieter and more responsive pickups
- This symbiotic relationship between guitar (and pickup) and amp manufactures created the classic rock guitar sound.

July 28, 1959 S. E. LOVER 2,896,491

MAGNETIC PICKUP FOR STRINGED MUSICAL INSTRUMENT

Filed June 22, 1955 2 Sheets-Sheet 1

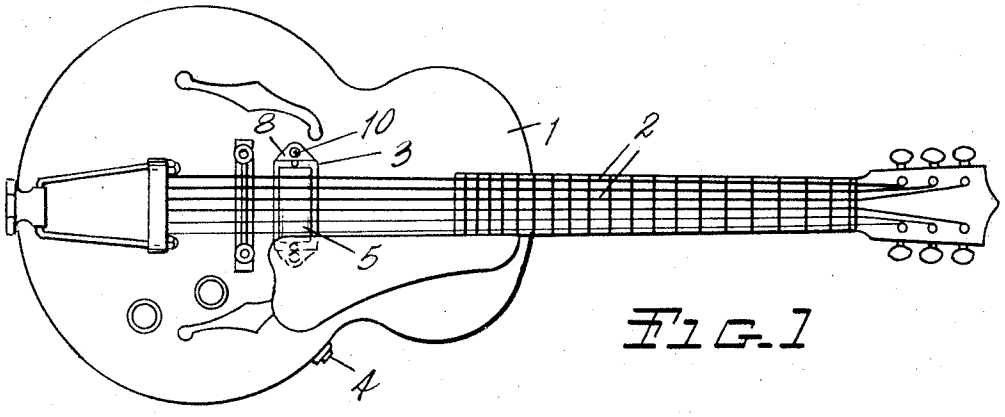


FIG. 1

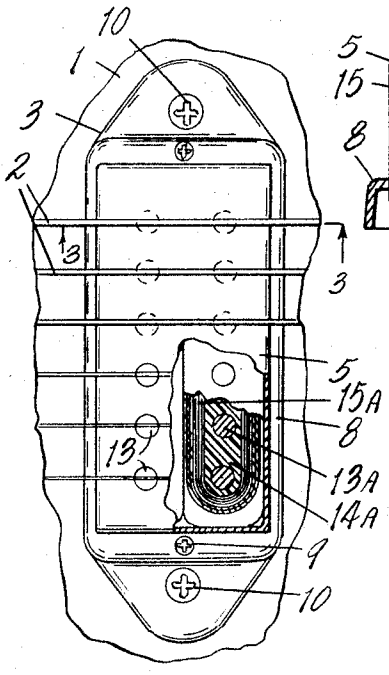


FIG. 2

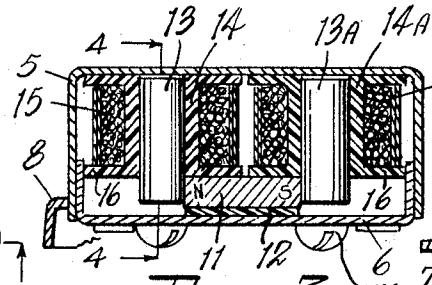


FIG. 3

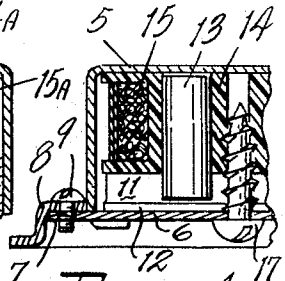


FIG. 4

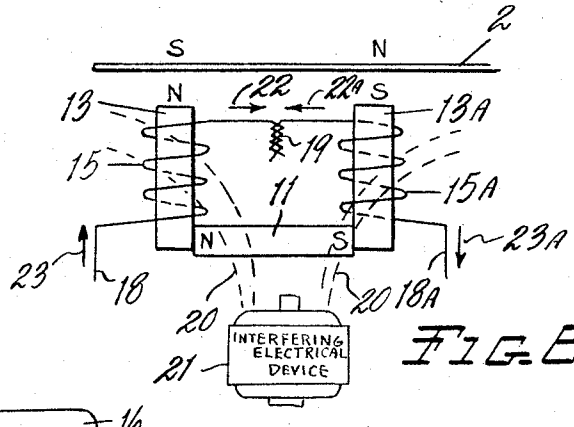


FIG. 6

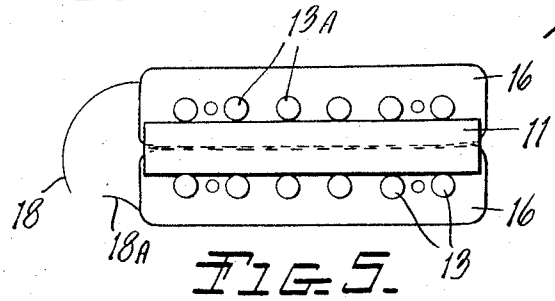


FIG. 5

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Attorney

July 28, 1959 S. E. LOVER 2,896,491

MAGNETIC PICKUP FOR STRINGED MUSICAL INSTRUMENT

Filed June 22, 1955 2 Sheets-Sheet 2

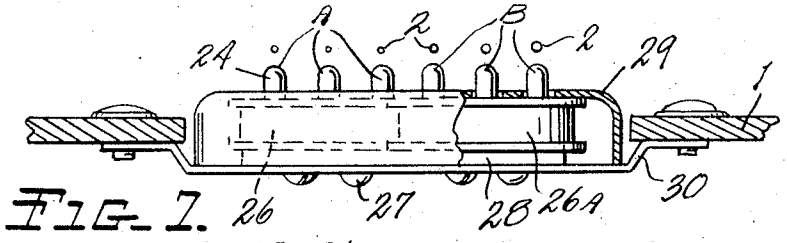


FIG. 7.

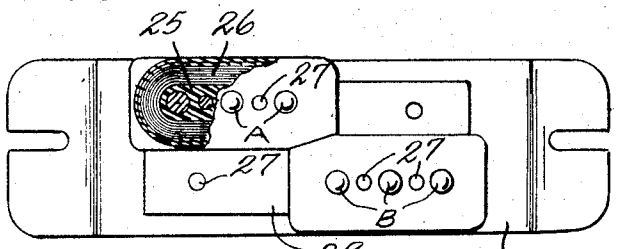


FIG. 8.

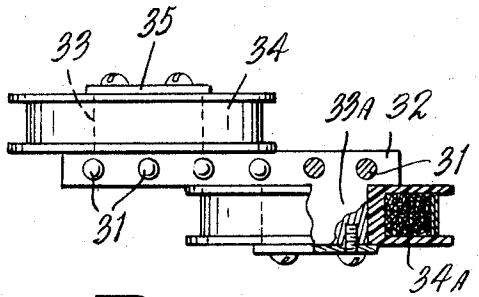


FIG. 9.

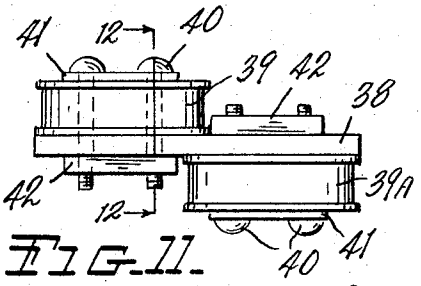


FIG. 11.

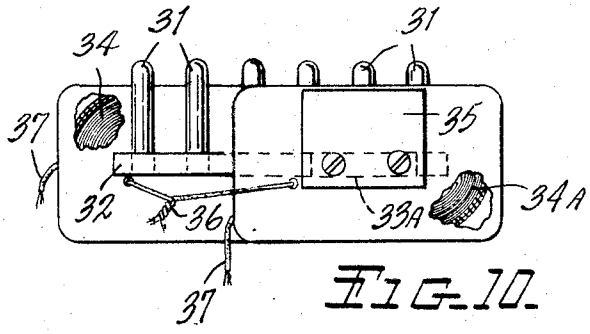


FIG. 10.

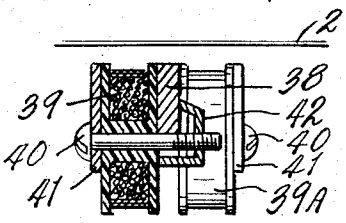


FIG. 12.

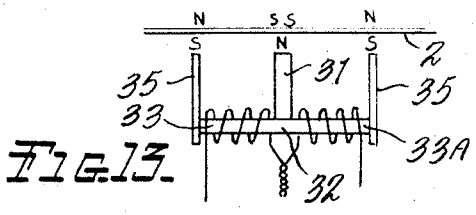


FIG. 13.

INVENTOR.
Seth E. Lover
BY
Attorney.

United States Patent Office 2,896,491 Patented July 28, 1959

2,896,491

MAGNETIC PICKUP FOR STRINGED MUSICAL INSTRUMENT

Seth E. Lover, Kalamazoo, Mich., assignor to Gibson, Inc., Kalamazoo, Mich.

Application June 22, 1955, Serial No. 517,171

1 Claim. (Cl. 84—1.15)

This invention relates to improvements in magnetic pickup for stringed musical instrument. The principal objects of this invention are:

First, to provide a magnetic pickup for a stringed musical instrument which is not affected by adjacent electrical devices and which does not pick up and transmit to the amplifier the hum of such devices.

Second, to provide an electromagnetic pickup for stringed musical instruments with magnetically opposed pickup coils that neutralize the effect of currents induced by adjacent electrical devices.

Third, to provide a hum neutralizing magnetic pickup that is efficient in producing electrical vibrations in response to the playing of a stringed instrument.

Fourth, to provide a magnetic pickup that effectively employs relatively small masses of permanent magnet material and is easily mounted on a stringed musical instrument in proper relation to the strings of the instrument.

Fifth, to provide a magnetic pickup having a metallic magnetic return circuit between a pole of the permanent magnet and a coacting string of a musical instrument to increase the strength of the magnetic field around the string and improve the efficiency of the permanent magnet.

Other objects and advantages of the invention will be apparent from a consideration of the following description and claim. The drawings, of which there are two sheets, illustrate a preferred and several modified forms of magnetic pickups embodying principles of the invention.

Fig. 1 is a plan view of a stringed musical instrument having metallic strings and having the preferred form of the magnetic pickup mounted thereon.

Fig. 2 is an enlarged fragmentary plan view of the pickup shown in Fig. 1 with parts broken away in horizontal cross section.

Fig. 3 is an enlarged vertical transverse cross sectional view through the pickup taken along the plane of the line 3—3 in Fig. 2.

Fig. 4 is a fragmentary longitudinal cross sectional view through the pickup taken along the plane of the line 4—4 in Fig. 3.

Fig. 5 is a bottom plan view of the pickup with the case removed.

Fig. 6 is a schematic view illustrating the electrical and magnetic circuits in the pickup in association with an external source of interfering magnetic energy.

Fig. 7 is a fragmentary vertical cross sectional view through the top panel of a stringed musical instrument with a modified form of pickup mounted therein.

Fig. 8 is a plan view of the pickup shown in Fig. 7 with the cover removed and portions broken away in horizontal cross section.

Fig. 9 is a top plan view of a second modified form of pickup with portions broken away in horizontal cross section.

Fig. 10 is a side elevational view of the pickup shown in Fig. 9 with portions broken away to illustrate the position of the coils.

Fig. 11 is a top plan view of a third modified form of the pickup.

Fig. 12 is a vertical cross sectional view taken along the plane of the line 12—12 in Fig. 11.

Fig. 13 is a schematic view illustrating the electrical and magnetic circuits in Figs. 9 to 12.

Magnetic pickups for stringed musical instruments having steel strings are well known and heretofore have consisted essentially of a coil wound around a permanent magnet core with a string of the instrument passing in proximity to the core so that vibration of the string will vary the magnetic field through the core and induce an electrical current in the coil capable of being amplified and passed through a loud speaker for amplifying the sound of the instrument. Stringed musical instruments and magnetic pickups of this type have been subject to the undesirable creation of hum noises in the amplifier by reasons of electrical devices in proximity to the pickup which create undesired interfering currents in the coil. The present invention eliminates the undesirable hum by neutralizing undesired induced currents in the pickup coil before they can be amplified and reproduced. Fig. 1 of the drawings illustrates a guitar 1 or other stringed musical instrument having metallic strings 2 stretched over a magnetic pickup device generally indicated at 3. The coils of the pickup device are connected to a jack 4 by means of which the pickup can be electrically connected to an amplifier and loud speaker in a well known manner.

As is more clearly illustrated in Figs. 2 to 5 the pickup 3 includes a case 5 of non-magnetic material having a removable bottom panel 6 with ears 7 projecting from each end thereof. A mounting plate 8 is secured around the case by means of screws 9 and the mounting plate is in turn attached to the body of the instrument by screws 10. Within the case 5 the pickup includes an elongated bar 11 of permanent magnetic material. The bar is cushioned on the bottom of the case 5 by a felt strip 12 and is magnetized transversely from side to side rather than longitudinally along its length so that one side of the magnet constitutes a north pole and the other side constitutes a south pole. Positioned at longitudinally spaced intervals along both sides of the magnet 11 are pairs of upright cylindrical soft iron cores forming pole pieces 13 and 13A, there being a pair of pole pieces for each of the strings 2 of the instrument. At their lower ends the pole pieces abut against the side edges of the magnet 11 and are held in place by the magnetism of the magnet. The pole pieces 13 on one side of the magnet project through an elongated insulating bobbin 14 having a first coil 15 wound therearound in a plane parallel to the magnet and the surface of the instrument. A similar bobbin 14A surrounds the other line of pole pieces and has a coil 15A wound therearound. End flanges 16 on the bobbin are retained in place by engagement with the inside of the case 5 and screws 17 extending through the bottom of the case into the bobbins between the pole pieces.

The electrical connection between the coils 15 and 15A is best illustrated in Figs. 5 and 6 where the outer ends 18 and 18A of the coils are extended for connection to the previously described jack 4 on the body of the instrument. The inner ends 19 of the coils are electrically joined and the coils 15 and 15A are wound around the magnetic cores formed by the pole pieces 13 and 13A as illustrated. Viewed from one side of both coils, one coil 15 runs around the front of its core 13 from the connected inner ends 19 while the other coil 15A runs around the back of its core 13A. Careful consideration

Late 60s, 70s, and Beyond: Back to Fender

- By the late 60s, Fender had stood by its single coils, but gotten better hum shielding
- Artists like Jimi Hendrix, Eric Clapton, Jeff Beck, David Gilmour and many other switched to Fenders (especially Strats) from Les Pauls and SGs
- The electric guitar led the way in “signal processing” as wah, distortion, delay, phase, flange, and other outboard and pedal effects became common
- By the 80s, the clean, funky sound of Strats took over pop/rock music
- Roland introduced the “Hex” pickup that generated digital signals from guitar string vibrations

High Tech and Solid State in the 80s and 90s Leads Back to Analog and “Low-Fi”

- In 1980s, Roland introduced the “Hex” pickup that generated digital signals from guitar string vibrations
- Solid state amps and new piezo and other acoustic pickups render cleaner and in some ways more authentic acoustic guitar sounds
- But, the warmth, soul, and grit of classic rock guitar got lost
- By the mid 90s, guitarists were clamoring for authentic and reissue PAF pickups, vintage guitars, tube amps, etc.

Conclusion

- In this way, the once-futuristic pickups, guitars, and amps of the 30s-50s were now prized as “vintage”
- If piezo and other modern amplification pickups were developed in the 40s, we might not have had classic rock guitar: guitars would have stayed clean and acoustic sounding
- Thus, the happenstance of history and the limits of the technology available at the time wound up creating a whole new sound that changed the world

Panel 2 *Consumer Products: IP In Our Everyday Lives*

- **Bill Coughlin**, *President and CEO*, Ford Global Technologies
- **Hannah Naltner**, *Corporate Counsel*, Steelcase
- **James Pooley**, *IP and Security Advisor*, A Professional Law Corporation
- **Thomas Stoll**, *Legislative Consultant, IP*, American Bar Association
- ***Moderator*: Prof. Ross Davies**, George Mason University School of Law

#cpip2015

“Back to the Future” of Disruptive Innovation

William J. Coughlin
President & CEO
Ford Global Technologies LLC

Sept. 29, 2015

A Historical Formula for Success

Disruptive Innovation + Intellectual Property (IP) Rights

=

Freedom + Wealth

The U.S. was Founded on IP Rights

Article 1, Section. 8 of the U.S. Constitution (1787):

The Congress shall have Power To lay and collect Taxes, …
To borrow Money on the credit of the United States;
To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes;
To establish an uniform Rule of Naturalization, and uniform Laws on the subject of Bankruptcies throughout the United States;
To coin Money, regulate the Value thereof, and of foreign Coin, and fix the Standard of Weights and Measures;
To provide for the Punishment of counterfeiting the Securities and current Coin of the United States;
To establish Post Offices and post Roads;

To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to *their* respective Writings and Discoveries;

To constitute Tribunals inferior to the supreme Court;
To define and punish Piracies and Felonies committed on the high Seas, and Offences against the Law of Nations;
To declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water;
To raise and support Armies, but no Appropriation of Money to that Use shall be for a longer Term than two Years;
To provide and maintain a Navy;
To make Rules for the Government and Regulation of the land and naval Forces; …

And How Important are IP Rights?

- **In 1858, Abraham Lincoln said:**
  - "In the world's history certain inventions and discoveries occurred of peculiar value, on account of their great efficiency in facilitating all other inventions and discoveries. Of these were the art of writing and of printing, the discovery of America, and the introduction of patent laws."
- **In 1859, Abraham Lincoln said:**
  - "These [patent laws] began in England in 1624; and, in this country, with the adoption of our constitution. Before then, any man might instantly use what another had invented; so that the inventor had no special advantage from his own invention. The patent system changed this; … and thereby added the fuel of interest to the fire of genius, in the discovery and production of new and useful things."

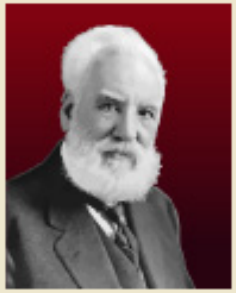
Freedom + Wealth

- **IP Rights are an Essential Element to the Formula for Success**
  - Anyone could create wealth by the ability to have an ownership stake in the inventive solutions they created
    - Wealth was no longer dependent upon land ownership or privilege
  - Freedom means more than the right to work by the hour and move about
    - Anyone can lead a technical revolution and change the lives of everyone

Leverage Ideas vs. Work by the Hour

http://www.american-inventor.com/

Inventor of the Telephone



Though he was born in Scotland and spent some time in Ontario, Alexander Graham Bell didn't actually start inventing until he settled in Boston and became an American citizen. And it's a good thing he did, because without Graham Bell we wouldn't have one of our most valued inventions: the telephone.

With both a mother and a wife who were unable to hear, inventor Alexander Graham Bell took an active interest in the deaf. Like his father, he taught deaf people and worked as a speech therapist. In fact, he first developed his phonautograph invention, a device that draws vibrations from the human voice, to help deaf students visualize sound. Eventually, this invention would evolve into what we now know as the telephone.

Alexander Graham Bell made the first speech transmission through his telephone invention on March 10, 1876 (three days after he received his patent), and soon after introduced the device at the World's fair. Of course, Graham Bell wasn't the only one working to develop this technology at the time – one of the others was telegraphy titan Western Union. All in all, the Bell Company was forced to defend over 600 legal challenges to the invention's patent. And, with Alexander Graham Bell's convincing testimony, the company won each and every one.

IP Rights and Economics

Intellectual property protection is identified in the WEF surveys as one of the key national 'institutions' within which individuals, companies and governments interact to generate income and wealth in the economy. As ICC has noted in the past, the countries that are perceived as having the strongest intellectual property protection are routinely found to be among the most economically competitive countries in the WEF surveys. Those perceived as having the weakest IPR systems tend to rank among the bottom for growth and competitiveness.[38] In the 2009-2010 WEF survey, there was again a high degree of correlation (r=0.86) between a country's intellectual property ranking and its overall competitiveness ranking for all 133 surveyed countries. *(See Fig. 3.)*

In the words of the WEF:

> "The quality of institutions [which include intellectual property] has a strong bearing on competitiveness and growth. It influences investment decisions and the organization of production and plays a central role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies. For example, owners of land, corporate shares, or intellectual property are unwilling to invest in the improvement and upkeep of their property if their rights as owners are insecure."[39]

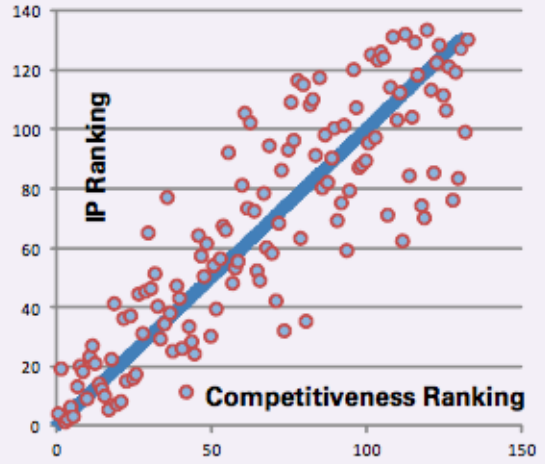


Figure 3. WEF Competitiveness and IP Rankings. *(WEF Global Competitiveness Report, 2009-2010)*

http://www.iccwbo.org/advocacy-codes-and-rules/bascap/value-of-ip/ip-and-economic-growth/

Now “Back to the Future”

"Don't worry about what anybody else is going to do…
The best way to predict the future is to invent it.
Really smart people with reasonable funding can do just about anything that doesn't violate too many of Newton's Laws!"

— Alan Kay in 1971, inventor of Smalltalk which was the inspiration and technical basis for the Macintosh and subsequent windowing based systems

Is This the Future You Want?

Have Your Work be "Programmed" by Robots?

"Rather than relying on preprogrammed instructions like other warehouse software, Hitachi claims that this AI can go off-script, adapting to on-site changes, weather patterns, and shifts in demand."

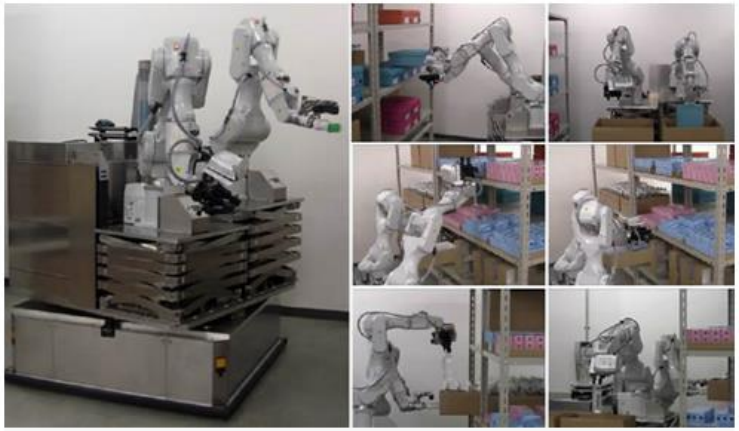
TECHNOLOGY

HITACHI HIRES ARTIFICIALLY INTELLIGENT BOSSES FOR THEIR WAREHOUSES

NO CUBICLE NECESSARY

By Dave Gershgorn Posted September 8, 2015

157 Shares



Hitachi

In addition to artificially intelligent bosses, Hitachi also recently announced a robotic warehouse worker that can handle goods with two arms.

Say hello to your new artificial intelligence overlord--er, boss.

At Hitachi, the Japanese electronics manufacturer, workers have started to take orders from artificial intelligence programs meant to increase productivity in the workplace.

http://www.popsci.com/hitachi-hires-artificial-intelligence-bosses-for-their-warehouses

Disruptive Technologies

Human-friendly Robots

http://www.rethinkrobotics.com/

3D Printers

http://3dprintingincubator.com/3d-printing-incubator-using-3d-printing-to-print-a-trachea/

Self-Driving Vehicles

http://www.pga.com/news/golf-buzz/mit-researchers-making-advances-self-driving-golf-carts

Internet of Things

https://media.ford.com/content/fordmedia/fna/us/en/news/2015/09/17/new-ford-smart-watch-apps.html

Open Source + 3D Printing

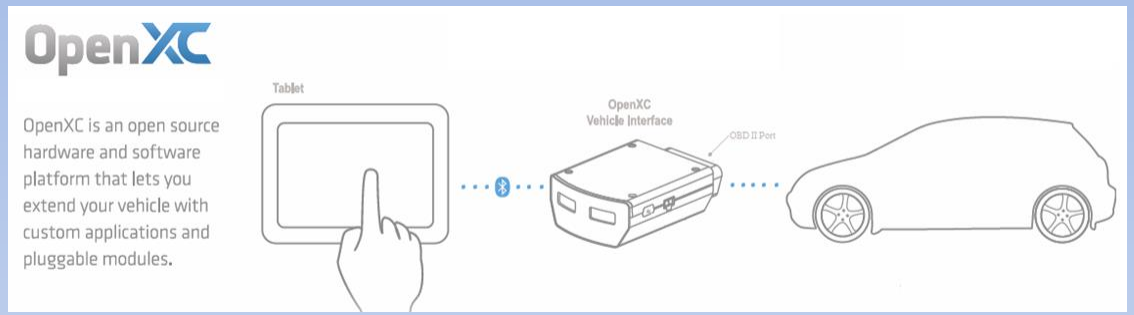
One Possible Formula for Disrupting The Auto Industry

The Local Motors Strati. This was a demonstration that 3D-printing could work for a car's structure. Local Motors

http://arstechnica.com/cars/2015/09/open-source-design-is-changing-the-way-we-make-cars/

Disruptive Tools and Resources

Open Source Software and Hardware



http://openxcplatform.com/

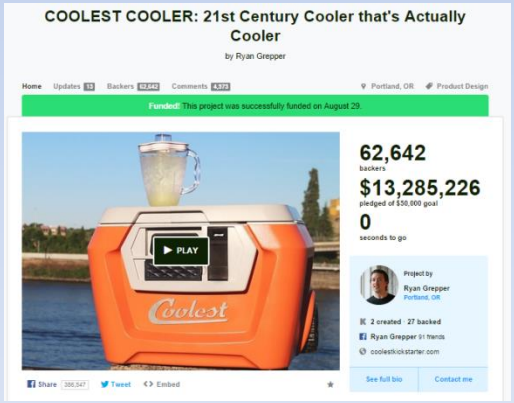
Maker Spaces

http://www.techshop.ws/

Online Courses

https://www.udacity.com/

Crowd Funding



https://www.kickstarter.com/

Start-up Accelerators

http://www.techstars.com/

Online Courses - Udacity

Will You be the
Next Steve Jobs?

http://blog.udacity.com/2015/09/traits-skills-of-a-tech-entrepreneur.html

Maker Spaces - TechShop Detroit

Autodesk (AUD)

- Autodesk Inventor Lab
- Autodesk Fusion 360 Basics

CNC (CNC)

- ShopBot Lab I
- Concepts of CNC
- Vinyl Cutter
- CAD to CAM Software - VCarve Pro & Cut3D
- ShopBot SBU
- Tormach CNC Mill SBU
- Tormach II - 4th Axis
- Waterjet SBU

Computers (COM)

- CorelDRAW for CNC

Electronics (EEE)

- Arduino Lab
- Soldering and Basic Electronics
- Building an Arduino
- Arduino Part 2 - Basic Programming

Fabrication (FAB)

- Composites Lab
- Vacuum Forming SBU
- Sand Blasting and Powder Coating SBU
- RTV Moldmaking and Casting Basics
- Injection Molding SBU
- Carbon Fiber Basics

Laser Cutting (LAS)

- Laser Lab
- Laser Cutter SBU
- Adv. Laser Cutter and Etching Techniques - Epilog

Machining (MAC)

- Milling Machine SBU
- Knurling and Threading on a Lathe
- Machine Shop Lab

Metal Shop (MTL)

- Basic Metal Shop SBU
- Sheet Metal Basics SBU
- Organic Sheet Metal SBU

Rapid Prototyping (PRO)

- 3D Printing SBU

STEAM Summer Camps 2015 (STEAM)

- Summer of Creation: Design and Build
- Summer of Creation: Arduino Robotics

Technology (TEC)

- 3D Scanning and Editing - NextEngine

Textiles (TXL)

- Basic Sewing Machine SBU
- CNC Embroiderer SBU
- Serger Sewing Machine
- Digitizer MBX CNC Embroiderer Software

Welding / HotShop (WLD)

- TIG Welding SBU
- MIG Welder SBU
- Welding Lab

Woodshop (WOD)

- Woodshop SBU
- Jointer, Planer and Table Router SBU

Workshops (WKS)

- AUTO1 3D Printer Build
- CNC Mini Mill Build
- Mach 4 Screen Design and ModBus
- Wizards and McLua for Mach4
- The CNC WorkShop 2015 - Pre-Registration
- "Bologna Sandwich" Pewter Casting
- Pinstriping!

$750k in Prototyping Machines and Classes

Ford gives its employees a free 3-month TechShop membership as part of Ford's Patent Incentive Award Program, which has helped increase invention disclosures by > 100%

Start-up Accelerator – Techstars

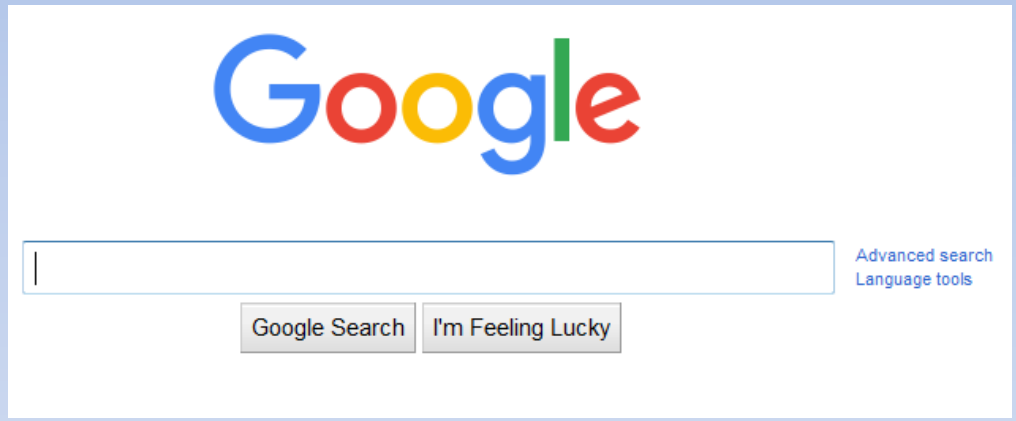
https://techstars.wistia.com/medias/waxzjdo540

Disruptive Cultures

Working Environment

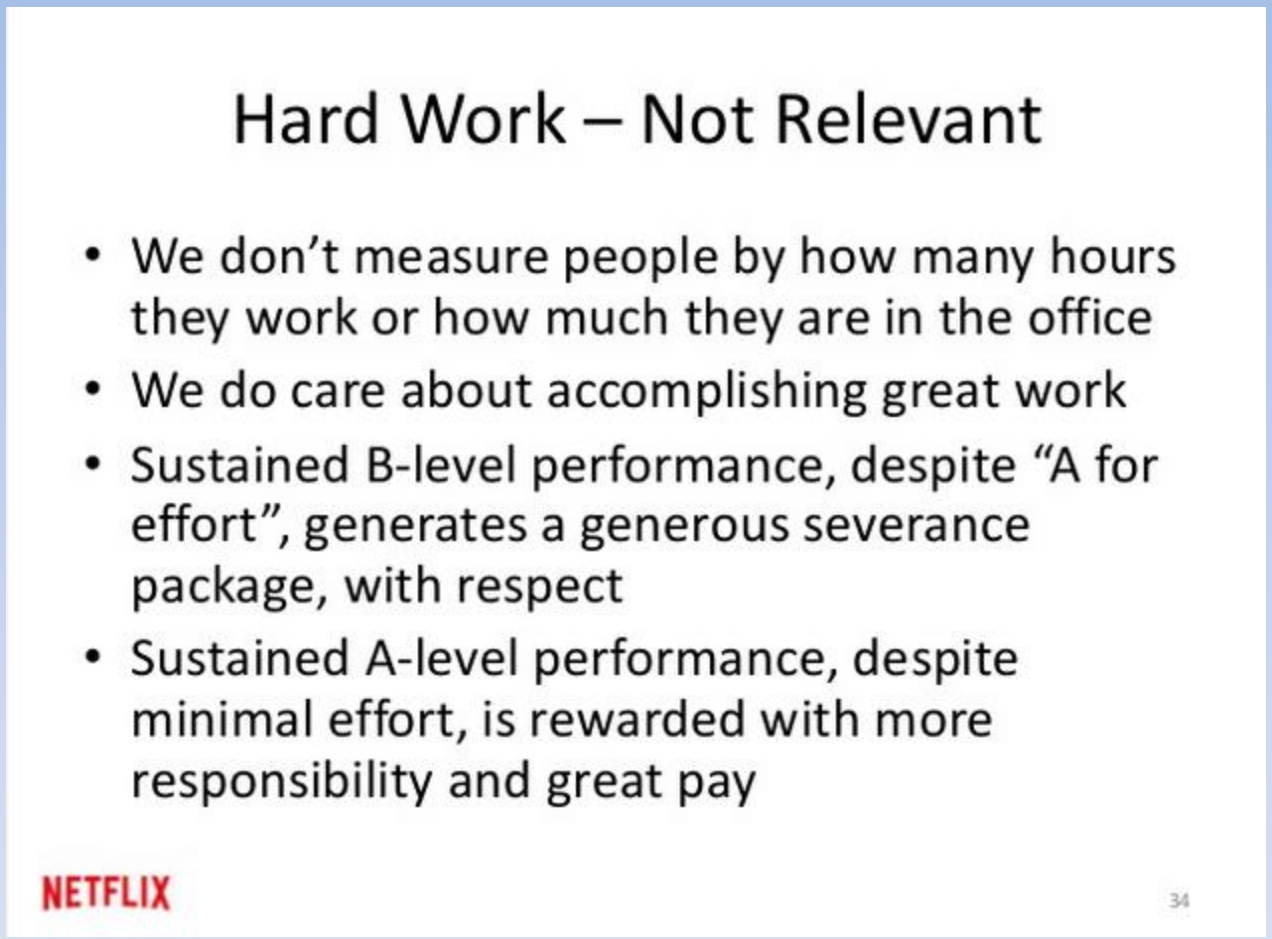
http://www.netflix.com

Innovation Principles



https://www.google.com/

Working Environment - Netflix



http://www.slideshare.net/reed2001/culture-1798664/34-Hard_Work_Not_Relevant_We

Innovation Principles – Google

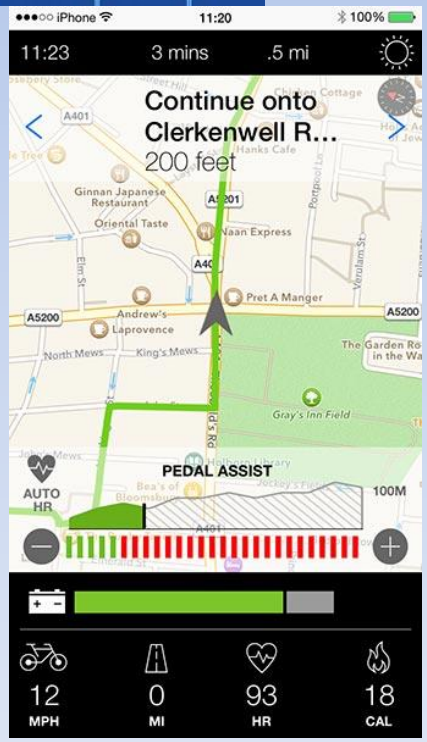
1. **Innovation comes from anywhere.**
    1. Ideas come from anyone from the very top of the organization to lower ranks.
2. **Focus on the user.**
    1. The company encourages employees to build products with the user – not profits – in mind, and "revenue issues take care of themselves"
3. **Think 10x, not 10% (make a ten-fold difference)**
4. **Bet on technical insights. ("Data is apolitical")**
    1. Google's self-driving car is an example of how reading about traffic deaths by human error was combined with Google Maps and artificial intelligence built on Street View to form an innovative project
5. **Ship and iterate.** ("Innovation, not instant perfection")
6. **20% time.** (Time to pursue ideas that employees are passionate about)
7. **Default to open.** Collaborate with millions of people)
8. **Fail well.** ("if you don't fail often enough, you're not trying hard enough")
9. **Have a mission that matters.** ("This is the most important one…we seriously believe that the work that we do has a huge impact on millions of people in a positive way."

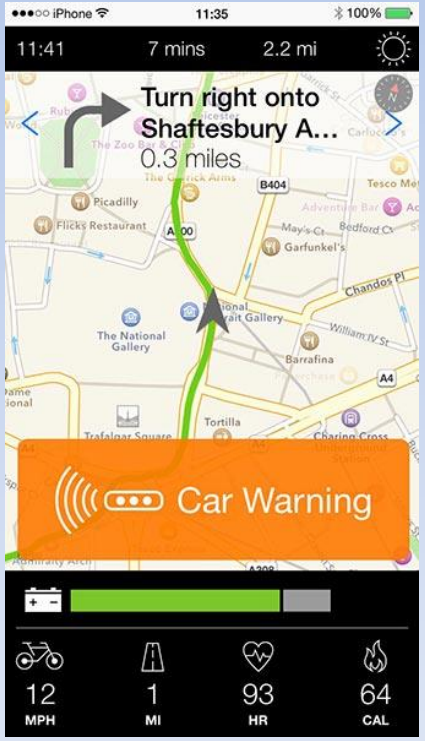
http://www.businessinsider.com.au/google-has-updated-its-9-principles-of-innovation-here-they-are-and-the-products-they-have-enabled-2013-11

Will Ford be a Disruptor Again?

Vision
Challenge
Team
Investment
Prototype

Trade Secrets
Copyrights
Patents
Trademarks
Licensing





CONSUMER PRODUCTS: IP IN OUR EVERYDAY LIVES

Hannah Naltner

September 30, 2015

Steelcase

WHO WE ARE

CORE BRANDS

Steelcase

Steelcase EDUCATION

Steelcase HEALTH

coalesse

turnstone

OUR PURPOSE

Unlocking human promise
by creating great experiences,
wherever work happens.

Steelcase

WHO WE ARE

Insight-led innovation

APPLIED PROCESS

GLOBAL POSTURE STUDY

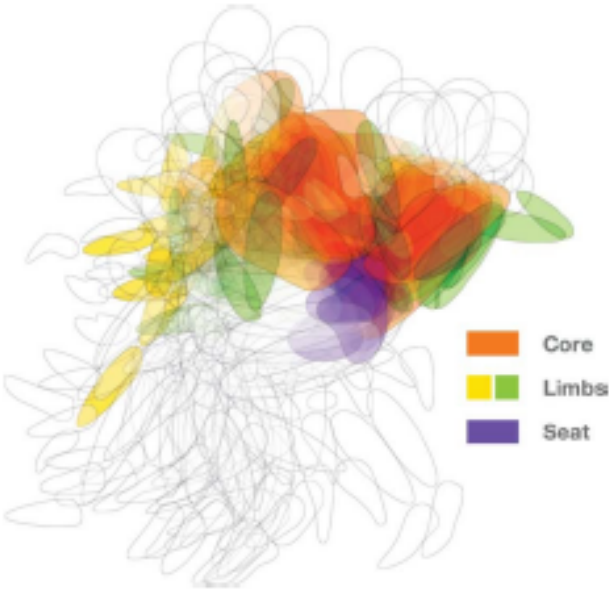
Conducted by Steelcase WorkSpace Futures researchers and the Steelcase Design Studio.

2,000+ people

11 countries

Belgium
Canada
China
France
Germany
Japan
Malaysia
Netherlands
Russia
United Kingdom
United States

OBSERVED BEHAVIORS + POSTURES



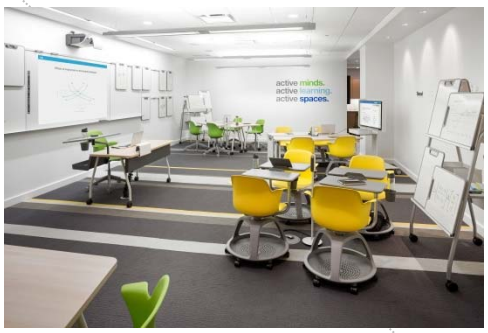
GESTURE®

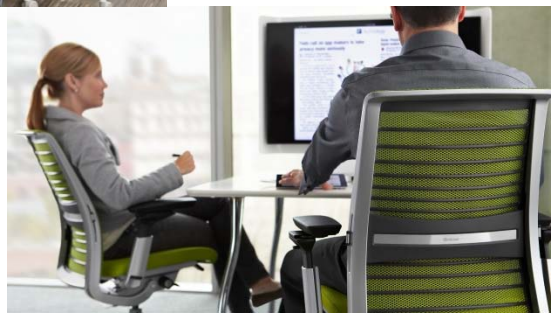
Steelcase

HOW WE USE IP TO PROTECT INNOVATION

1914

today





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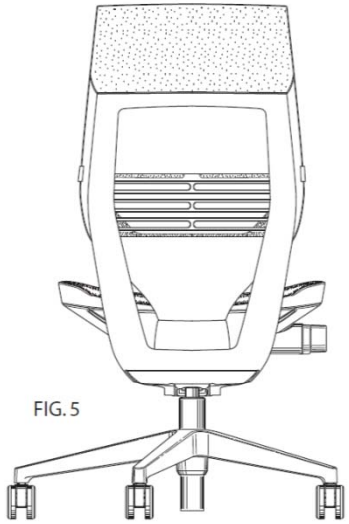
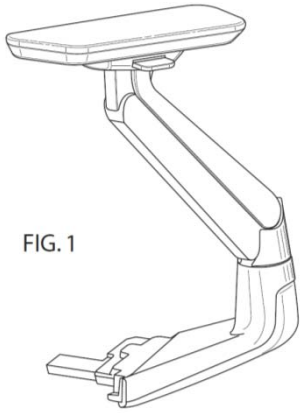
HOW WE USE IP TO PROTECT INNOVATION





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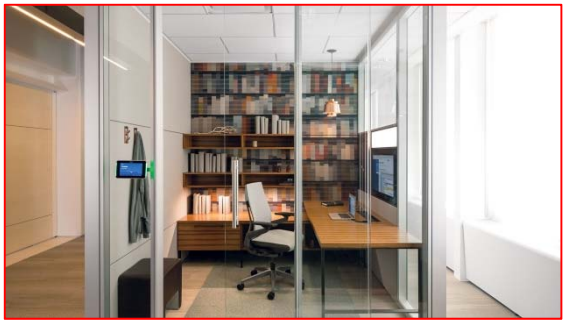
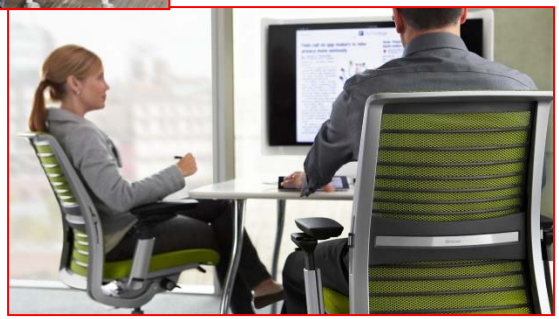
WHY INVEST IN IP

1914

today





Steelcase

OTHER INNOVATION MODELS & IP

- Open source IP
- Collaborations, partnerships, and other opportunities
  - Seamlessaccelerator.com (@SeamlessAccel)

THANK YOU

Steelcase

TRADE SECRETS
the other IP right

*By **James Pooley**,*
Deputy Director General, Innovation and Technology Sector, WIPO

What kind of intellectual property (IP) is most often relied on by business to protect competitive advantage? Most people would answer with one of the best known areas of IP: patents, copyright, trademarks or designs. But they would be wrong. The most common form of protection used by business is secrecy.

Why then do trade secrets receive less attention than the other areas of IP? There are several reasons. First, secrecy does not involve a government registration process; it is implemented as a matter of practice by each business. Second, although the general principles of trade secret law – also referred to as the law of undisclosed, or confidential, information – are established in similar ways in most countries, there are few common rules or regulations about enforcement. Third, secrecy disputes are usually secret, so they do not become part of the public debate.

Recently, however, trade secrets have shot to the top of the news, with stories of "cyber-espionage" attacks on companies throughout the world, with spies using fake email messages to get inside corporate networks and trawl for useful information. But trade secret law is also getting a fresh look for more positive reasons, as a framework that can enable collaborative innovation, often involving actors located in many different countries. Whatever the catalyst, governments and industry are clearly interested. Within the last year, major initiatives on secrecy have been launched by the European Commission as well as the US government.

JUST WHAT IS A TRADE SECRET?

Most simply, a trade secret is information that you do not want the competition to know about. The law generally protects not just secret formulas and designs, but even simple facts, such as the features that might be introduced in the next iPhone, or which country a business intends to go into next.

Secrecy has been a part of trade for thousands of years. For example, secrecy allowed a region of China to profit for centuries from clever harvesting of the silkworm's thread, and it gave a family from Armenia a 400-year lead in producing the best orchestral cymbals.

Trade secrecy is a legal regime that protects relationships of trust. Before the industrial age, innovative craftsmen would keep their "tricks of the trade" closely held through small, family-owned shops. However, as industry moved from the cottage to the factory, there was need for a legal system that would enforce an employee's promise of confidence about a secret process or piece of machinery.

It is important to keep in mind that secrecy is a legitimate tool for businesses of all sizes. Enforcing business secrets has nothing to do with lack of transparency in government. Although it may seem paradoxical, trade secret laws can enable and encourage technology transfer, because they provide a commercially reasonable way to disseminate information. Although some aspects of secrecy laws, such as data exclusivity for drug companies (Art. 39.3 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement)), can be controversial, there is general agreement that confidential disclosure is beneficial in a modern economy. Indeed, keeping secrets – often information about customers and their needs and

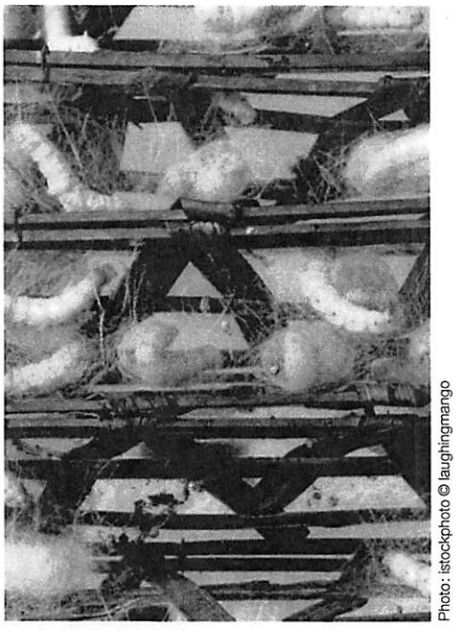


Photo: istockphoto © laughingmango

Secrecy has been a part of trade for thousands of years. Trade secrecy is a legal regime that protects relationships of trust. Secrecy allowed a region in China to profit for centuries from clever harvesting of the silkworm's thread.

preferences – is the main way that small and medium-sized enterprises (SMEs) protect their business advantage.

It is easier to understand this point if you imagine what it would be like if no one could count on the law to enforce obligations of confidence. Businesses would hire fewer people, since each new employee would expand the risk of information loss. The cost of enforcing physical security – locks, fences, etc. – would increase. Perhaps most important, many licensing transactions and research collaborations would never happen, because there would be nothing to ensure that partners would not run off with the new technology and unfairly compete against its creator. The general approach would be to hoard information, slowing the progress of innovation.

WHY USE SECRECY?

Why do businesses turn most often to secrecy to maintain their advantage? First, it is cheaper than other forms of IP that require registration with a government agency, often with the expense of hiring lawyers or other professionals. In contrast, to establish your trade secret right, all you need to do is be careful with it, spending only what is necessary to keep it from becoming generally known. Usually keeping facilities secure and getting nondisclosure agreements from employees and vendors is enough.

In addition, much more information can be protected through secrecy than is possible with patents, which can only be granted for truly novel technical innovations. Secrecy covers any information that gives you an advantage, even if someone else is already using it; the only limitation is that it not be generally known.

That point reveals the downside of secrecy: there is no guaranteed exclusivity. If someone else discovers your secret without stealing it from you, there's nothing you can do about it, although for most businesses this is not a significant drawback.

LEGAL PROTECTION

Trade secret law, like other forms of IP, is governed by national legal systems. However, international standards for protecting secrets (called "undisclosed information") were established as part of the TRIPS Agreement in 1995. Article 39 of the agreement provides that member states shall protect "undisclosed information" against unauthorized use "in a manner contrary to honest commercial practices" (this includes breach of contract, breach of confidence and unfair competition). The information must not be generally known or readily accessible, must have value because it is secret, and must be the subject of "reasonable steps" to keep it secret. This general formula for trade secret laws has been adopted by well over 100 of the 159 members of the World Trade Organization.

"Although it may seem paradoxical, trade secret laws can enable and encourage technology transfer, because they provide a commercially reasonable way to disseminate information."

Articles 42 to 49 of the TRIPS Agreement cover enforcement, requiring that civil judicial proceedings be available to enforce all IP rights and that "confidential information" be protected from disclosure. Nevertheless, because national judicial systems, including the methods for granting access to evidence, vary greatly, enforcement of trade secret rights around the world is generally viewed as uneven.

CYBER ESPIONAGE

The practical challenges of protecting secrets are more difficult to overcome than the legal ones, however. Paradoxically, the great explosion of innovation that has brought so many benefits to the world has also made it easier for thieves to steal valuable business information. For example, through a process known as "spear-phishing", commercial spies send an email using personal information gleaned from Facebook or other social media, leaving the recipient unaware that the message is a hoax. Once the embedded link is clicked, the thief's malicious software, known as "malware", invades the recipient's computer and through it the employer's network. Staying in the computer system for months or sometimes years, this silent invader searches for important confidential files and passwords, and sends all of it back to the hackers who use or sell the information.

Tracing the source of cyber-espionage is notoriously difficult, given the ubiquity and anonymity of the Internet. Estimating

Photo: istockphoto © Agustinc

Keeping secrets is the main way that SMEs protect their business advantage.

damage to businesses is likewise challenging, in part because many enterprises do not know that their systems have been compromised, and also because those who do are often reluctant to report it. Nevertheless, studies show that the problem is growing, and governments around the world are looking for ways to address it.

For businesses, the issue is not just about protecting their own valuable information, but about avoiding being infected by secrets belonging to others. In a global market characterized by easy movement of employees and complex webs of connections among companies' suppliers and customers, it takes special vigilance to avoid contamination by unwanted information. Greater competition also means that businesses have to work continuously on finding ways to exploit their secrets, either through direct commercialization, collaborations or licensing. In the meantime, the sheer volume of potentially valuable data creates its own challenges of inventory and valuation.

For businesses that rely on patent protection, secrecy is a critical part of the innovation process. Because most national patent laws require "absolute novelty", this means that until the day a patent application is filed, the invention must be completely protected from any public disclosure. Where the technology requires refinement through experimentation outside the laboratory, this can be extremely difficult. That is why discussions regarding international patent law harmonization often include the idea of a "grace period" of up to one year before filing, during which time disclosures by an inventor will not disqualify a later patent application.

"It is in the rapidly-expanding realm of international open innovation that trade secret laws may be turned to greatest advantage, particularly for smaller firms and individual inventors from developing and least developed countries."

ADVANTAGES FOR SMES

It is in comparing patents and secrecy that one can most easily see the importance of trade secrets for SMEs. Patents have been key to the success of many businesses, particularly as they reach into global markets where a period of exclusivity is needed to recoup the cost and risk of innovation. That sort of advantage is greatly amplified when using the Patent Co-operation Treaty (PCT), the international patent filing system administered by WIPO, which gives applicants up to 30 months to refine their plans and find partners and sources of funding. However, patents are not the only tool for protecting technological advantage. Secrecy can do this too, through licensing and various forms of collaboration.

Indeed, it is in the rapidly-expanding realm of international "open innovation" that trade secret laws may be turned to greatest advantage, particularly for smaller firms and individual inventors from developing and least developed countries. These actors often can leverage their special creativity and local knowledge most effectively by collaborating with large, well-established multinational corporations that are looking for fresh ideas. That kind of partnering – the building of "trusted networks" of SMEs and other innovators – is enabled by national trade secret laws that protect the integrity of shared information.

Emerging from a long period of relative obscurity, the subject of trade secrets is currently getting a lot of attention. There is good reason to be concerned about commercial espionage, because like other forms of piracy it disrupts markets and slows progress. But another reason to focus on secrecy is for what it can do to support and amplify the creative work of individuals and SMEs throughout the world, by making it possible to connect with other firms to deliver innovative solutions to the public. ◆

Panel 3 *Mobile Tech: IP In An Interconnected World*

- **Leonid Kravets**, *Patent Counsel*, InterDigital Solutions
- **Keith Mallinson**, *Founder*, WiseHarbor
- **Prof. Kristen Osenga**, University of Richmond School of Law
- **Morgan Reed**, *Executive Director*, ACT The App Association
- ***Moderator:*** **Devlin Hartline**, *Assistant Director*, Center for the Protection of Intellectual Property, George Mason University School of Law

#cpip2015

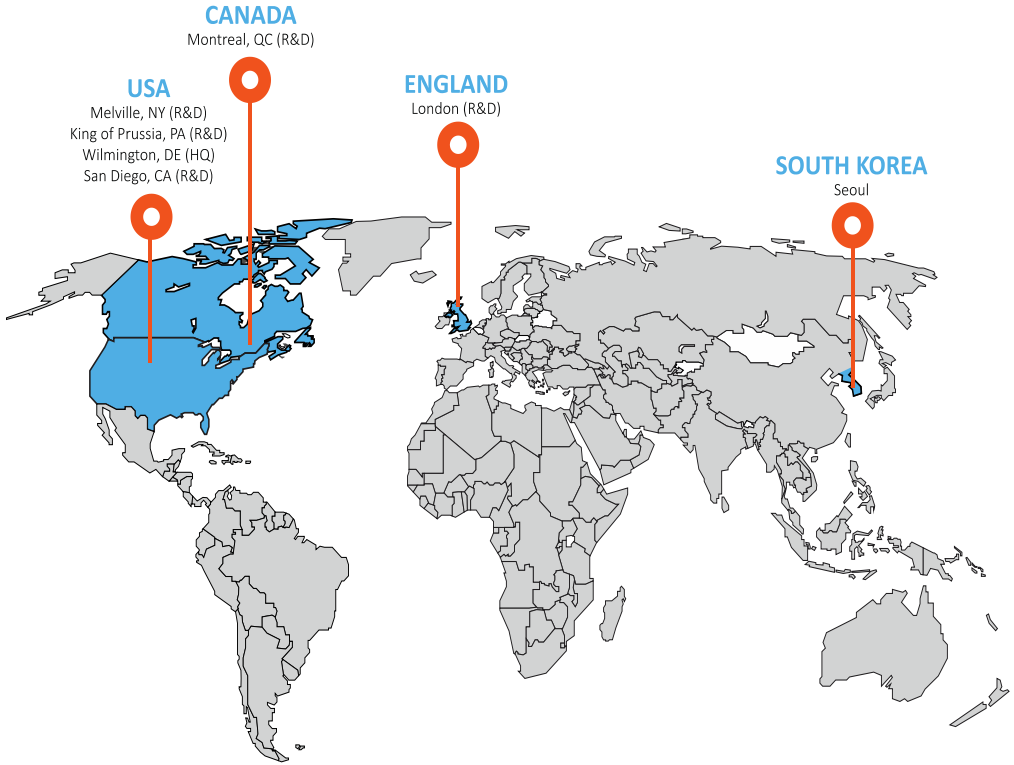
Mobile Tech - IP in an Interconnected World

CPIP: Fall Conference

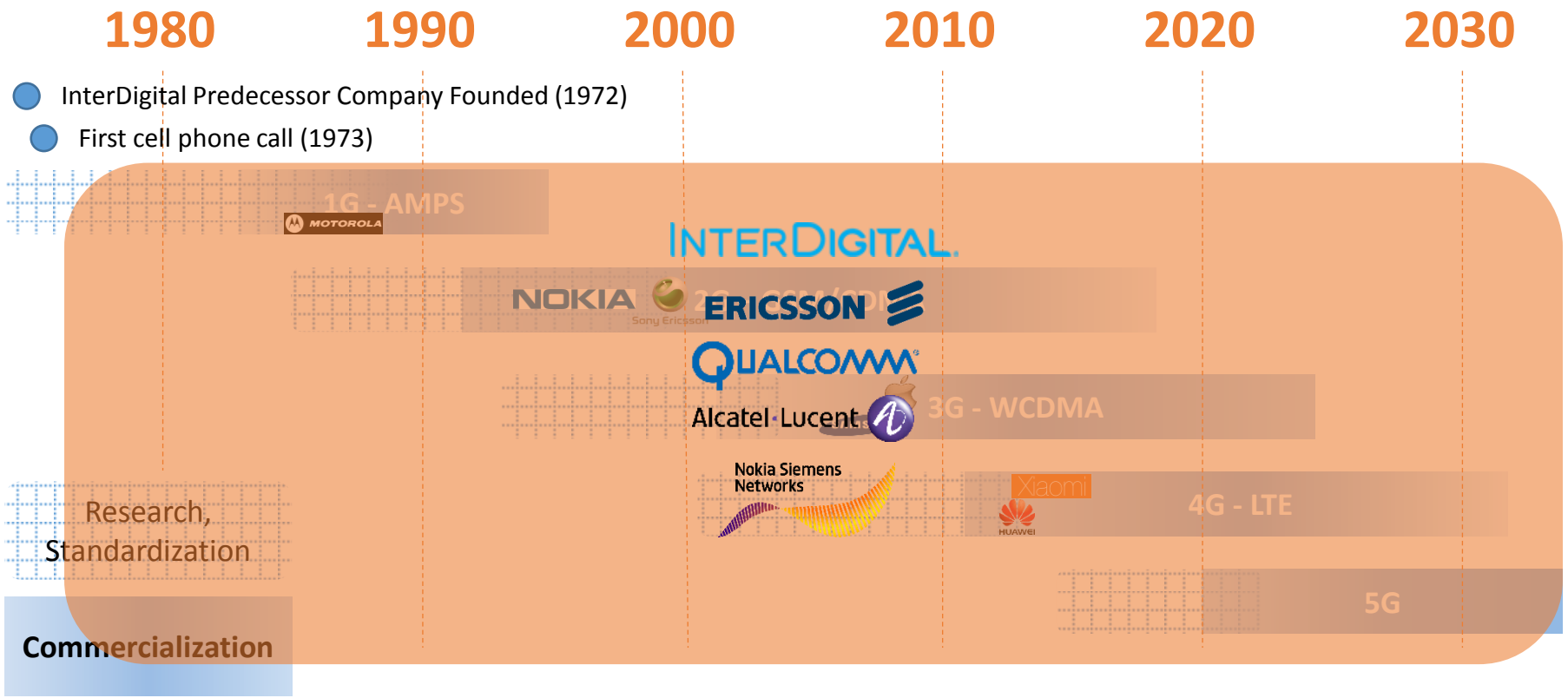
Leonid Kravets
InterDigital

InterDigital Snapshot –
Invention, Collaboration, Contribution

- Four decades of innovation in wireless
- Pioneer in digital wireless technologies
- Key contributions to global wireless standards
- Solutions for more efficient broadband networks
- Leading technologies in Spectrum Utilization, Network management, Internet of Things, Video streaming and 5G



Evolution of Wireless Communications



All Made Possible Through Standards Bodies

- All of the major mobile players work with one another through participation in Standards Setting Organizations (IEEE, 3GPP, ETSI)

- Participation in standards-setting activities is way up
  - New participants are increasingly active and increasing their investment

- InterDigital is a major contributor
  - Hundreds of our contributions are included in today's 3G mobile specifications
  - Among the leading contributors to the standardization process for LTE and LTE-A

How Does IP System Work for InterDigital?

- All market participants are looking for ROI through R&D; InterDigital is no different

- In mobile, long term innovation is vital
  - Possibility of ROI encourages investments in long term R&D
  - Those that are better at innovating are traditionally rewarded with higher ROI
  - Standards Setting Organizations play a key role in long term innovation
  - InterDigital receives ROI from standards-based IPR licensing, thereby justifying significant investments in long-term R&D

- Innovation specialization is no different than specialization in the mobile supply chain

Flexible Engagement Model

Technical Expertise

Our engineers are well recognized in the industry as thought leaders with leadership roles in standard organizations and conferences. Their expertise includes all layers of wireless technology, IoT platforms, Security, Analytics, Augmented Reality and Video technology.

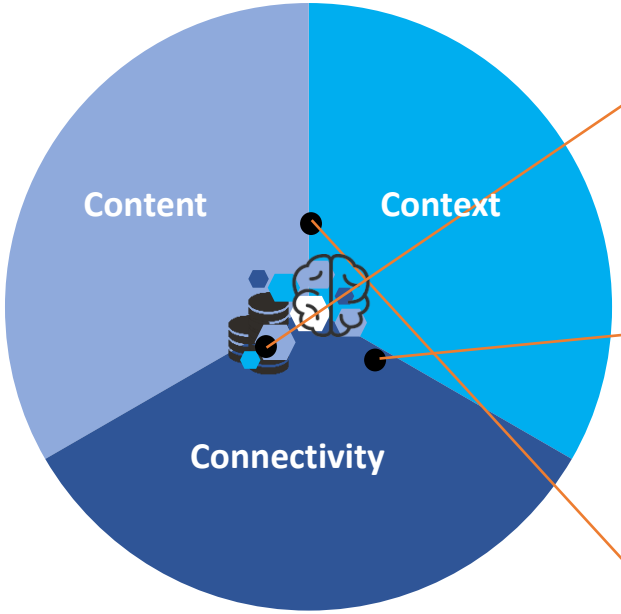
Joint Technology Development

We have a history of collaborating with our partners on various technologies such as IoT IP generation with Sony (CONVIDA JV), WCDMA/HSDPA protocol stack development with Infineon (Intel) and NXP (Ericsson) among others.

Commercial Solutions

We offer commercial solutions to enable new market opportunities for our partners through our IOT platform, cloud based network management platform and contextual technologies to significantly improve customer engagement in human and machine communications.

Now Driving the next Major Transition – By focusing on three Key elements of Innovation



Internet of Things: Cloud-based software and services that provide IoT data, data integration, analytics and security. InterDigital has substantial expertise with OneM2M, an organic business initiative (WoT.io) and a joint venture with Sony (Convida Wireless)

Next Generation Networks: Cloud-based software and services that enable next generation wireless networks. “New World IT Infrastructure” is a megatrend with substantial market opportunities for disruptive innovation from InterDigital with mesh backhaul (EdgeHaul) and an organic business initiative around Hetnet Management (XCellAir).

Intelligent Data Technologies: Cloud-based software and services enabling delivery and monetization of digital content over wireless networks. Desire for media “wherever and whenever” is driving opportunities for disruptive innovation and long-term growth related to monetization via analytics.

Thank You

WiseHarbor
wireless • mobile • telecom
www.wiseharbor.com

Mobile Tech: IP in an Interconnected World

Smartphone Market Success

Keith Mallinson
Founder, WiseHarbor

For GMU CPIP Conference, October 2015

Markets Functioning with (F)RAND SEP Licensing

Hold-up and royalty stacking theories predict excessive royalties, other harms and effects which evidence disproves

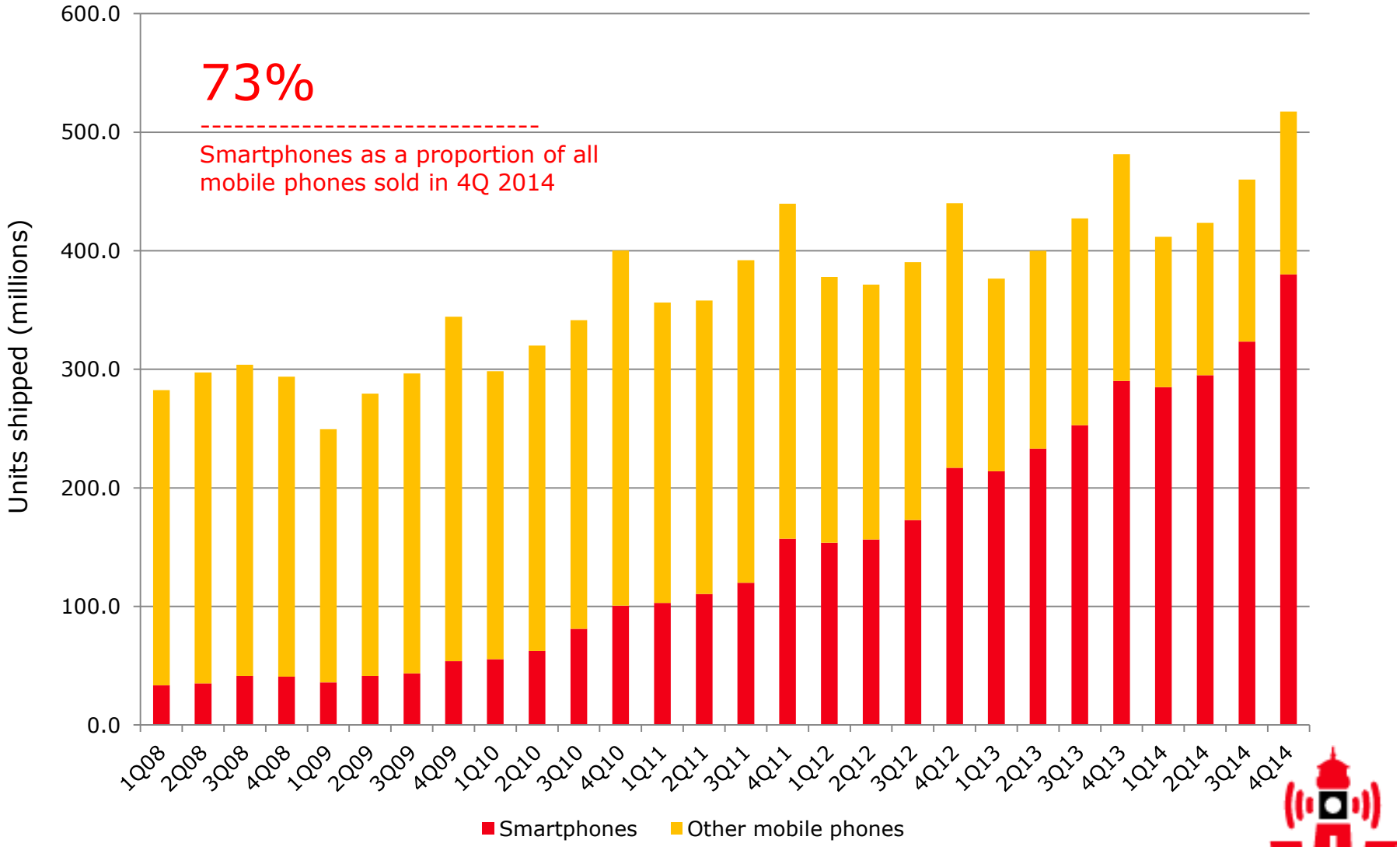
- **Consumer adoption and consumption increasing**
- **Innovation and technical progress accelerating**
- **Cellular technology R&D up 74% to $46bn since 2009**
- **Time-to-market for new standards shortening**
- **Technology/device OEM vertical integration collapsed**
- **Market entry downstream in smartphones burgeoning**
- **Concentration in handset OEM supply low and declining**
- **Smartphone prices falling on average, and dramatically so on a quality-adjusted basis**
- **Royalties for SEPs and other patents very small proportion of consumer product and service prices**

Highlighting Progress and Success in Mobile Services, Devices and Standard-based Technologies

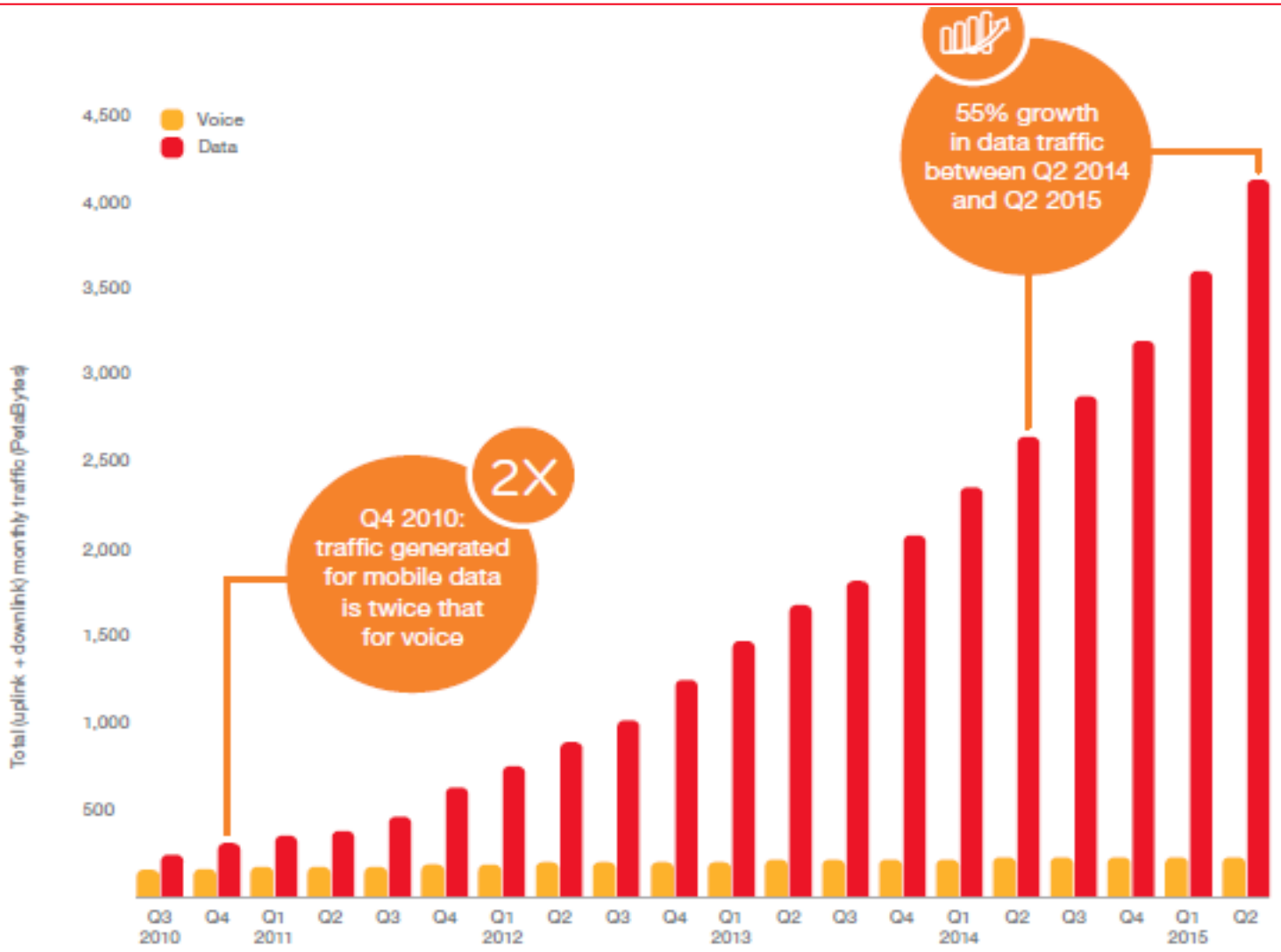
- **7 billion subscribers since inception in early 1980s**
- **$400 bn in handset sales and $1.2 trillion in services annually**
- **Prices as low as $20 since mid 2000s, <$75 smartphones now**
- **Hundreds of companies including SMEs contribute to and implement 3GPP (ETSI is a partner) standards**
- **>124,000 patents declared possibly essential to 3GPP standards**
- **Relentless innovation with a major 3GPP standards release every year or so**
- **4G LTE data speeds >50Mbps are 1,000 times faster than with 2G one decade ago**
- **393 commercially launched LTE networks in 138 countries***
- **Increasing product choice (e.g. 2,919 4G LTE user devices have been announced by 297 manufacturers*)**

*http://www.gsacom.com

Overwhelming Adoption of Smartphones with Mobile Broadband in Recent Years has Driven…

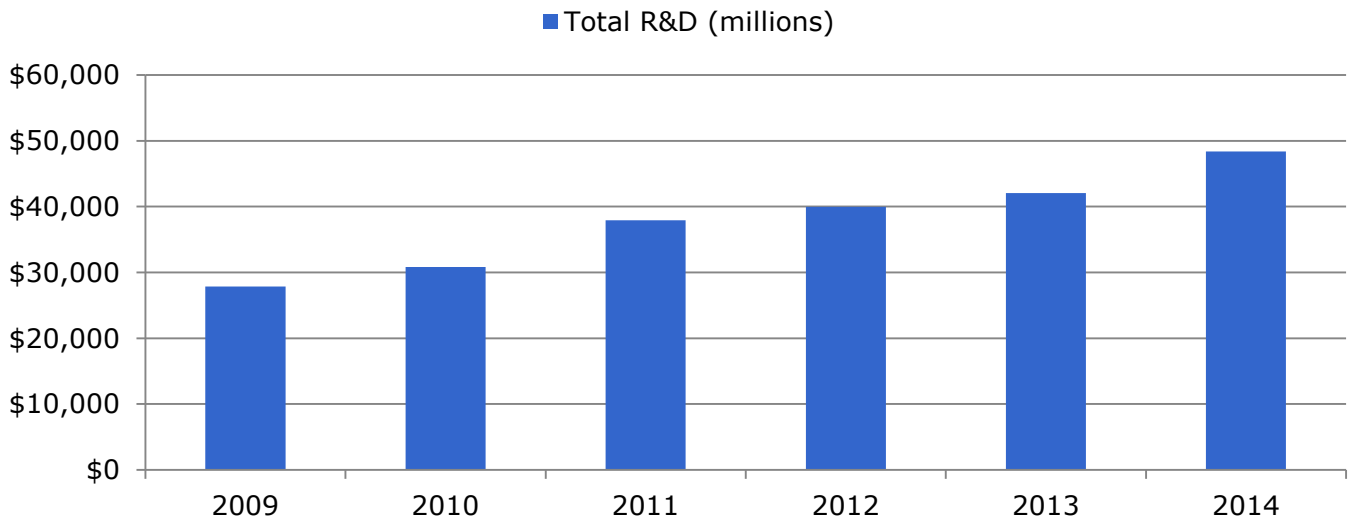


30x Data consumption driven by LTE since 2010



Source: Ericsson. Traffic does not include DVB-H, Wi-Fi, or Mobile WiMax. Voice does not include VoIP

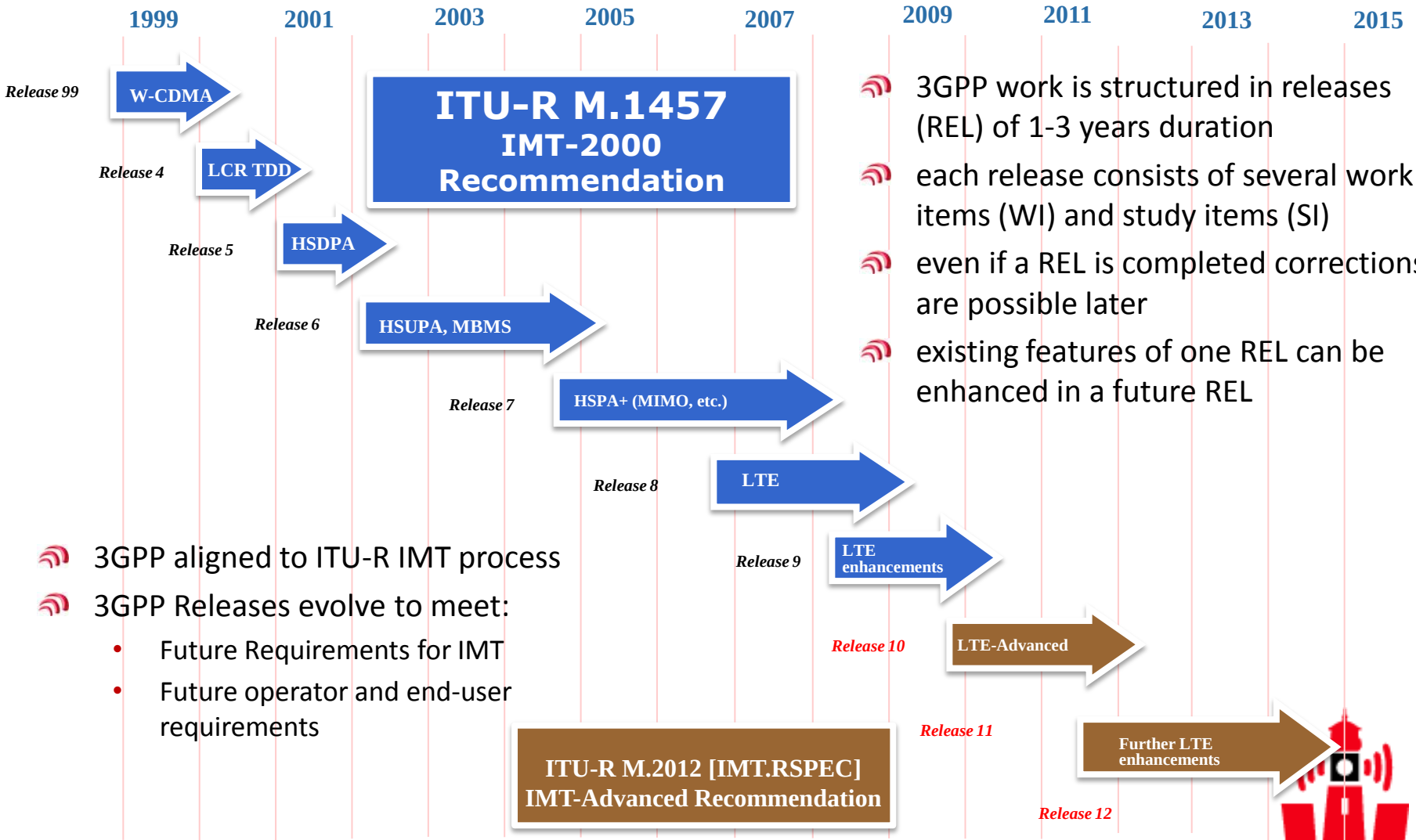
R&D Growth in Line with 74% Revenue Growth



	2009	2010	2011	2012	2013	2014	Growth 2009-2014
Total Sales (millions)	$353,836	$401,722	$510,840	$559,173	$582,011	$614,459	74%
Total R&D (millions)	$27,854	$30,829	$37,922	$39,970	$42,073	$48,386	74%
R&D/Sales	7.9%	7.7%	7.4%	7.1%	7.2%	7.9%	

Total revenues and R&D expenditures for eleven largest technology companies with a predominant or exclusive focus on mobile communications: Alcatel-Lucent, Apple, BlackBerry, Ericsson, Huawei, MediaTek, Nokia, Qualcomm, Samsung, LG, ZTE

3GPP Standards Release Schedule

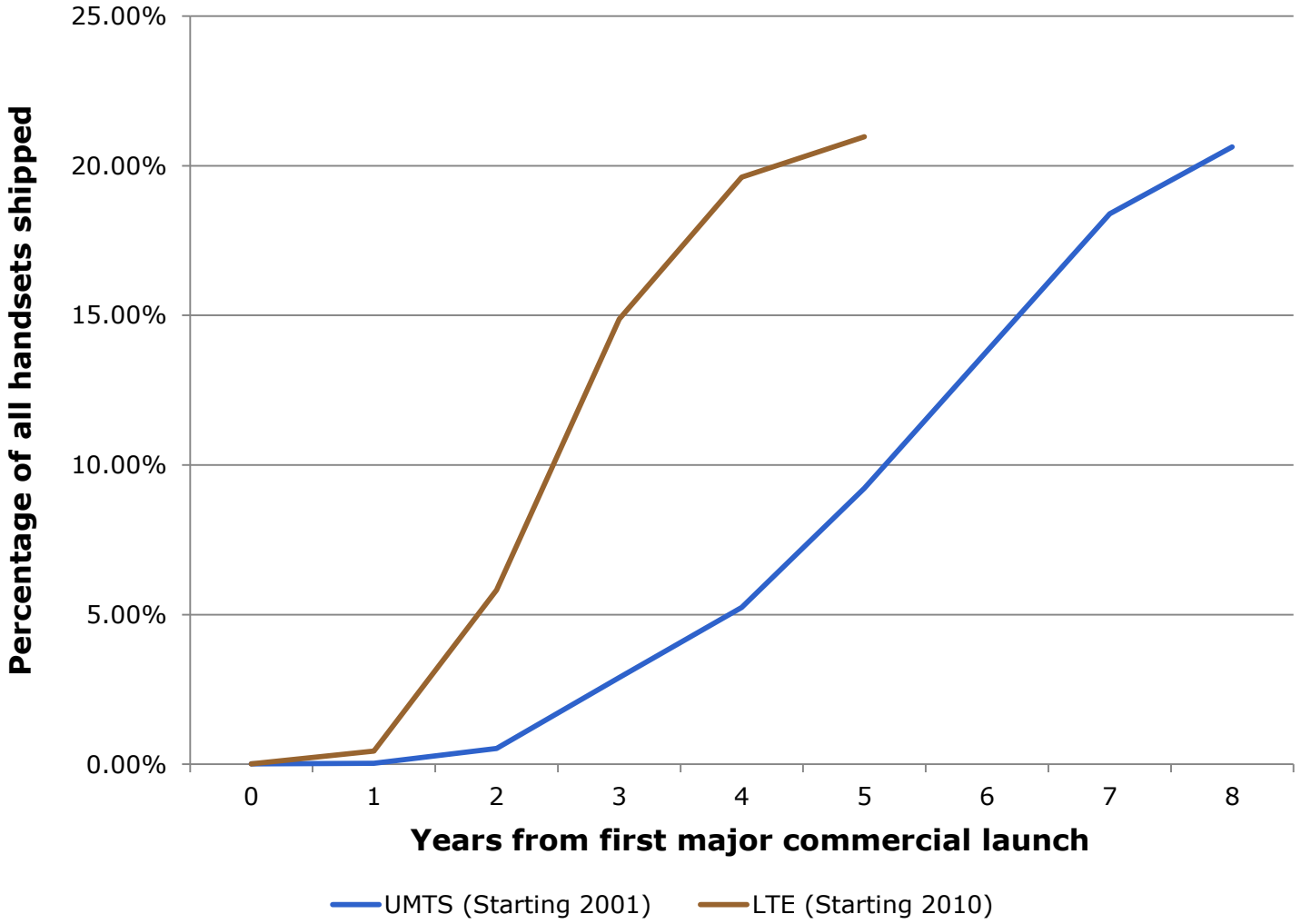


- 3GPP work is structured in releases (REL) of 1-3 years duration
- each release consists of several work items (WI) and study items (SI)
- even if a REL is completed corrections are possible later
- existing features of one REL can be enhanced in a future REL

- 3GPP aligned to ITU-R IMT process
- 3GPP Releases evolve to meet:
  - Future Requirements for IMT
  - Future operator and end-user requirements

Source: 3GPP

Time-to-Market and Adoption Rate Accelerating



First release of the UMTS standard (Release 99) was in 1999; the first commercial launch was in 10/2001
First release of the LTE standard (Release 8) was in 2008; the first commercial launch was in 12/2009

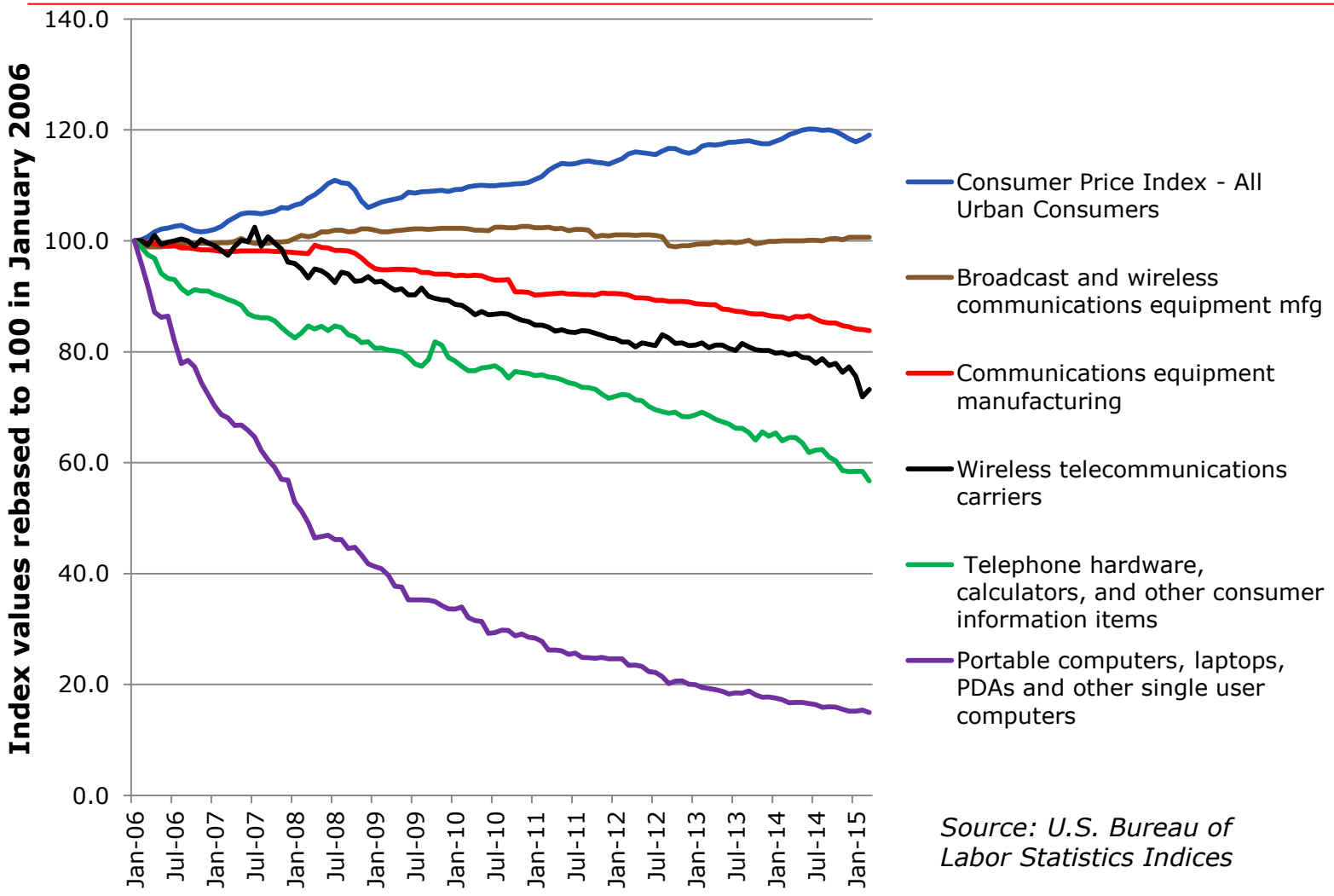
So Much More and for less Money (2006-2013)

Model	Nokia N93 (2006)	Samsung Galaxy S III (2013)
Images not to scale		
2G Network	GSM 900/1800/1900	GSM 850/900/1800/1900
3G Network	UMTS (WCDMA) 2100	HSDPA 850/900/2100
4G Network	No	LTE 700/2100 or LTE 800/1800/2600*
Data Speed	384 kbps (3G)	50 Mbps (LTE)
Chipset	Nokia/TI baseband processor and Texas Instruments OMAP 2420 Applications Processor	Qualcomm MSM 8960 or Exynos 4412 Quad*
Central processor	332 MHz Dual ARM 11	Dual core 1.5 GHz or Quad core 1.4 GHz Cortex-A9*
Graphics processor	3D Graphics hardware accelerator	Adreno 225 or Mali-400MP*
Operating System	Symbian OS 9.1, Series 60 3rd edition UI	Android OS v4.0 (Ice Cream Sandwich) or Android OS v4.1.1 (Jelly Bean)*
Display	TFT, 256K colours, 240 x 320 pixels, 2.4 inches, 36 x 48mm, 167 pixels per inch	Super AMOLED, 16M colours, 720 x 1,280 pixels, 4.8 inches, 306 pixels per inch
Touchscreen	No	Capacitive multitouch
Memory	50MB storage +64 MB RAM +128 MB miniSD Card	16GB storage, 2GB RAM, up to 64 GB microSD
Cameras	3.15 megapixels, VGA @30 fps: secondary CIF videocall camera	8MP, autofocus, LED flash: secondary 1.9MP, 720p @30 fps
Price without subsidy	Euro 550 x $1.26 = $693	$599-$649 (24% cheaper with 14% cumulative inflation)

So Much More and for less Money (2013-2014)

Model	Samsung Galaxy S III (2013)	Xiaomi M i4 (2014)
Images not to scale		
2G Network	GSM 850/900/1800/1900	GSM 850/900/1800/1900
3G Network	HSDPA 850/900/2100	TD-SCDMA 2010-2025/1880-1920
4G Network	LTE 700/2100 or LTE 800/1800/2600*	TD-LTE 2570-2620/1880-1920/2300-2400
Chipset	Qualcomm MSM 8960 or Exynos 4412 Quad*	Qualcomm MSM8974AC Snapdragon 801
Central processor	Dual core 1.5 GHz or Quad core 1.4 GHz Cortex-A9*	Quad-core 2.5GHz Krait 400
Graphics processor	Adreno 225 or Mali-400MP*	Adreno 330
Operating System	Android OS v4.0 (Ice Cream Sandwich) or Android OS v4.1.1 (Jelly Bean)*	Android OS, v4.43 (KitKat)
Display	Super AMOLED, 16M colors, 720 x 1,280 pixels, 4.8 inches, 306 pixels per inch	IPS LCD, 16 M colors, 1080x1920 pixels, 5.0 inches , 441 pixels per inch
Touchscreen	Capacitive multitouch	Capacitive multitouch
Memory	16GB storage, 2GB RAM, up to 64 GB microSD	16 GB (64GB at higher price), 3GB RAM
Cameras	8MP, autofocus, LED flash: secondary 1.9MP, 720p @30 fps	13 MP, autofocus, dual-LED flash. Video includes 2140p@30fps. Secondary 8MP, 1080p@30fps
Launch price without subsidy	$599-$649	$400-$460 (18% cheaper)

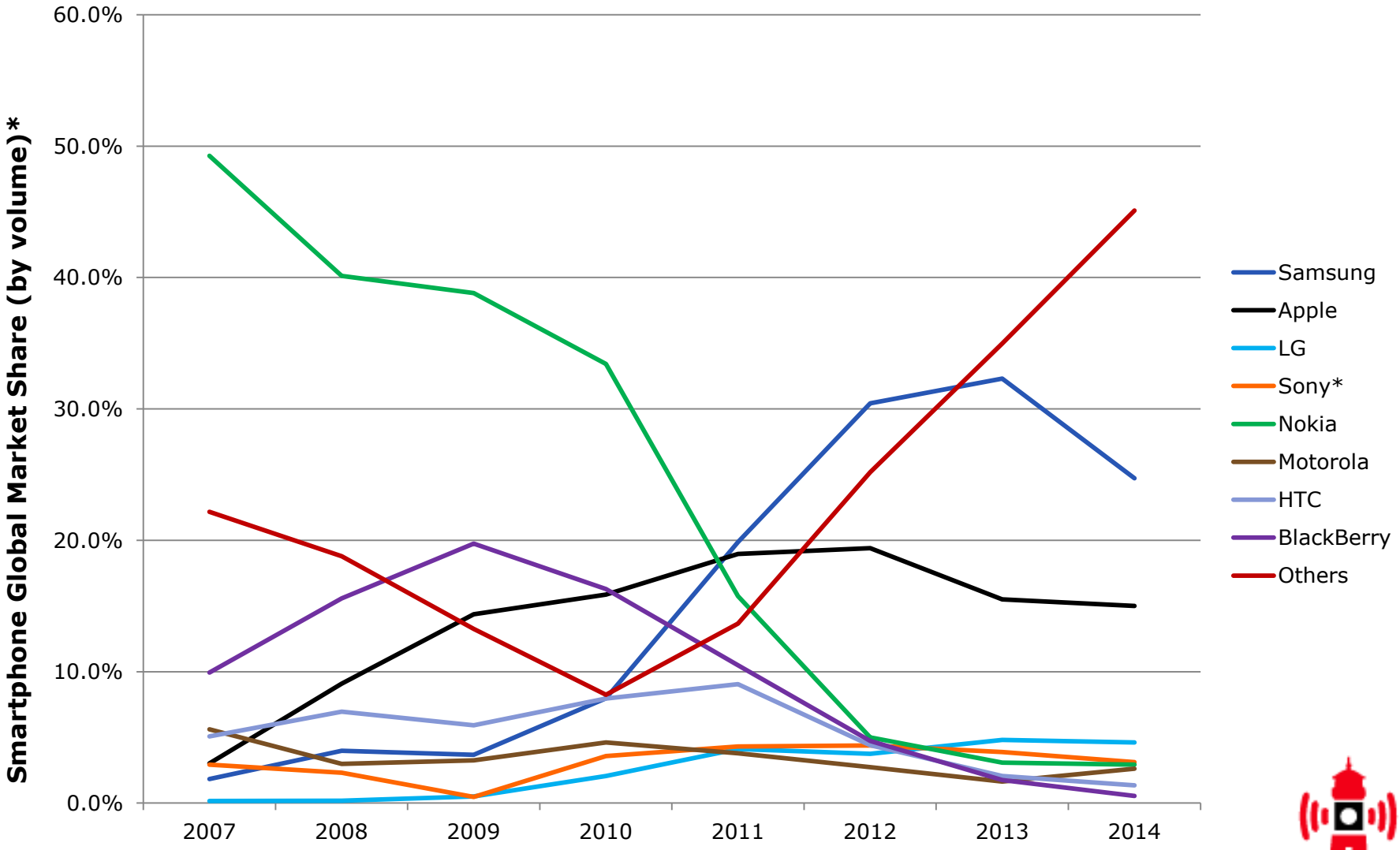
Telecom, Wireless and Personal Computing Prices Flat or Falling versus Rising CPI



Source: U.S. Bureau of Labor Statistics Indices

"Telephone" category understates smartphone price declines. PDAs are today's smartphones; which significantly exceed sales of other kinds of "portable computer" (>2 x by volume for US in 2014)

How the Mighty Have Fallen: "Others" Predominate now in Smartphone Supply



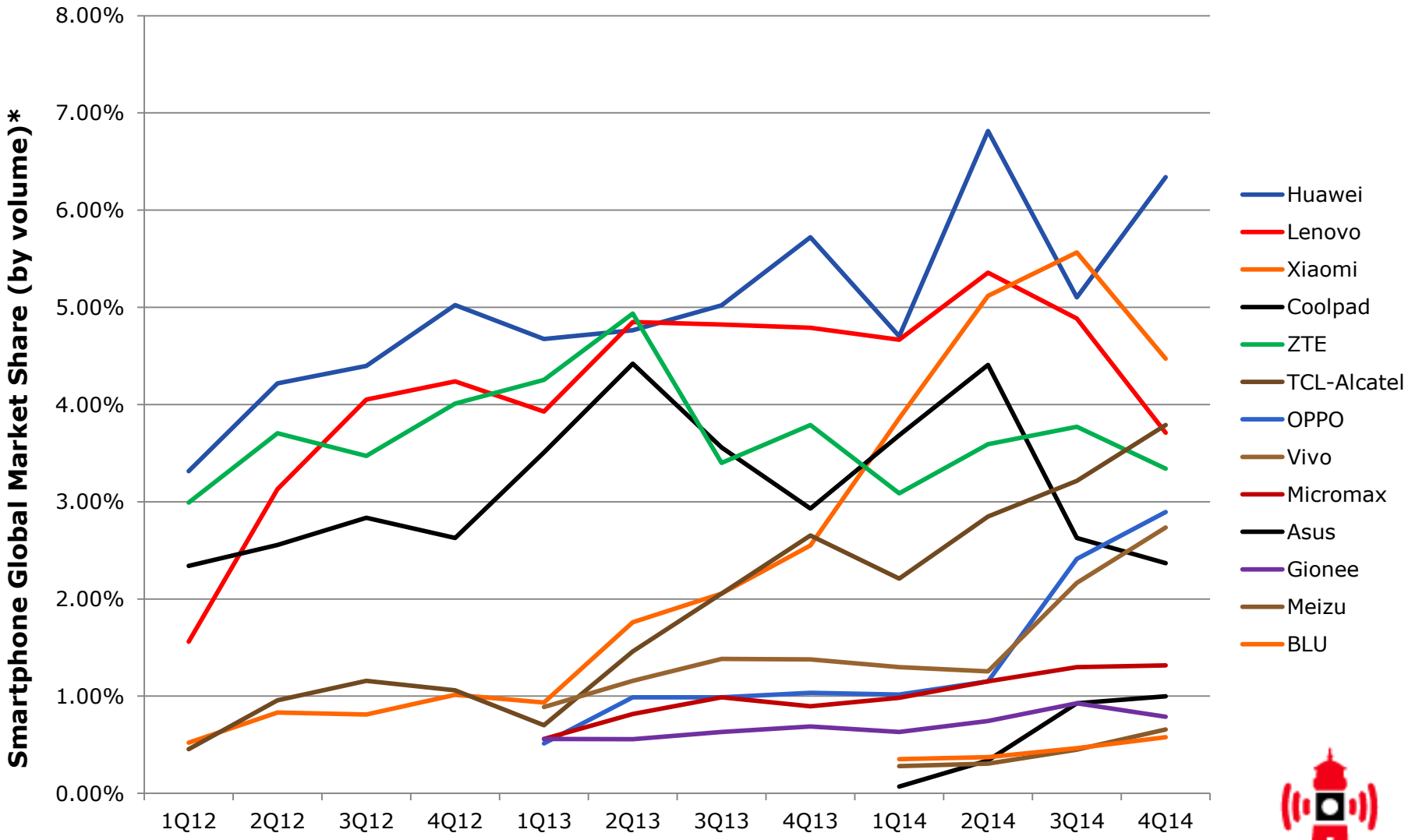
Sony Ericsson until 2011

Vertical Integration of OEMs has Collapsed

- **Almost all major developers of mobile standard-essential technologies have exited the handset market, while some of the brand names are still used independently of their former parents**

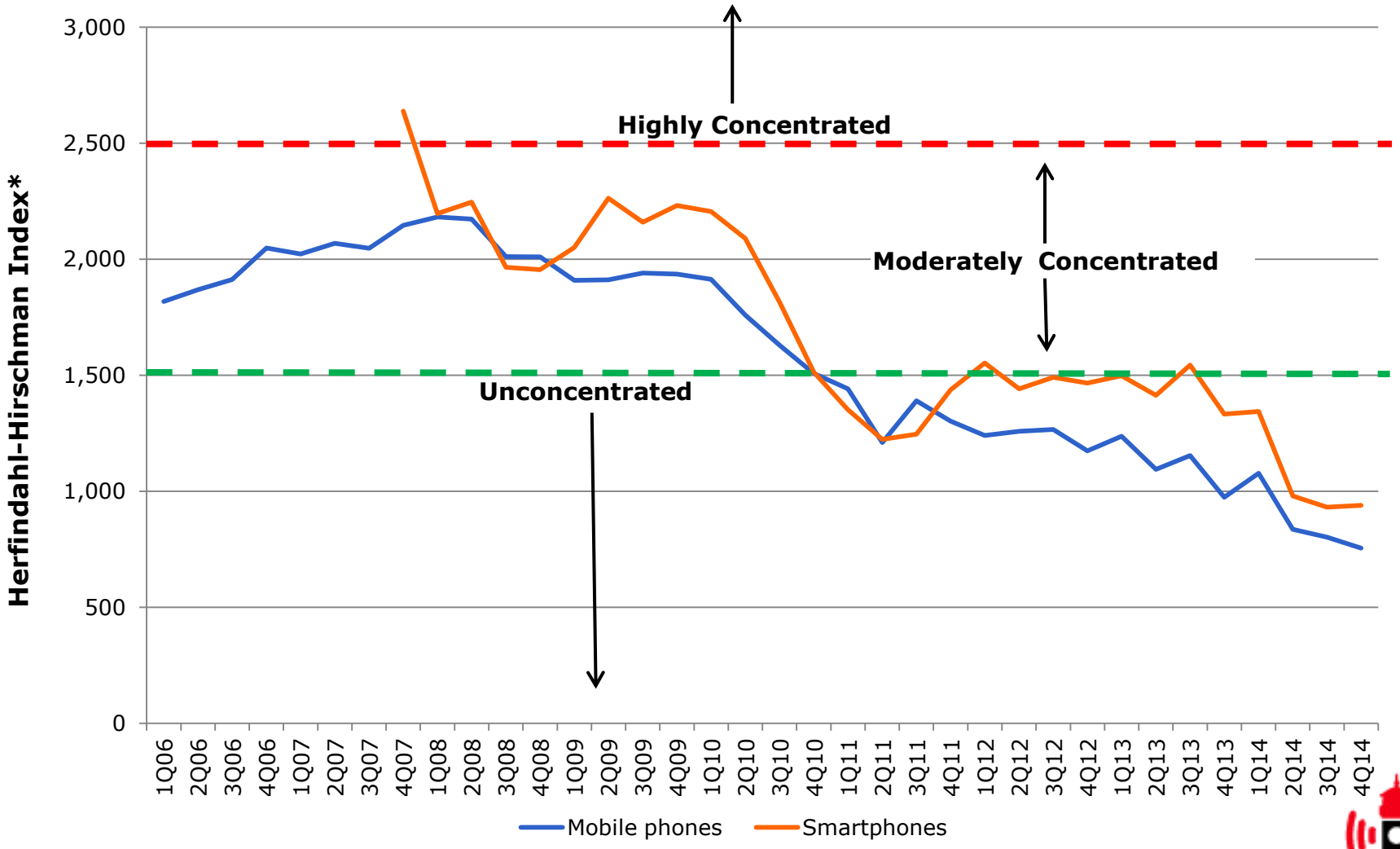
	Peak share year	Peak share %	Exited market	Prior year share	Sold to
Qualcomm		Small: CDMA-only	2000	Small: CDMA-only	Kyocera
Alcatel	2002	2.8%	2005	1.1%	TCL: uses Alcatel OneTouch brand
Siemens	2003	8.4%	2005	7.3%	BenQ: bankruptcy followed in 2006
Motorola	2006	22%	2012	2.7%	Google, who then sold to Lenovo in 2014
Ericsson	2007	9.2%	2011	3.2%	Sony, following 2001-formed JV
Nokia	2008	40%	2014	15%	Microsoft

Many Fast-Growing Newcomers Capitalize on Low Barriers to Entry for Smartphone OEMs



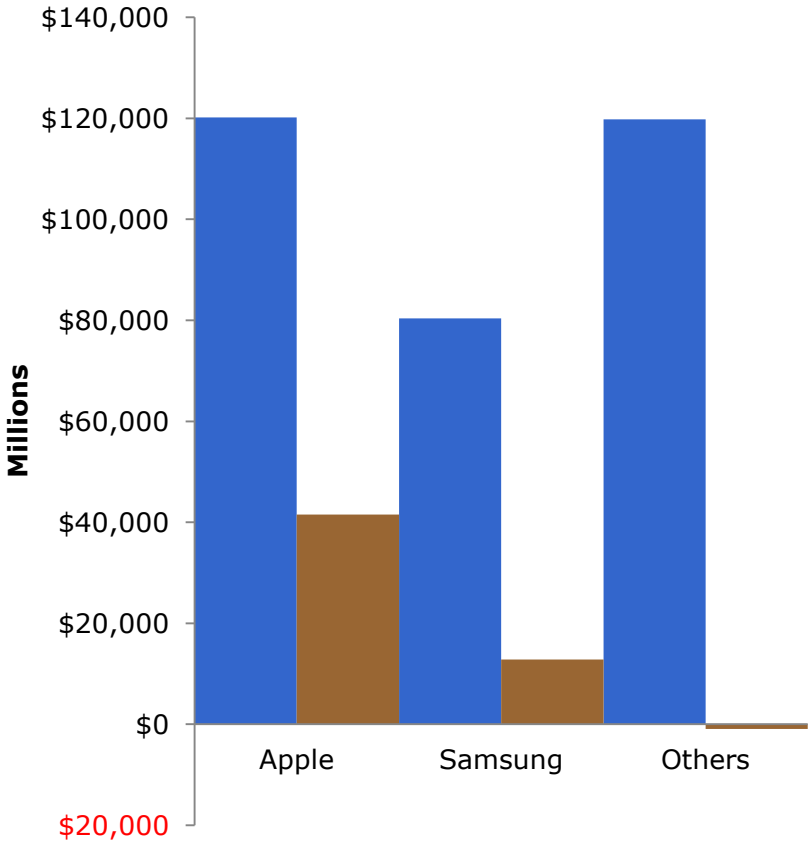
*For new entrants with more that 0.5% market share -- equivalent to 6 million units annually in 2014

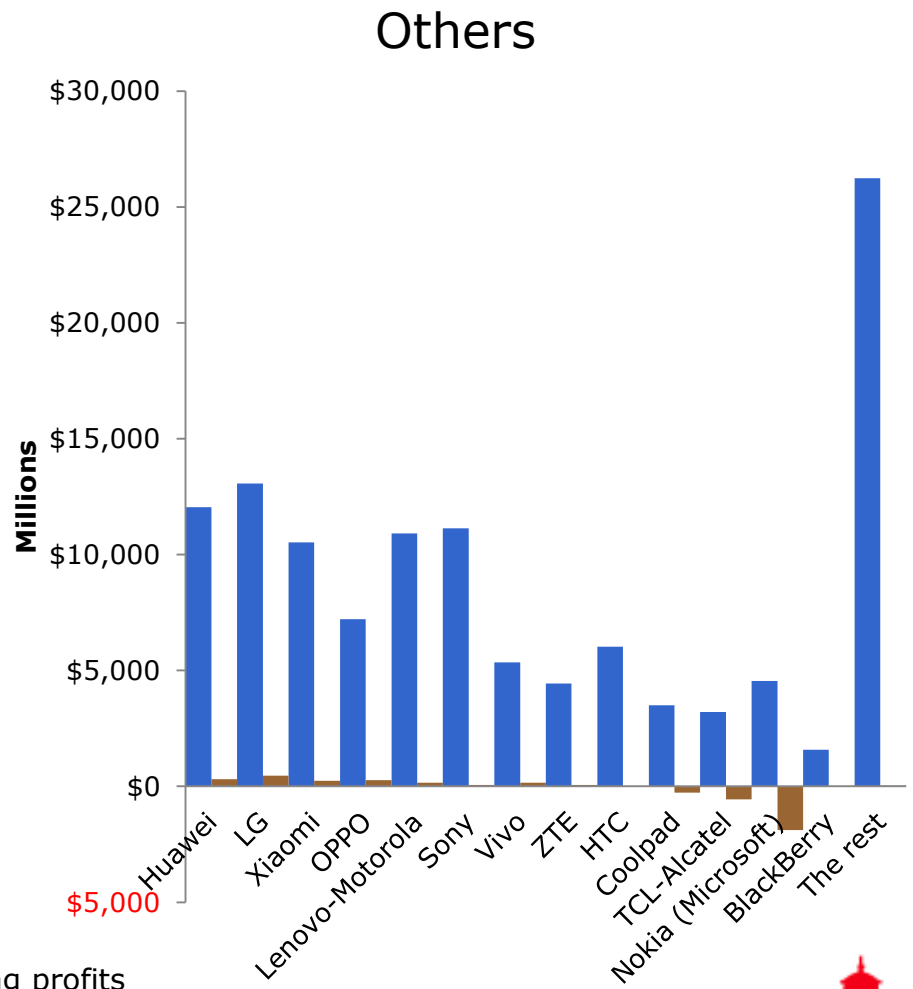
Competition: Unconcentrated Handset OEM Supply



**This widely-accepted measure of market concentration in competition analysis is calculated by summing the squared market shares of all firms in any given market*

Apple and Samsung took 62% of Revenues and 102% of Operating Profits in Smartphones, 2014





Apple took 38% of revenues and made 78% of operating profits
Samsung took 25% of revenues and made 24% of operating profits
Overall, others took 37% of revenues and lost 2% of operating profits

Similar Spec, but at Twice the Price with Cellular*

iPod Touch 5th Generation (no cellular capabilities)

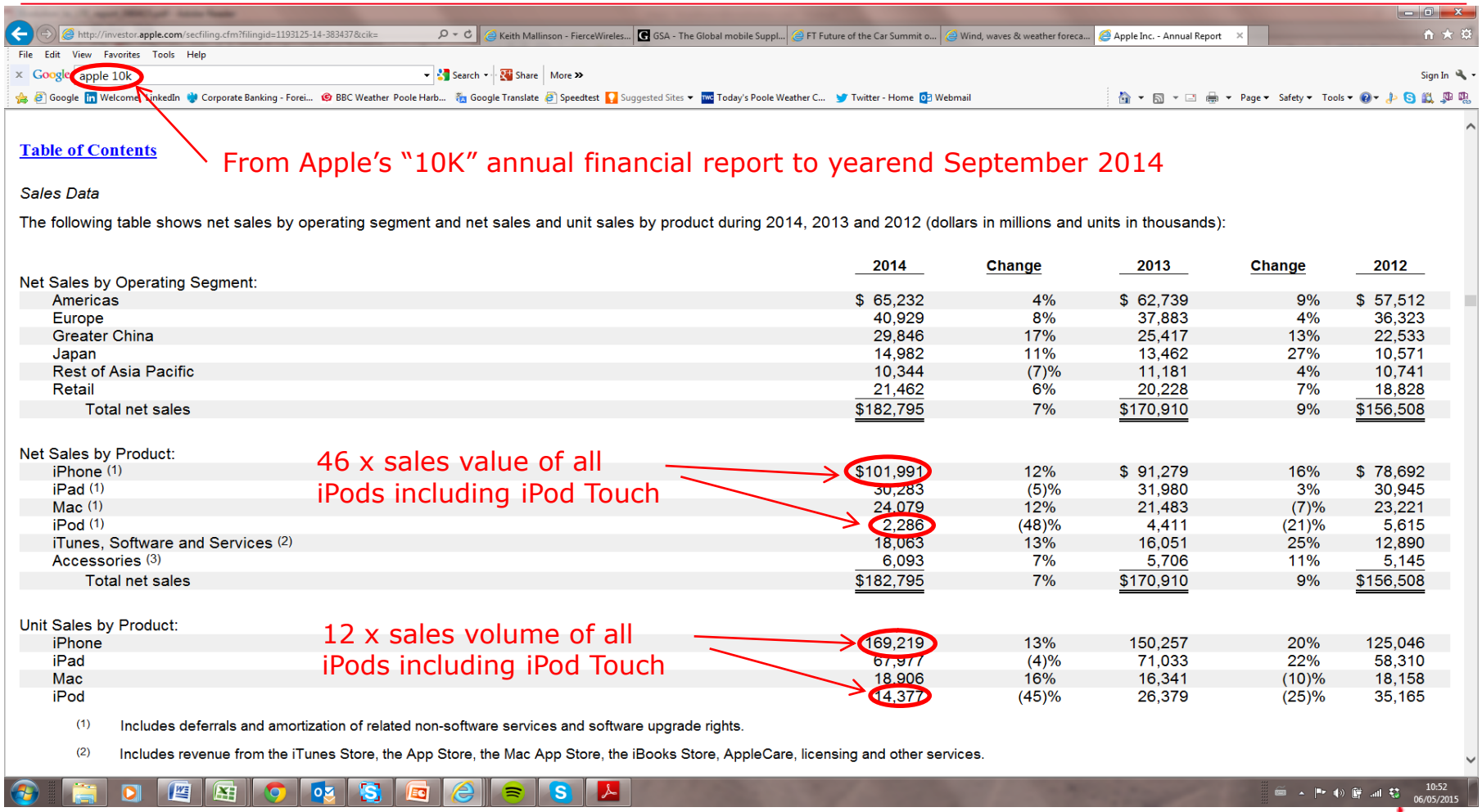
$199 price for 16 GB version, May 2015*

iPhone 5c

$450 price, unlocked and contract/SIM free, for 8 GB version, May 2015**

http://www.phonearena.com/phones/Apple-iPod-touch-5th-generation_id7545
http://www.phonearena.com/phones/Apple-iPhone-5c_id7983
*With equivalent comparison between iPads; cost of adding cellular is $32 in components plus $1 in manufacturing: http://www.isuppli.com/Teardowns/News/Pages/New-iPad-Air-Costs-Less-to-Make-Than-Third-Generation-iPad-Model-,IHS-Teardown-Reveals.aspx.
**According to Apple's US web site. http://www.apple.com

And iPhones Outsell all iPod models 46-fold in Revenues and 12-fold in Volume



http://investor.apple.com/secfiling.cfm?filingid=1193125-14-383437&cik=

apple 10k

From Apple's "10K" annual financial report to yearend September 2014

Table of Contents

Sales Data

The following table shows net sales by operating segment and net sales and unit sales by product during 2014, 2013 and 2012 (dollars in millions and units in thousands):

	2014	Change	2013	Change	2012
Net Sales by Operating Segment:					
Americas	$ 65,232	4%	$ 62,739	9%	$ 57,512
Europe	40,929	8%	37,883	4%	36,323
Greater China	29,846	17%	25,417	13%	22,533
Japan	14,982	11%	13,462	27%	10,571
Rest of Asia Pacific	10,344	(7)%	11,181	4%	10,741
Retail	21,462	6%	20,228	7%	18,828
Total net sales	$182,795	7%	$170,910	9%	$156,508
Net Sales by Product:					
iPhone (1)	$101,991	12%	$ 91,279	16%	$ 78,692
iPad (1)	30,283	(5)%	31,980	3%	30,945
Mac (1)	24,079	12%	21,483	(7)%	23,221
iPod (1)	2,286	(48)%	4,411	(21)%	5,615
iTunes, Software and Services (2)	18,063	13%	16,051	25%	12,890
Accessories (3)	6,093	7%	5,706	11%	5,145
Total net sales	$182,795	7%	$170,910	9%	$156,508
Unit Sales by Product:					
iPhone	169,219	13%	150,257	20%	125,046
iPad	67,977	(4)%	71,033	22%	58,310
Mac	18,906	16%	16,341	(10)%	18,158
iPod	14,377	(45)%	26,379	(25)%	35,165

46 x sales value of all iPods including iPod Touch

12 x sales volume of all iPods including iPod Touch

(1) Includes deferrals and amortization of related non-software services and software upgrade rights.

(2) Includes revenue from the iTunes Store, the App Store, the Mac App Store, the iBooks Store, AppleCare, licensing and other services.

Apple is generating more that $40 billion annually in gross profits on its iPhones with margins in the 40%-50% range in recent years

Aggregate Royalty Yield <2.8% for Five Licensors who Collectively Own Most Mobile SEP Value

	2013		2014	
	2013 Total Royalties (millions)	2013 Royalty Yield*	2014 Total Royalties (millions)	2014 Royalty Yield*
Qualcomm**	$7,878	2.09%	$7,862	1.92%
Ericsson	$1,583	0.42%	$1,480	0.36%
Nokia***	$688	0.18%	$791	0.19%
InterDigital****	$264	0.07%	$416	0.10%
Alcatel-Lucent	$100	0.03%	$75	0.02%
Total	$10,513	2.79%	$10,625	2.59%

*As a percentage of global handset revenues of $377 billion in 2013 and an estimated $410 billion in 2014 (Morgan Stanley)
**September yearend
***Nokia Technologies: figures for patent, technology and brand licensing
**** Net of patent disposal income in 2013
From audited company reporting in all cases. Mid-year exchange rates used

Thank You

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SUPPORTING COLLABORATIVE INNOVATION IN THE INTERCONNECTED WORLD

KRISTEN OSENGA

PROFESSOR, UNIVERSITY OF RICHMOND SCHOOL OF LAW
SENIOR SCHOLAR, CENTER FOR THE PROTECTION OF INTELLECTUAL PROPERTY

OVERVIEW

- Understanding collaborative innovation & its importance
- Tracking collaboration across the innovation cycle
- Challenges to collaborative innovation at each stage

UNDERSTANDING COLLABORATIVE INNOVATION

- What is collaborative innovation?
- Why is it important?
- Why is collaborative innovation especially important in the mobile tech space?

COLLABORATION ACROSS THE INNOVATION CYCLE

- Epstein: 4 stages to innovation cycle
  - Initial startup, infusion of venture capital, commercialization of patented products, protection of underlying rights (girds first 3 stages)
- 3 stages in mobile tech innovation
  - Pre-standardization, standardization, post-standardization
  - Commonalities with Epstein's stages, but specialized for ICT

CHALLENGES TO COLLABORATIVE INNOVATION

- How does IP fit in? Help or hinder or hijack?
- Pre-standardization issues
- Standardization issues
- Post-standardization issues
- Can any of these be fixed?

Panel 4 *IP In The Biotech & Pharmaceutical Industries*

- **Jim Calkins**, *AVP, Global Head of Patent Support for Emerging Markets & Consumer Products, Economic Strategy*, Sanofi
- **Prof. Chris Holman**, University of Missouri–Kansas School of Law
- **Prof. Mark Schultz**, Southern Illinois University School of Law, *Founder & Senior Scholar*, Center for the Protection of Intellectual Property, George Mason University School of Law
- **Michael Walker**, *VP and Assistant General Counsel, Chief IP Counsel*, DuPont
- ***Moderator:*** **Prof. Erika Lietzan**, University of Missouri School of Law

CPIP Annual Conference

Patent Eligibility Update

Chris Holman
UMKC School of Law
Hovey Williams, LLP
October 1, 2015

Mayo/Alice Two-Part Test for Patent Eligibility

- First, determine whether the claims at issue are directed to a patent-ineligible concept.
  - Abstract idea
    - Non-technological inventions
  - Law of nature/Natural phenomenon
    - Building blocks of future innovation
    - Focus has been on biological laws of nature

Mayo/Alice Two-Part Test for Patent Eligibility

- If the answer is yes, determine whether additional elements "transform the nature of the claim" into a patent-eligible application.
  - The Supreme Court has described the second step of this analysis as a search for an "inventive concept"—i.e., an element or combination of elements that is "sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself."

Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012)

- A method of optimizing therapeutic efficacy for treatment of an immune-mediated gastrointestinal disorder, comprising:
  - (a) ***administering*** a drug providing 6-thioguanine to a subject having said immune-mediated gastrointestinal disorder; and
  - (b) ***determining*** the level of 6-thioguanine in said subject having said immune-mediated gastrointestinal disorder,
  - wherein ***the level*** of 6-thioguanine less than about 230 pmol per $8x10^{8}$ red blood cells ***indicates a need*** to increase the amount of said drug subsequently administered to said subject and
  - wherein the level of 6-thioguanine greater than about 400 pmol per $8x10^{8}$ red blood cells indicates a need to decrease the amount of said drug subsequently administered to said subject."

Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012)

- Prometheus' patents set forth laws of nature—namely, relationships between concentrations of certain metabolites in the blood and the likelihood that a dosage of a thiopurine drug will prove ineffective or cause harm.
  - The relation is a consequence of the ways in which thiopurine compounds are metabolized by the body—entirely natural processes

Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012)

- [T]he steps in the claimed processes (apart from the natural laws themselves) involve well-understood, routine, conventional activity previously engaged in by researchers in the field.
  - ”a doctor using Mayo's test could violate the patent even if he did not actually alter his treatment decision in the light of the test”
- At the same time, upholding the patents would risk disproportionately tying up the use of the underlying natural laws, inhibiting their use in the making of further discoveries.

Ariosa Diagnostics, Inc. v. Sequenom, Inc., 788 F.3d 1371(Fed. Cir. 2015)

- 1. A method for detecting a paternally inherited nucleic acid of fetal origin performed on a maternal serum or plasma sample from a pregnant female, which method comprises
  - ***amplifying*** a paternally inherited nucleic acid from the serum or plasma sample and
  - ***detecting*** the presence of a paternally inherited nucleic acid of fetal origin in the sample.

Ariosa Diagnostics, Inc. v. Sequenom, Inc., 788 F.3d 1371(Fed. Cir. 2015)

- The asserted claims are directed to a multistep method that starts with cffDNA taken from a sample of maternal plasma or serum—a naturally occurring non-cellular fetal DNA that circulates freely in the blood stream of a pregnant woman
- The method ends with paternally inherited cffDNA, which is also a natural phenomenon.
- The method therefore begins and ends with a natural phenomenon.
- Sequenom does not contend that Drs. Lo and Wainscoat created or altered any of the genetic information encoded in the cffDNA, and it is undisputed that the location of the nucleic acids existed in nature before Drs. Lo and Wainscoat found them.

Ariosa Diagnostics, Inc. v. Sequenom, Inc., 788 F.3d 1371(Fed. Cir. 2015)

- Using methods like PCR to amplify and detect cffDNA was well-understood, routine, and conventional activity in 1997.
- Because the method steps were well-understood, conventional and routine, the method of detecting paternally inherited cffDNA is not new and useful.
- The only subject matter new and useful as of the date of the application was the discovery of the presence of cffDNA in maternal plasma or serum.

Ariosa Diagnostics, Inc. v. Sequenom, Inc., 19 F. Supp. 3d 938 (N.D. Cal. 2013)

- A court should consider whether the claim poses a risk of preempting a law of nature, natural phenomenon, or abstract idea
- Sequenom has presented the Court with scientific articles describing [noninfringing] methods for detecting cffDNA
- Sequenom does not present the Court with any evidence of a ***commercially viable*** alternative method of detecting cffDNA

Ariosa Diagnostics, Inc. v. Sequenom, Inc., 19 F. Supp. 3d 938 (N.D. Cal. 2013)

- Sequenom itself has acknowledged the preemptive effect of its patent.
  - " '[M]anagement believes that the in-licensed '540 patent ... will block all non-invasive cell-free DNA-based approaches.' "
  - "[W]e believe [the '540 patent] is the underpinnings of this whole field, and potentially believe anybody whose [*sic*] developing, an approach that interrogates the circulating cell [free] DNA is infringing this key patent in the field."

Rapid Litigation Management (formerly Celsis) v. Cellzdirect (Fed Cir. No. 2015-1570)

- A method of producing a desired preparation of multi-cryopreserved hepatocytes, said hepatocytes, being capable of being frozen and thawed at least two times, and in which greater than 70% of the hepatocytes of said preparation are viable after the final thaw, said method comprising:
  - (A) *subjecting* hepatocytes that have been frozen and thawed to density gradient fractionation to separate viable hepatocytes from non-viable hepatocytes,
  - (B) *recovering* the separated viable hepatocytes, and
  - (C) *cryopreserving* the recovered viable hepatocytes to thereby form said desired preparation of hepatocytes without requiring a density gradient step after thawing the hepatocytes for the second time, wherein the hepatocytes are not plated between the first and second cryopreservations, and wherein greater than 70% of the hepatocytes of said preparation are viable after the final thaw.

Rapid Litigation Management (formerly Celsis) v. Cellzdirect (Fed Cir. No. 2015-1570)

- Step 1
  - District court found that claims were directed to "an ineligible law of nature: the discovery that hepatocytes are capable of surviving multiple freeze-thaw cycles."
- Step 2
  - The court considered the patent to be "a straightforward application of the truth that hepatocytes are inherently capable of surviving multiple freeze-thaw cycles."

Rapid Litigation Management (formerly Celsis) v. Cellzdirect (Fed Cir. No. 2015-1570)

- Preemption
  - The district court acknowledged that other methods existed for creating multi-cryopreserved hepatocyte preparations, but reasoned that if the patent law permitted "a lock on a narrow albeit routine combination of steps, different combinations of other routine steps would also be patent-eligible."
    - "Put another way, if one were allowed to own a slice of the preemptive pie, that would pave the way for multiple others to claim the rest of that pie."

Exergen Corporation v. Thermomedics, Inc. et al, 1-13-cv-11243 (D. MA. September 15, 2015, Order)

- A method of detecting human body temperature comprising:
  - measuring temperature of a region of skin of the forehead; and
  - processing the measured temperature to provide a body temperature approximation based on heat flow from an internal body temperature to ambient temperature.

Exergen Corporation v. Thermomedics, Inc. et al, 1-13-cv-11243 (D. MA. September 15, 2015, Order)

- Step 1
  - The parties do not seriously dispute that the four claims at issue are directed to patent-ineligible concepts.
  - Claims 51 and 54 recite a method for processing temperature and radiation measurements to estimate body temperature "based on heat flow from an internal body temperature to ambient temperature."
  - Claims 51 and 54 and their related dependent claims are directed to applying mathematical models of natural thermodynamic relationships, so the § 101 analysis proceeds to the second step.

Exergen Corporation v. Thermomedics, Inc. et al, 1-13-cv-11243 (D. MA. September 15, 2015, Order)

- Prior art taught away from the invention
  - 1996 study from the Thermoregulation Research Laboratory at UCSF warned the medical community of the dangers of using skin temperature as a substitute for traditional core-temperature monitoring sites and reported a “poor correlation” between skin temperature and core temperature.
  - The American Society for Testing and Materials, an international organization that develops technical standards, concluded in its 2003 and 2009 standards for infrared thermometers that skin temperature could not be independently correlated with core body temperature.
  - The inventor spent years conducting clinical trials of Exergen’s forehead thermometer to overcome skepticism among medical professionals who believed that measuring temperature at the forehead could not lead to accurate estimates of core body temperature.

Exergen Corporation v. Thermomedics, Inc. et al, 1-13-cv-11243 (D. MA. September 15, 2015, Order)

- No matter how novel the concept of measuring body temperature from forehead skin temperature or how valuable the contribution to the medical community, this idea as set forth in the asserted claims is fundamentally a discovery of a natural relationship between skin temperature and body temperature.
- "Groundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry." Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107, 2117 (2013)

Endo Pharmaceuticals Inc. v. Actavis, Inc. (No. 14-1381-RGA) (D.Del.)(Sept. 23, 2015)

- 1. A method of treating pain in a renally impaired patient, comprising the steps of:
  - a. ***providing*** a solid oral controlled release dosage form, comprising: i. about 5 mg to about 80 mg of oxymorphone or a pharmaceutically acceptable salt thereof as the sole active ingredient; and ii. a controlled release matrix;
  - b. ***measuring*** a creatinine clearance rate of the patient and determining it to be (a) less than about 30 ml/min, (b) about 30 mL/min to about 50 mL/min, (c) about 51 mL/min to about 80 mL/min, or (d) above about 80 mL/min; and
  - c. ***orally administering*** to said patient, in dependence on which creatinine clearance rate is found, a lower dosage of the dosage form to provide pain relief;
  - wherein after said administration to said patient, the average AUC of oxymorphone over a 12-hour period is less than about 21 nghr/mL.

Endo Pharmaceuticals Inc. v. Actavis, Inc. (No. 14-1381-RGA) (D.Del.)(Sept. 23, 2015)

- Step 1
  - Directed towards a natural phenomenon

    Relationship between severity of renal impairment and the bioavailability of oxymorphone
- Step 2
  - "Providing," "measuring/determining" and ""administering" steps analogous to step in Prometheus claims

BIO/PhRMA Amici Brief Seeking En Banc Rehearing of *Ariosa v. Sequenom*

- Big question:
  - Was Judge Linn's correct in his concurrence, i.e., is Supreme Court intervention necessary, or can the Federal Circuit fix this mess within the confines of *Mayo?*

BIO/PhRMA Amici Brief Seeking En Banc Rehearing of *Ariosa v. Sequenom*

- Unprecedented uncertainity regarding the scope of patent-eligible subject matter
  - PTO has responded with ongoing stream of revised and re-revised non-final and interim guidance documents
- Increasing rate of claim rejections
  - Novel antibiotics
  - Industrial enzymes
  - Diagnostics
  - Crop protection products

BIO/PhRMA Amici Brief Seeking En Banc Rehearing of *Ariosa v. Sequenom*

- Widening gap between US and the rest of the world
- PTO's "July 2015 Update: Subject Matter Eligibility"
  - 24 post-*Mayo* Federal Circuit decisions
    - 22 found all challenged claims patent ineligible
    - Only one decision found all challenged claims patent eligible
- Threat to future investment

BIO/PhRMA Amici Brief Seeking En Banc Rehearing of *Ariosa v. Sequenom*

- Supreme Court intended Step 1 to perform some gate-keeping function
  - Panels approach renders the first part of the Supreme Court's test superfluous for a vast array of technologies
  - Particularly diagnostics and personalized medicine
- It will often be the case that an otherwise novel and non-obvious biotechnology invention can be deconstructed into a mere combination of natural phenomena and known techniques.

BIO/PhRMA Amici Brief Seeking En Banc Rehearing of *Ariosa v. Sequenom*

- Supreme Court assumed the existence of limiting principles that would maintain patent eligibility for truly meritorious inventions
  - En banc reconsideration would allow court to address the nature of these limitations
  - Alternatively, if this court finds that Supreme Court precedent does not provide for limiting principles that provide a meaningful opportunity for patenting important biotechnology innovations, that would suggest a need for the Supreme Court to readdress the contours of patent eligibility in the context of biotechnology.

BIO/PhRMA Amici Brief Seeking En Banc Rehearing of *Ariosa v. Sequenom*

- Claims identified by Judge Bryson, which the Supreme Court assumed to be available to Myriad under the newly heightened standard for patent eligibility, were subsequently declared patent ineligible by the Federal Circuit for failure to satisfy the *Mayo* framework. *University of Utah Research Foundation v. Ambry Genetics Corp.*, 774 F.3d 755 (Fed. Cir. 2014).

2014-1139, -1144

United States Court of Appeals
for the Federal Circuit

ARIOSA DIAGNOSTICS, INC., and NATERA, INC.,
Plaintiffs-Appellees,

and

DNA DIAGNOSTICS CENTER, INC.,
Counterclaim Defendant-Appellee,

v.

SEQUENOM, INC., and
SEQUENOM CENTER FOR MOLECULAR MEDICINE, LLC,
Defendants-Appellants,

and

ISIS INNOVATION LIMITED,
Defendant.

Appeals from the United States District Court for the Northern District of California in Nos. 3:11-cv-06391-SI, and 3:12-cv-00132-SI, Judge Susan Y. Illston.

THE BIOTECHNOLOGY INDUSTRY ORGANIZATION (BIO) AND PHARMACEUTICAL RESEARCH AND MANUFACTURERS OF AMERICA (PhRMA) AS *AMICI CURIAE* SUPPORTING APPELLANTS AND IN FAVOR OF EN BANC RECONSIDERATION

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August 27, 2015

CERTIFICATE OF INTEREST

Counsel for *Amici Curiae* certifies the following:

1. The full name of every party or *amicus curiae* represented by me is:

   Biotechnology Industry Organization ("BIO")
   Pharmaceutical Research and Manufacturers of America ("PhRMA")

2. The name of the real parties in interest (if the party named in the caption is not the real party in interest) represented by me is:

   None.

3. All parent corporations and any publicly held companies that own 10 percent of the stock of the party or *amicus curiae* represented by me are:

   None.

4. The names of all law firms and the partners or associates that appeared for the party or *amici curiae* now represented by me in the trial court or are expected to appear in this court are:

   Christopher M. Holman
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   University of Missouri-Kansas City School of Law

   Brian P. Barrett
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Date: August 27, 2015

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STATEMENT OF INTEREST OF AMICI CURIAE

The Biotechnology Industry Organization (BIO) is the world's largest biotechnology trade association, with over 1,100 members worldwide involved in the research and development of innovative healthcare, agricultural, industrial, and environmental biotechnology products. The Pharmaceutical Research and Manufacturers of America (PhRMA) is a voluntary, nonprofit association representing the nation's leading research-based pharmaceutical and biotechnology companies. PhRMA's member companies are dedicated to discovering medicines that enable patients to lead longer, healthier, and more productive lives. BIO and PhRMA are concerned that the development and commercialization of a range of biotechnologies will be impeded if this Court does not address the mounting uncertainty currently afflicting patentable subject matter jurisprudence.

Amici have no direct stake in the result of this appeal. No counsel for a party authored this brief in whole or in part, and no such counsel or party, nor any person other than the amici curiae or their counsel, made a monetary contribution intended to fund the preparation or submission of this brief. This brief is solely the work of BIO and PhRMA and their counsel; it reflects the amici's consensus view, but not necessarily the view of any individual member. Pursuant to Fed. Cir. R. 35(g) amici are contemporaneously filing a motion for leave to file this brief.

ARGUMENT

I. The Panel Decision Has Exacerbated Uncertainty as to the Availability of Effective Patent Protection for Biotechnological Innovation

The rapid expansion of biotechnology beginning in the 1980s has been attributed, at least in part, to the inclusive scope of patentable subject matter espoused by the Supreme Court in *Diamond v. Chakrabarty*, 447 U.S. 303 (1980). Unfortunately, recent rulings have resulted in a level of uncertainty about the scope of patent-eligible subject matter that is unprecedented in the history of biotechnology. This is affecting both the patent user community and the US Patent and Trademark Office (PTO), which has responded with an ongoing stream of revised and re-revised non-final and interim guidance documents. With each new PTO guidance, biotech companies have observed an increasing rate of claim rejections, affecting a diverse range of biotechnology, including novel antibiotic molecules, industrial enzymes, diagnostic processes, and crop protection products, to name but a few.[1]

Until recently, such inventions were uncontroversially deemed patent eligible, and still are in other industrialized countries, where trading partners are growing concerned about a widening U.S. departure from internationally prevailing standards for patent eligibility of at least some biotechnologies, and its

[1] See e.g. Chao, Bernard, *The USPTO Is Rejecting Potentially Life-Saving Inventions;* available at http://www.law360.com/articles/604808/uspto-is-rejecting-potentially-life-saving-inventions.

effect on trade and the cross-border flow of innovation and investment.[2]

Even if a biotechnology firm succeeds in overcoming a rejection on patent-eligibility grounds in the PTO, the unsettled state of the law creates doubt about whether such issued patents would withstand challenge. So far, the vast majority of judicial decisions addressing patent eligibility across technologies have resulted in a determination of ineligibility under the recently articulated standards. For example, Appendix 3 of the the recent PTO "July 2015 Update: Subject Matter Eligibility," identifies 24 post-*Mayo* subject matter eligibility decisions of this Court alone.[3] Of these, 22 held *all* of the challenged claims to be patent ineligible.

The dark cloud overshadowing thousands of issued and maintained biotechnology patents,[4] many of which have been the basis for substantial investment, threatens investors' expectations that appeared reasonable prior to recent jurisprudential developments. And the resulting uncertainty is affecting future investment decisions. Biotechnology is often identified as one of the areas of technology most dependent upon effective and predictable patent protection, in the

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[2] See 2014 and 2015 Comments of International Bioindustry Associations, available at http://www.uspto.gov/sites/default/files/patents/law/comments/mm-a-bio20140731.pdf and http://www.uspto.gov/sites/default/files/documents/2014ig_a_bio_2015mar16.pdf , respectively.

[3] Available at http://www.uspto.gov/patent/laws-and-regulations/examination-policy/examination-guidance-and-training-materials.

[4] For example, the *Myriad* decision alone effectively invalidated isolated nucleic acid claims in over 8,700 issued and maintained US patents - this effect is much greater when extrapolated to claims to other isolated naturally-occurring substances. See Graff, Gregory D. et al., *Not quite a myriad of gene patents*, Nature Biotechnology 31(5) (2013) 404-410.

absence of which investors will choose to switch to other, perhaps less socially beneficial, areas of technology. *In re Bilski*, 545 F.3d 943, 1014 (Fed. Cir. 2008) (J. Rader, dissenting) (warning of the danger of "inadvertently advis[ing] investors that they should divert their unprotectable investments away from discovery of 'scientific relationships' within the body that diagnose breast cancer or Lou Gehrig's disease or Parkinson's [ ].").

II. This Court Should Clarify the Contours of the *Mayo* Framework

Mayo established a two-step framework, inquiring first whether the claims at issue are "directed to" excluded subject matter, and, if so, asking second, whether the claim nonetheless embodies an "inventive concept." *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1375 (Fed. Cir. 2015)(citing *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S.Ct. 1289, 1297).

Clearly, the Supreme Court would not have articulated a two-step test if it did not intend the first step to serve a meaningful gatekeeping function. Yet, the panel missed an opportunity to clarify if and how this gatekeeping function operates in biotechnology. For example, the panel indicates that a claim "directed to detecting the presence of a naturally occurring thing or natural phenomenon" meets Step I. But under this logic, it is difficult to see how *any* analytical or detection method would ever *not* satisfy Step I, so long as that method is designed to detect something that occurs naturally. Such uncritical application of Step I would render the first part of the Supreme Court's test superfluous for a vast array

of technologies, including not only virtually all diagnostics, but also forensic, geological or atmospheric testing, petrochemical or metallurgical analysis, and even radioisotope dating in archaeology. The panel's analysis would also promote disparate treatment of analytical methods based on what these methods detect, even if they are otherwise indistinguishable from a practical and social utility perspective. For example, a method for detecting man-made toxic contaminants in drinking water might be found patent eligible under Step I, while a functionally equivalent method for detecting waterborne natural pathogens would advance to higher scrutiny under Step II.

Whether or not Step I plays a meaningful gatekeeping role also has serious implications for personalized medicine, widely heralded as the next generation of medical innovation. Personalized medicine inventions inherently rely on the detection or evaluation of a patient-specific trait, or on a patient's physiological response to a treatment, and could categorically be deemed "directed to" a natural phenomenon under an uncritical or undifferentiated application of Step I. It seems unlikely this was the intent of the Supreme Court, and *en banc* reconsideration could provide an opportunity to clarify the contours of Step I of the *Mayo* framework in the context of personalized medicine, and biotechnology in general.

There is also a great need for *en banc* clarification of the parameters of Step II of the *Mayo* analysis. One particular area of confusion concerns the interplay of analysis for "inventive concept" and "preemption." Often, the existence of

preemption and inventive concept are not connected, and in fact threaten to drive the development of patent eligibility doctrine in different directions. For example, an application of a biological natural phenomenon that is highly inventive might constitute the only practical use of the phenomenon apparent at the time of invention. Should its patent-eligibility be upheld because of the presence of an inventive concept, or barred because of its apparent preemption of the natural phenomenon? On the other hand, it will always be possible to limit a claim by including conventional steps, such that the public retains virtually unfettered access to the implicated natural phenomenon. Does a manifest lack of preemption ever remove the need for an "inventive concept" analysis, or influence it in any way?

The panel's interpretation of the "inventive concept" test is likewise problematic. It will often be the case that an otherwise novel and nonobvious biotechnology invention can be deconstructed into a mere combination of natural phenomena and known techniques. But biotechnology has advanced through inventions of this type, which prior to the recent Supreme Court decisions have been viewed as eligible for patent protection. Such inventions translate nascent technology into commercial products that provide meaningful benefits to society. Patents on diagnostics, for example, play a critical role as the necessary incentive for the substantial investment required for commercialization activities such as clinical studies in support of regulatory approval, insurance reimbursement, and

even the necessary studies to ensure healthcare providers and patients have sufficient information to avail themselves of the technology.[5]

The basis for innovation in genetic diagnostic testing is the identification of a genetic variation that correlates with some clinically significant information regarding a patient, such as a propensity for cancer, or the optimal dosage of a drug.[6] These are extremely important innovations, but the resulting clinical tests generally involve the use of conventional techniques for amplifying and analyzing DNA, such as polymerase chain reaction (PCR) and electrophoresis (the techniques used in this case). Because such techniques are well-understood, validated, and reliable, their use for medical applications makes good sense. Yet if the genetic variation is characterized as a natural phenomenon, as seems likely under recent jurisprudence, the reasoning applied by the panel could generally preclude patent eligibility for diagnostic tests simply because the most practical means for administering the tests involves the use of conventional techniques.

In its recent decisions the Supreme Court apparently assumed the existence of limiting principles that would maintain patent eligibility for truly meritorious inventions (Judge Linn's characterization of the claims at issue in this case), even

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[5] See e.g. Holman, Christopher M., *The Critical Role of Patents in the Development, Commercialization and Utilization of Innovative Genetic Diagnostic Tests and Personalized Medicine* (2014) , available at http://cpip.gmu.edu/wp-content/uploads/2014/04/Holman-Critical-Role-of-Patents-in-Genetic-Diagnostic-Tests.pdf.

[6] *Id.*

if that invention can be deconstructed into a combination of natural phenomena and conventional technology. *Mayo*, for example, reaffirmed the continuing viability of *Diamond v. Diehr*, a decision in which the Court upheld the patent eligibility of a process comprising an inventive application of a mathematical equation implemented by means that would appear to have been conventional and routine at the time of invention. 132 S.Ct. at 1299 (citing *Diamond v. Diehr*, 450 U.S. 175 (1981). *Mayo* found that the *Diehr* claim did satisfy the "inventive concept" test because these steps "apparently added to the formula something that in terms of patent law's objectives had [significance, transforming] the process into an inventive application of the formula." *Id.* Note *Mayo*'s focus on the *objectives* of patent law - which would clearly encompass providing adequate patent protection for meritorious inventions - and its conclusion that when these objectives are satisfied, a claim reciting the application of an excluded law of nature with conventional and well-known process steps can be patent eligible. *Diehr* also emphasized that the claims deemed patent eligible in that case did "not seek to pre-empt the use of [the mathematical] equation," an important consideration that was given short shrift by the panel in this case.

En banc reconsideration would allow this court to address the nature of the limiting principles suggested in *Mayo*. Alternatively, if this court finds that Supreme Court precedent does not provide for limiting principles that provide a meaningful opportunity for patenting important biotechnology innovations, that

would suggest a need for the Supreme Court to readdress the contours of patent eligibility in the context of biotechnology. This case would be an appropriate vehicle to alert the Supreme Court to the urgent need for this clarification.

Some opinions seem to suggest that the developer of, for example, a new diagnostic test can avoid subject matter eligibility problems by coming up with some new methodology for analyzing DNA, enzymes or other patient-specific traits, and then patenting a method limited to this new methodology. But this is not a realistic proposal. The resulting patent claim would have little commercial value, since it would permit competitors to perform equivalent diagnostic tests using conventional methodology without any liability. An informed consideration of the practicalities of personalized medicine suggests that the Federal Circuit must begin articulating limiting principles in order to achieve the Supreme Court's objective of balancing access to the building blocks of innovation against reasonable scope of patent protection for important inventions in the life sciences.

III. A Coherent Articulation of the Policy Basis for the Patent Eligibility Requirement is Necessary for Development of the Doctrine in a Manner Consistent with the Overarching Objectives of the Patent System

Nothing in *Mayo* and *Myriad* suggests that the Court intended to single out whole classes of socially beneficial biotechnology for unfavorable treatment under the patent law - to the contrary, these decisions are replete with cautionary statements indicating that the Court did not envision its decisions as upsetting the availability of effective patent protection for biotechnology inventions, particularly

in the areas of diagnostics and pharmaceuticals. We are reminded that the statute is inclusive and judicial exceptions to it are narrow, not the other way round.

For example, in *Myriad* the Court stressed that its decision did not implicate "patents on new *applications* of knowledge about the BRCA1 and BRCA2 genes." *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107, 2120 (2013). To the contrary, the Court assumed that effective patent protection would remain available for those who discovered new information useful for the development of diagnostic tests. *Myriad* quotes approvingly from the panel decision below, where Judge Bryson had "aptly noted that, '[a]s the first party with knowledge of the [BRCA1 and BRCA2] sequences, Myriad was in an excellent position to claim applications of that knowledge. Many of its unchallenged claims are limited to such applications." *Id.* (citing *Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office*, 689 F.3d 1303, 1349 (Fed. Cir. 2012).

Two years later, the patent user community is left to wonder which claims those might be. Claims identified by Judge Bryson, which the Supreme Court assumed to be available to Myriad, were subsequently declared patent ineligible by the Federal Circuit for failure to satisfy the *Mayo* framework. *University of Utah Research Foundation v. Ambry Genetics Corp*., 774 F.3d 755 (Fed. Cir. 2014).

CONCLUSION

For these reasons, this Court should grant en banc reconsideration of this case.

Respectfully submitted,

Date: August 27, 2015

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United States Court of Appeals
for the Federal Circuit

Ariosa Diagnostics, Inc v. Sequenom, Inc.
Nos. 2014-1139, -1144

CERTIFICATE OF SERVICE

I, Robyn Cocho, being duly sworn according to law and being over the age of 18, upon my oath depose and say that:

Counsel Press was retained by Hovey Williams LLP, counsel for Amici Curiae, BIOTECHNOLOGY INDUSTRY ORGANIZATION and PHARMACEUTICAL RESEARCH AND MANUFACTURERS OF AMERICA, to print this document. I am an employee of Counsel Press.

On **August 27, 2015**, Counsel for *Amici Curiae* has authorized me to electronically file the foregoing **Brief of *Amici Curiae*** with the Clerk of Court using the CM/ECF System, which will serve via e-mail notice of such filing to any of the following counsel registered as CM/ECF users:

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Any counsel for Amici Curiae who are registered users, at the time of filing, will also be served via e-mail notice from the Clerk of Court via the CM/ECF System.

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Sixteen paper copies will be filed with the Court within the time provided in the Court's rules.

August 27, 2015

/s/ Robyn Cocho
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IP as a Platform for Access to Pharmaceuticals

Mark F. Schultz
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GEORGE MASON UNIVERSITY

Where Innovation Is Tradition

Topic

- The function of IP rights in the pharmaceutical market once a drug has been developed and obtained regulatory approval
- The relationship, if any, between IP rights and the commercial availability of drugs

$800 million

$1.2 billion

$2.6 billion


If you build it, they will come

Is it really true that:

‘There is no evidence that increasing the strength of IP rights as a result of TRIPS has benefited developing countries and LDCs.’?

“If national patent laws did not exist, it would be difficult to make a conclusive case for introducing them; but the fact that they do exist shifts the burden of proof and it is equally difficult to make a really conclusive case for abolishing them.”

--Edith Penrose, The Economics of the International Patent System (1951)

“If we did not have a patent system, it would be irresponsible, on the basis of our present knowledge of its economic consequences, to recommend instituting one. But since we have had a patent system for a long time, it would be irresponsible, on the basis of our present knowledge, to recommend abolishing it.”

--Fritz Machlup, An Economic Review of the Patent System (1958).

Null hypothesis

- There is no relationship between access to drugs and the strength of IP rights
  - Along the way, let's see if there is any evidence, one way or another about the harm of benefit of TRIPS by at least one measure: The availability of medicines

Is distribution and commercialization really such a neglected consideration?

Proposals for alternatives to the patent system

- Patent buyouts: Kremer (1998)
- Compulsory licensing: Hollis (2004)
- Prizes: too many to mention
- Public funding of research as a substitute, not complement to patents: too many to mention
- Procurement, i.e., Advanced Market Commitments: Kremer (2005)

How might property rights facilitate availability of pharmaceuticals?

- Educating medical professionals
- Educating patients
- Establishing distribution networks
- Setting up complements (e.g., diagnostic devices; insurance acceptance)

The evidence

- Focuses on the “natural experiment” of TRIPS
- Three effects:
  - Import volume of pharmaceuticals
  - Timing of product launch
  - Availability

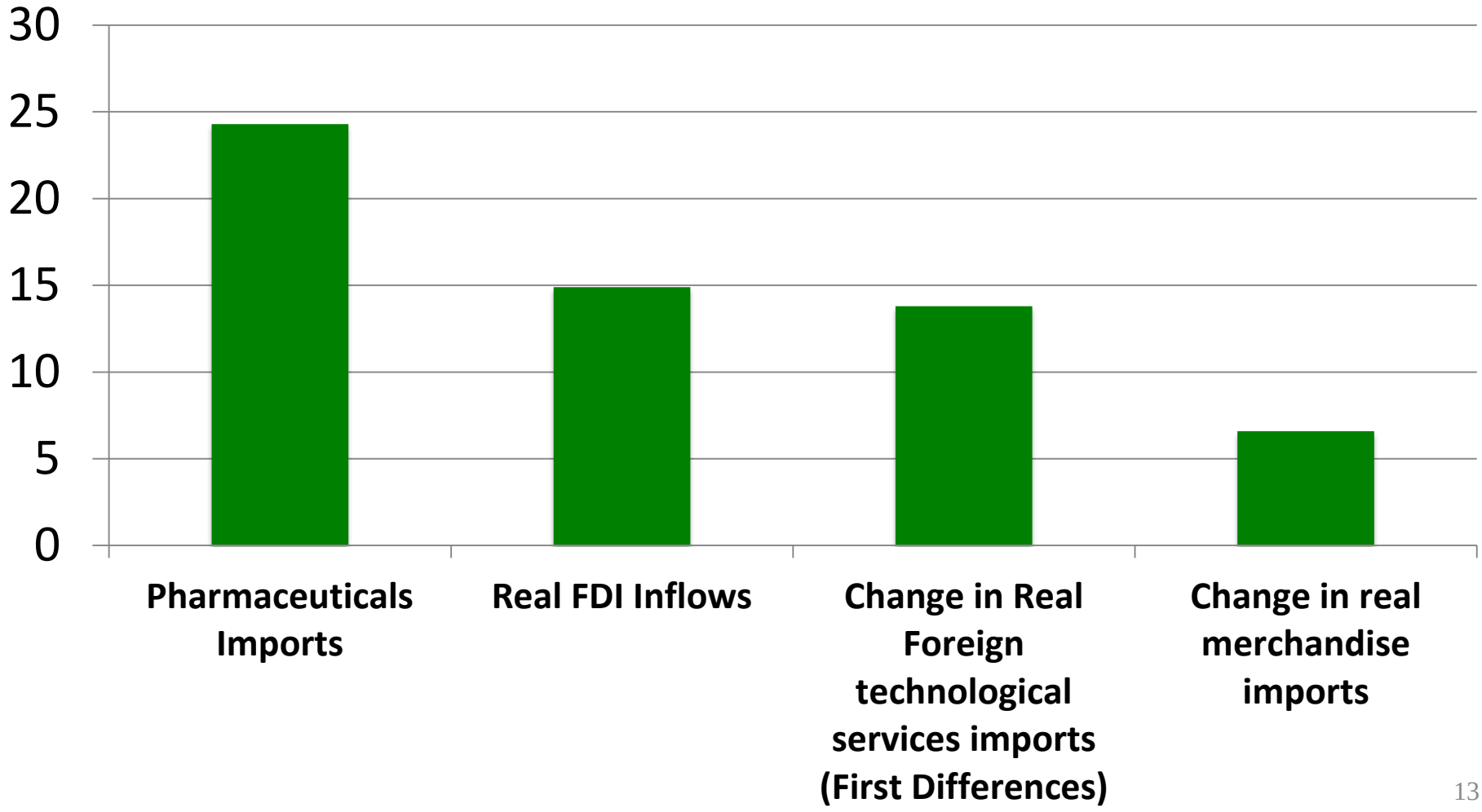
Import Volume

- Delgado, et al. (2013)
  - Postive relationship between TRIPS implementation and increased trade in knowledge-intensive goods
- Park & Lippoldt (2008)
  - Strengthening of patent rights strongly postively associated with increased pharma imports to developing countries & LDCs
- Ivus (2010)
  - Stronger patent rights associated with increased import of patent intensive goods

Import Volume: Greater quantity, or substitution of higher priced goods?

- Two opposing potential effects of stronger IPRs on trade: a market expansion effect and a market power effect Maskus and Penubarti (1995)
- Chauduri (2006)
  - Counter-factual study estimates that India would have lost $305 billion if certain antibiotics were subject to patent protection
- Duggan et al. (2014)
  - After India implemented pharma product patents, average price increase of 3 – 6% with little impact on quantity

Lippoldt & Schultz
Trade Secrets & Trade
(for each one point change in the Trade Secret Protection Index, % change in X)



Timing of Product Launch

- Lanjouw (2005) & Cockburn et. al. (2014)
  - Speed of drug launch positively associated with strength of patent protection
- Borrell (2005)
  - Speed of launch of HIV drugs in developing countries positively associated with strength of patent protection

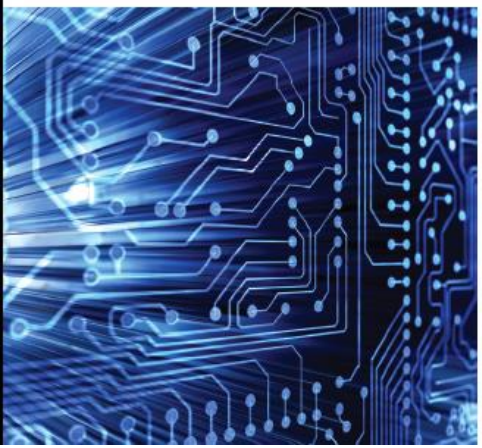
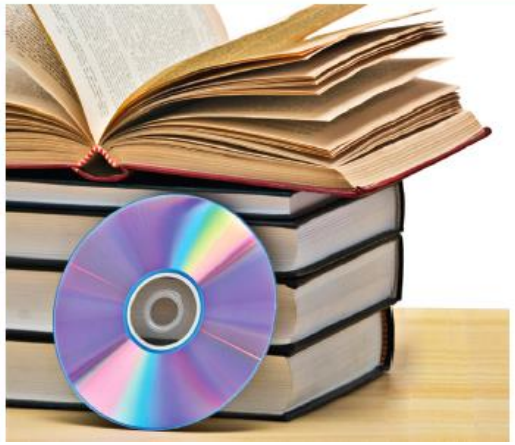
Availability

- Berndt & Cockburn (2014)
  - Availability of drugs in India –vs- the rest of the world
  - Of 184 drugs approved by the US FDA between 2000 & 2004, half were delayed in India by at least 5 years or more
- Berndt (2011)
  - Probability of drug being commercially available is lowest in countries with weak patent protection and weak/no market exclusivity

Conclusions

- Several studies find a relationship between stronger IP rights and access to drugs
  - More imports
  - Faster launches
  - More drugs available
- Indicates that IP rights support investment in education and infrastructure
- Yes, there actually is evidence that strengthening IP rights – including via TRIPS – led to at least one benefit – drug availability

CENTER FOR THE PROTECTION OF INTELLECTUAL PROPERTY

Thank you

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George Mason Law, CPIP

Southern Illinois University School of Law

GEORGE MASON UNIVERSITY

Where Innovation Is Tradition

Panel 5 *IP & The Movies We Watch*

- **Garrett Brown**, Oscar-winning Inventor of the Steadicam® camera stabilizer
- **Prof. Justin Hughes**, Loyola Law School, Los Angeles
- **Prof. Eric Priest**, University of Oregon School of Law
- **Ben Sheffner**, *VP, Legal Affairs*, Motion Picture Association of America
- ***Moderator:*** **Troy Dow**, *Vice President & Counsel*, The Walt Disney Company

#cpip2015

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COPYRIGHT EXTREMOPHILES: DO CREATIVE INDUSTRIES THRIVE OR JUST SURVIVE IN CHINA'S HIGH-PIRACY ENVIRONMENT?

Eric Priest *

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* Assistant Professor, University of Oregon School of Law. This Article began as a presentation at the conference on "IP for Creative Upstarts" at Michigan State University, November 10, 2012. The Author wishes to thank Sean Pager, Mark Schultz, and Peter Yu for their helpful comments on previous drafts, and Mark Cohen for useful suggestions and source materials. The Author is indebted to the *Harvard Journal of Law & Technology* editors, particularly Nathan Campbell and Samantha Rothberg, for their patience and insightful editorial suggestions.

I. INTRODUCTION

Does copyright piracy actually *benefit* creators and the creative industries in China? Recent scholarship and commentaries suggest that rampant piracy might result in no net social loss in China or might even produce net social benefits.[1] This tracks a broader trend in intellectual property ("IP") scholarship expressing skepticism about the benefits of exclusive IP rights and emphasizing the importance of public access to knowledge and the cumulative nature of creativity and innovation.[2]

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1. *See, e.g.*, LUCY MONTGOMERY, CHINA'S CREATIVE INDUSTRIES 70 (2010); Jingying Li, *From D-Buffs to the D-Generation: Piracy, Cinema, and an Alternative Public Sphere in Urban China*, 6 INT'L J. COMM. 542, 557–61 (2012) (discussing how the black market for films undermines state censorship and helps to establish a new venue for civil discourse); Kal Raustiala & Christopher Sprigman, *Fake It Till You Make It*, 92 FOREIGN AFF. 25, 26 (2013) (discussing piracy's contribution to business growth, middle class development, and the encouragement of creativity throughout China); Joe Karaganis, *Media Piracy and the End of Chinese Cultural Exceptionalism? The Ancient History of the DVD*, CHINA L. BLOG (July 10, 2013), http://www.chinalawblog.com/2013/07/media-piracy-and-the-end-of-chinese-cultural-exceptionalism-the-ancient-history-of-the-dvd.html [hereinafter Karaganis, *Ancient History of the DVD*]; Joe Karaganis, *Media Piracy and the End of Chinese Cultural Exceptionalism? Part 2 of 3: What Everyone Wants*, CHINA L. BLOG (July 13, 2013), http://www.chinalawblog.com/2013/07/media-piracy-and-the-end-of-chinese-cultural-exceptionalism-part-2-of-3-what-everyone-wants.html [hereinafter Karaganis, *What Everyone Wants*] (observing China's exposure to Western norms and values through pirated goods); Joe Karaganis, *The End of Chinese Cultural Exceptionalism? Part 3 of 3: Forget It, Jack, It's Chinatown*, CHINA L. BLOG (July 14, 2013), http://www.chinalawblog.com/2013/07/the-end-of-chinese-cultural-exceptionalism-part-3-of-3-forget-it-jack-its-chinatown.html [hereinafter Karaganis, *Forget It, Jack, It's Chinatown*].

2. *See, e.g.*, YOCHAI BENKLER, THE WEALTH OF NETWORKS 38–40 (2006); JAMES BOYLE, THE PUBLIC DOMAIN 8–9 (2008); LAWRENCE LESSIG, FREE CULTURE 183–89 (2004); JESSICA LITMAN, DIGITAL COPYRIGHT 173 (2006); KAL RAUSTIALA & CHRISTOPHER SPRIGMAN, THE KNOCKOFF ECONOMY 7–8 (2012).

As scholars increasingly question the role and value of copyright law in society, some might suggest the "headline" from China's experience is that creative industries can survive and even thrive despite an ineffectual copyright system. Piracy remains rampant, but China has skyrocketed to become the second largest film market in the world, with production quantitatively on par with Hollywood.[3] The music industry is disproportionately small given China's size and the enormous popularity of music online, but it has not collapsed.[4] People still write and produce music, and some superstars even earn millions from alternative revenue streams such as concerts, corporate events, and sponsorships.[5] So, does piracy have an unduly bad reputation in China, and is copyright overrated? As one commentator asks, "[W]here is the problem in need of an enforcement solution [in China]? Where is the evidence that piracy is undercutting production?"[6]

This Article aims to deconstruct and refute the notion that effective copyright enforcement is unnecessary — or even detrimental — to the growth and success of creative industries in China and beyond. Instead, one might liken successful Chinese music and film producers to extremophiles: biological organisms that adapt to environments otherwise uninhabitable to most life.[7] Just as microorganisms have evolved to thrive in superheated deep-sea vents or highly acidic environments,[8] so too can a subset of creative professionals find ways to monetize their works even in a high-piracy environment. The fact that some monetization models can work for some types of producers or artists in China does not mean that optimal or even near-optimal conditions exist for the development of flourishing, healthy, and stable creative industries. In short, poor copyright enforcement inflicts significant and persistent harms on China's music and film industries. To invoke the extremophiles analogy, China's inhospitable creative industry environment may support narrow strains of creative "life," but with an effective regime of copyright norms and enforcement, China's creative ecosystem could more closely resemble a lush, diverse rainforest.

The purpose of this Article is neither to explain why copyright piracy is endemic in China nor to proffer solutions to the profound challenge of piracy; ample literature already addresses these topics.[9]

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3. *See infra* Part III.B.

4. *See infra* Part III.C.

5. *See infra* Part III.C.1.

6. Karaganis, *What Everyone Wants*, *supra* note 1.

7. *See* THE CONCISE OXFORD DICTIONARY 505 (Judy Pearsall ed., 1999).

8. *Extremophile*, WIKIPEDIA, http://en.wikipedia.org/wiki/Extremophile (last visited May 7, 2014).

9. *See, e.g.*, WILLIAM P. ALFORD, TO STEAL A BOOK IS AN ELEGANT OFFENSE 2–4 (1995); MARTIN K. DIMITROV, PIRACY AND THE STATE 4–5, 187 (2009); ANDREW C. MERTHA, THE POLITICS OF PIRACY 2–5 (2006); Jiarui Liu, *The Tough Reality of Copyright Piracy: A Case Study of the Music Industry in China*, 27 CARDOZO ARTS & ENT. L.J. 621,

Instead, this Article responds to the contention that eliminating piracy may be a socially wasteful endeavor because piracy in China confers net benefits on creators, Chinese society, and beyond. To this end, this Article examines China's film and music industries to analyze six themes developed in recent scholarly literature about piracy's inconsequentiality or even advantageousness to China's creators, creative industries and, by extension, Chinese society.[10] These themes are: (1) piracy has not harmed the Chinese creative industries, because production continues apace and is even growing; (2) piracy benefits the creative process and consumers by lowering access barriers to a wide variety of information goods; (3) piracy incentivizes copyright owners to adopt innovative business models; (4) piracy is especially important for political discourse in China because it helps information goods circumvent heavy-handed state censorship policies; (5) piracy confers benefits on foreign rights holders in China by providing free advertising and branding for their works; and (6) foreign dominance poses a greater threat to China's creative industries than piracy does.

This Article argues that each of these six hypotheses about piracy in China is wrong, or at least incomplete. In responding to these themes, this Article claims there are three critical functions of copyright that are undermined in a high-piracy environment such as China. First, copyright helps to nurture and enable a professional class of creators, including an ecosystem of support professionals who are critical to the development and maintenance of a vibrant creative sector. Second, copyright enables creators to monetize diverse revenue streams — a crucial but often overlooked function of copyright. Reduced revenue stream diversity harms the creative ecosystem by diminishing monetization opportunities for smaller and independent producers, distorting market signals sent to producers, and dispropor-

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623–24 (2010); Eric Priest, *The Future of Music and Film Piracy in China*, 21 BERKELEY TECH. L.J. 795, 801 (2006); Peter K. Yu, *From Pirates to Partners: Protecting Intellectual Property in China in the Twenty-First Century*, 50 AM. U. L. REV. 133–36 (2000); Rogier Creemers, Explaining Audiovisual Media Piracy in China 34–36 (Feb. 2, 2012) (unpublished Ph.D. dissertation, Maastricht University) [hereinafter Creemers, Explaining Audiovisual Media Piracy], *available at* http://arno.unimaas.nl/show.cgi?fid=24067.

10. While copyright law in China affects many creative industries, numerous scholars have focused in particular on piracy's effects on the Chinese film and music industries. *See, e.g.*, MONTGOMERY, *supra* note 1, at 41–75 (analyzing the music and film industries, among others, in China); Jingying Li, *supra* note 1 (analyzing the effects of piracy on the film industry in China); Jiarui Liu, *supra* note 9, at 631 (analyzing the effects of piracy on the music market in China); Priest, *supra* note 9, at 798–99 (analyzing the effects of piracy on the music and film industries in China); Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 13 (analyzing the effects of piracy on the market for audiovisual works in China); Karaganis, *Forget It, Jack, It's Chinatown*, *supra* note 1 (addressing the relationship between Chinese censorship of Hollywood films and the business models now prevalent in the Chinese film industry); Karaganis, *What Everyone Wants*, *supra* note 1 (analyzing the effects of piracy on the film industry in China). The focus on the Chinese film and music industries is likely attributable to their domestic cultural and economic importance as well as their economic importance to foreign copyright owners.

tionately exposing producers to the idiosyncrasies of peculiar markets and exploitation by intermediaries.[11] Third, a functioning copyright system enables market-supported creative industries independent of government largesse; that is, independent creative industries are crucial to the long-term development of a more open and diverse public discourse. With these three functions of copyright diminished, China's piracy environment threatens the long-term stability and growth of its creative industries.

Part II of this Article provides an overview of China's copyright law and enforcement challenges and discusses the primary causes proffered by scholars for China's poor copyright enforcement record. Part III examines the economic and regulatory ecosystem in which China's film and recording industries are situated. It considers these industries' monetization challenges, areas and causes of their growth, and the role that their economic and regulatory environments — including piracy and censorship — play in aiding and hindering their development. Part IV introduces the six themes about piracy drawn from recent literature, as enumerated above. Part V then responds to and critiques each of these six themes in light of the circumstances of China's music and film industries and reveals how they ignore the three critical functions of copyright that are highlighted above. Finally, Part VI argues that the lessons in Part V are applicable beyond China, and shows in particular how piracy in the United States threatens the stability of the creative industries by diminishing revenue stream diversity.

II. COPYRIGHT PIRACY IN CHINA

Copyright owners have long lamented rampant media piracy in China. For years, international film and music industry groups have estimated the piracy rate for optical disc media (CDs, DVDs, and VCDs) to be at least eighty-five to ninety percent.[12] As recently as 2011, virtually all music downloads in China were unauthorized.[13] Subsequently, the international major record labels struck an accord with some of China's major search engines — one of the most common sources of links to unauthorized music downloads[14] — which

11. The starkest example of such exploitation is the treatment of record labels by Chinese mobile service providers, which earn more than $4 billion annually from mobile music services but allegedly keep more than ninety-eight percent of the revenue for themselves. *See infra* Part III.C.1. Labels, with virtually every other source of recorded music revenue foreclosed by piracy, appear to feel they have little choice but to accept what China's mobile providers give them. *Id.*

12. *See* Jiarui Liu, *supra* note 9, at 631; Priest, *supra* note 9, at 797.

13. INT'L FED'N OF THE PHONOGRAPHIC INDUSTRY ("IFPI"), DIGITAL MUSIC REPORT 2012 23 (2012), *available at* http://www.ifpi.org/content/library/DMR2012.pdf.

14. *See infra* Part III.C.1.a.

resulted in the search engines receiving licenses for at least some music content.[15] It is currently unclear what percentage of music downloads is unlicensed, but by all accounts the rate of online music piracy remains very high.[16] China's recorded music revenue is so disproportionately low that China's total recorded music revenue in 2011 was eclipsed by that of Thailand — itself a high-piracy country with one-twentieth the population of China.[17]

The piracy rate for online video has declined in recent years as several leading user-generated content ("UGC") sites have self-purged pirated content and endeavored to acquire licenses for any professionally produced content they serve.[18] Nevertheless, video piracy remains a serious problem as users migrate from UGC sites to peer-to-peer streaming websites that serve high volumes of pirated content.[19]

A. Copyright Enforcement: Legal Framework and International Pressure

While enforcement on the ground remains an extreme challenge, the high piracy rates in China do not necessarily result from a deficient legal infrastructure or a low volume of enforcement. To begin with, China has a relatively sophisticated legal infrastructure for the grant and enforcement of copyright rights. Chinese copyright law in many respects comports with international standards regarding the economic and moral rights granted to creators, the terms of rights, the types of works eligible for protection, and available remedies, includ-

15. IFPI, *supra* note 13 (noting that the deal with China's largest search engine, Baidu, "by no means ends China's piracy problem" and that "[o]ther unauthorized 'deep-linking' services are still operating, while cyberlockers and illegal download sites remain a huge barrier to growth").

16. *See* OFFICE OF THE U.S. TRADE REP., 2012 SPECIAL 301 REPORT 29 (2012) [hereinafter OFFICE OF THE U.S. TRADE REP., 2012 SPECIAL 301 REPORT] ("[S]ales of IP-intensive goods and services to China from U.S. companies remain substantially below levels in other markets, measured in a variety of ways, ranging from spending on legitimate music as a percentage of GDP to software sales per personal computer."); IFPI, *supra* note 13.

17. OFFICE OF THE U.S. TRADE REP., 2012 SPECIAL 301 REPORT, *supra* note 16.

18. *See id.*; Loretta Chao, *Top China Video Site Steps Up Its Piracy Fight*, WALL ST. J., Apr. 19, 2010, at B8 [hereinafter Loretta Chao, *Top China Video Site Steps Up Its Piracy Fight*], *available at* http://online.wsj.com/news/articles/SB10001424052748703757504575193741461518942; *see also* Loretta Chao, *China's Youku Goes Hollywood*, WALL ST. J., Jan. 6, 2011, http://online.wsj.com/article/SB10001424052748703675904576063510245910424.html#_jmp0_.

19. *See* OFFICE OF THE U.S. TRADE REP., 2012 SPECIAL 301 REPORT, *supra* note 16; Karen R. Thorland, Motion Picture Ass'n of Am., Enforcement Issues in the Entertainment Industries, PowerPoint Presentation Before the Berkeley Center for Law and Technology October 2012 Chinese IP Law Conference (Oct. 4, 2012), *available at* http://www.law.berkeley.edu/files/bclt_Panel_4_Karen_Thorland.pptx (noting that the "[m]igration of piracy [in China] from video hosting sites to hybrid streaming 'rogue' sites using P2P technology are growing immensely in popularity and are difficult to enforce against").

ing damages and injunctive relief.[20] Similar to United States law, Chinese law provides criminal sanctions for copyright infringement.[21] China also has established specialty IP divisions within courts throughout the nation.[22] China is a signatory to the major international copyright conventions, including: the Berne Convention, the World Trade Organization's ("WTO") Agreement on Trade-Related Aspects of Intellectual Property ("TRIPS"), the World Intellectual Property Organization ("WIPO") Copyright Treaty, and the WIPO Performances and Phonograms Treaty.[23] The Chinese copyright law is presently undergoing its third major revision in the past dozen years, much of which is aimed at addressing existing deficiencies in the law.[24] In short, China has developed a relatively sophisticated copyright infrastructure in the short time since it adopted its first modern copyright law twenty-four years ago.[25]

Furthermore, the volume of copyright enforcement in China is high. Controlling for population, China has a higher volume of IP enforcement than any other country in the world.[26] In 2011, 35,185 civil copyright cases were litigated in China,[27] as compared with 2,225 in the United States.[28]

Chinese copyright regulations also extend to online activity, where the majority of piracy occurs. China has regulations that provide notice and takedown procedures analogous to those of § 512(c)

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20. *See* OFFICE OF THE U.S. TRADE REP., 2011 REPORT TO CONGRESS ON CHINA'S WTO COMPLIANCE 4 (2011); Priest, *supra* note 9, at 806–17; Peter K. Yu, *The Middle Kingdom and the Intellectual Property World*, 13 OR. REV. INT'L L. 209, 210–11 (2011).

21. Zhonghua Renmin Gongheguo Zhuzuo Quanfa (中华人民共和国著作权法) [Copyright Law of the People's Republic of China] (promulgated by the Standing Comm. Nat'l People's Cong., Feb. 26, 2010, effective Apr. 1, 2010), art. 48 (China) [hereinafter Copyright Law of the People's Republic of China], *translated in* WORLD INTELLECTUAL PROPERTY ORGANIZATION, *available at* http://www.wipo.int/wipolex/en/details.jsp?id=6062.

22. *See* INT'L INTELLECTUAL PROP. INST., *Specialized Intellectual Property Courts Worldwide*, http://www.iipi.org/map/map.htm (select "China" hyperlink) (last visited May 7, 2014) ("All High People's Courts, almost all Intermediate People's Courts, and all Primary People's Courts with civil jurisdiction to hear IPR cases have specialized IPR divisions.").

23. *See, e.g.*, U.S. COPYRIGHT OFFICE, CIRCULAR 38A: INTERNATIONAL COPYRIGHT RELATIONS OF THE UNITED STATES 4 (2014), *available at* http://www.copyright.gov/circs/circ38a.pdf.

24. *See* Hong Xue, *A User-Unfriendly Draft: 3rd Revision of the Chinese Copyright Law*, INFOJUSTICE.ORG (Apr. 25, 2012), http://infojustice.org/wp-content/uploads/2012/04/hongxue042012.pdf.

25. *See id.*

26. DIMITROV, *supra* note 9, at 33.

27. Helen Sloan, *The Surge in IP Litigation in China Continues*, INTELL. ASSET MGMT. (Apr. 27, 2012), http://www.iam-magazine.com/blog/detail.aspx?g=4a132dd6-ed14-4eff-b646-af5bf3638cc7&q=35%2c185#search=%2235%2c185%2.

28. ADMIN. OFFICE OF THE U.S. COURTS, FEDERAL JUDICIAL CASELOAD STATISTICS: MARCH 31, 2012 50 (2012), *available at* http://www.uscourts.gov/Viewer.aspx?doc=/uscourts/Statistics/FederalJudicialCaseloadStatistics/2012/tables/C02Mar12.pdf.

of the United States' Digital Millennium Copyright Act.[29] Websites hosting user-uploaded content are immune from copyright liability if they expeditiously remove the content and follow other procedures upon receipt of notice from the copyright owner.[30] For music copyright owners in particular, however, requesting the removal of infringing files has had little effect. Sometimes files linked through search engine results are hosted on a rotating network of surreptitious domains, and "infringement notifications result[] in unlicensed songs simply moving from one of these domains to another."[31] Moreover, copyright owners allege that the notice and takedown procedures in China offer them little practical benefit. Online service providers' divergent, onerous and unreasonable requirements for establishing copyright ownership and infringement squander copyright owners' time and resources while the infringement continues unabated.[32] Although search engines such as Baidu and Sogou have recently executed licensing agreements with international major record labels, music industry executives allege that these sites still host many files not covered by the licenses.[33] Owners of audiovisual copyrights have enjoyed more success enforcing removal of infringing content from video sites, but this has had less to do with notice-and-takedown compliance and more to do with market pressure and business strategy.[34]

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29. 17 U.S.C. § 512(c) (2012).

30. A website enjoys a safe harbor from copyright liability if it: (1) clearly indicates that it provides its storage space to subscribers, (2) does not alter the works in question, (3) has no knowledge of or reasonable grounds for knowing of the infringing act, (4) does not seek to financially benefit directly from the works, and (5) expeditiously removes the content after receipt of the notice. Xinxi Wangluo Chuanbo Baohu Quan Tiaoli (信息网络传播保护权条例) [Regulations for the Protection of the Right of Communication Through the Information Network] (promulgated by the St. Council, May 10, 2006, effective July 1, 2006) ST. COUNCIL GAZ., Jul. 10, 2006, at 13 (China), *translated in* 3 CHINA PAT. & TRADEMARKS 90, 93–94 (2006). The 2012 second revision draft of the Copyright Law of the People's Republic of China provides that a network service provider that fails to expeditiously remove or otherwise disable access to infringing content on its service "bear[s] joint and several liability with the [direct] infringer." Zhonghua Renmin Gongheguo Zhuzuo Quanfa (Xiugai Caoan Di Er Gao) (中华人民共和国著作权法(修改草案第二稿)) [Copyright Law of the People's Republic of China (Second Revision Draft)] (promulgated by the Nat'l Copyright Admin. Mar. 31, 2012, effective Jul. 31, 2012) (Westlaw China万律 (Westlaw China)), art. 69 (China).

31. Andrew Orlowski, *China's Nonstop Music Machine*, THE REGISTER (Sept. 13, 2008), http://www.theregister.co.uk/2008/09/13/baidu_investigation?page=1.

32. *See* Mathew D, *China Aims To Redress Copyright Burden of Proof Imbalance*, GLOBAL OUTPOST (May 5, 2011), http://www.theglobaloutpost.com/archives/45. For a discussion of sufficiency of takedown notices in Chinese court cases involving Baidu and Yahoo! China, see Seagull Haiyan Song, *A Comparative Copyright Analysis of ISP Liability in China Versus the United States and Europe*, 27 COMPUTER & INTERNET L. 1, 10 (2010).

33. *See* Mathew D, *supra* note 32; Liu Yuhan, *Sohu, Sogou Settle Music-Piracy Lawsuit with 4 Labels*, CHINADAILY USA (Mar. 5, 2013, 12:42), http://usa.chinadaily.com.cn/epaper/2013-03/05/content_16278696.htm.

34. *See infra* Part III.B.1.

Any gains that copyright owners have achieved in China are only modestly attributable to international political efforts — led largely by the United States government — to pressure China. Since the 1980s, United States businesses have lobbied the United States government to pressure China into improving IP protection.[35] However, diplomatic pressure from the United States resulted in what scholar Peter Yu calls the "cycle of futility." That is, the United States, dissatisfied with the state of IP protection in China, repeatedly designated China as an offender of IP rights and then threatened to impose trade sanctions on Chinese imports.[36] China, in turn, responded with threats of retaliatory sanctions of its own.[37] In each instance, trade wars were averted by eleventh-hour memoranda of understanding in which China agreed to improve IP protection in return for the United States' agreement not to impose tariffs.[38] The fact that the cycle repeatedly played out the same way throughout the 1990s is a testament to the inefficacy of the process.

The cycle of futility ceased, but piracy did not, when China joined the WTO in 2001 and became subject to the WTO's official dispute resolution process.[39] Six years later, after bringing a number of other trade-related WTO cases against China, the United States brought a case concerning protection and enforcement of IP rights ("*China — Intellectual Property Rights*").[40] Two of the three issues the United States raised addressed copyright protection. First, it argued that Article Four of the Copyright Law of the People's Republic of China ("Copyright Law"), which denies protection to works that are not approved for distribution in China, violated TRIPS and the Berne Convention by conditioning copyright protection on the formality of pre-prepublication review and by effectively depriving unapproved works of the guaranteed minimum standards of protection.[41] Second, the United States argued that Chinese thresholds for criminal prosecution of copyright infringement were too high and therefore inconsistent with requirements under the WTO's TRIPS Agreement.[42] The WTO dispute resolution panel held in favor of the United States with respect

35. *See, e.g.*, ALFORD, *supra* note 9, at 112–19; Peter K. Yu, *supra* note 9, at 136–54.

36. Peter K. Yu, *Still Dissatisfied After All These Years: Intellectual Property, Post-WTO China, and the Avoidable Cycle of Futility*, 34 GA. J. INT'L & COMP. L. 143, 149 (2005).

37. *Id.*

38. Peter K. Yu, *supra* note 9, at 137–54.

39. Decision of 10 November, 2001, *Accession of the People's Republic of China*, WT/L/432 (Nov. 23, 2001).

40. Request for Consultations by the United States, *China — Measures Affecting the Protection and Enforcement of Intellectual Property Rights*, WT/DS362/1 (Apr. 10, 2007).

41. *Id.*

42. *Id.*

to the Copyright Law Article Four claims, but not the criminal threshold claims.[43]

China — Intellectual Property Rights indicates that the WTO dispute resolution mechanism has been a disappointment as a means of improving copyright enforcement in China. China amended its Copyright Law to comply with the WTO panel's ruling, but it is unlikely this technical amendment will have a significant effect because it fails to remedy many of the principal causes of piracy discussed below.[44] Therefore, even the partial United States victory in this case was likely Pyrrhic. Moreover, if United States copyright industries pressure the United States Trade Representative to initiate another IP case against China, a new cycle of futility may result.[45]

B. Factors Contributing to China's High-Piracy Environment

Despite formal advances in the law, China's piracy rates remain persistently high. As the following discussion demonstrates, commentators attempt to explain the high piracy rates by pointing to a number of systemic failures that limit copyright law's effectiveness as a deterrent, and to cultural factors that allegedly have inhibited the uptake of IP norms in Chinese society. Identifying a simple explanation or set of factors appears increasingly elusive, however.

One important reason why piracy persists at such a high level in China is that the threat of copyright enforcement provides little deterrence value. Damages awarded in civil infringement cases are often far too low to deter lucrative infringing activities.[46] Copyright law presently awards prevailing plaintiffs compensation for their actual damages or the defendant's illegal profits; if the evidence is insufficient to substantiate either damages or profits, then the court may award statutory damages up to 500,000 RMB (approximately $79,000).[47] Average damages awarded are nowhere near the statutory limit. From 2006 to 2009, the average award for copyright infringement was just 31,189 RMB (slightly more than $5000).[48] In a 2009

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43. Report of the Panel, *China — Measures Affecting the Protection and Enforcement of Intellectual Property Rights*, WT/DS362/R (Jan. 26, 2009).

44. *See* Rogier Creemers, *The Effects of WTO Case DS362 on Audiovisual Media Piracy in China*, 31 EUR. INTELL. PROP. REV. 568, 572–73 (2009).

45. *Cf. id.*

46. *Compare CIELA Summary Report: Trend by Year*, CIELA: CHINA IP LITIGATION ANALYSIS, http://www.ciela.cn/Search/TrendByYear.aspx?pageId=6&ppId=2&language=en (search "Copyright" for "IP Right" and search "Infringement" for "Cause of Action"; then follow "Submit" hyperlink) (last visited May 7, 2014) (reporting average damages awarded in copyright infringement cases across China as 41,955 RMB in 2006, 39,891 RMB in 2007, 17,039 RMB in 2008, and 25,872 RMB in 2009), *with* Copyright Law of the People's Republic of China, *supra* note 21.

47. Copyright Law of the People's Republic of China, *supra* note 21.

48. *CIELA Summary Report: Trend by Year*, *supra* note 46.

study of damages claimed and awarded in fifty-four Chinese copyright cases, which included a number of cases involving major Western film studios and record labels as plaintiffs, the median copyright damages awarded were about $18,000 — a mere nine percent of median damages claimed.[49] In one example involving unauthorized music downloads, the record label plaintiffs sought one million RMB in damages, but the court entered a judgment of just 60,000 RMB (approximately $8800) against defendant Baidu,[50] China's largest search engine and a frequent defendant in copyright infringement lawsuits. Injunctive relief is available under the law,[51] but enforcing injunctive orders in China has been a persistent challenge.[52] Administrative enforcement actions also do little to deter infringement because they tend to emphasize high-profile campaigns involving agencies with overlapping jurisdiction, which often results in uncoordinated and duplicative efforts.[53]

Commentators argue that several other systemic deficiencies contribute to the existence and prevalence of piracy, including: high evidentiary thresholds for bringing criminal copyright enforcement actions;[54] a relatively weak and under-resourced National Copyright Administration (the primary administrative organ tasked with developing copyright policy and enforcing copyright);[55] and severe censorship and market access policies that greatly restrict the legitimate distribution of foreign copyright owners' works, creating an enormous market for illegitimate copies.[56]

In addition to these systemic factors, some scholars argue that cultural, social, and economic factors such as China's traditional political culture, a lack of local IP stakeholders, and relatively poor economic conditions, among other factors, converge to impede the flourishing of IP norms in Chinese society. One view, most closely

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49. *See* KRISTINA SEPETYS & ALAN COX, NAT'L ECON. RESEARCH ASSOCS., INTELLECTUAL PROPERTY RIGHTS PROTECTION IN CHINA: TRENDS IN LITIGATION AND ECONOMIC DAMAGES 9, 13 (2009), *available at* http://www.nera.com/extImage/PUB_IPR_Protection_China_0109_final.pdf.

50. *See* Xue "Snow" Dong & Krishna Jayakar, *The Baidu Music Settlement: A Turning Point for Copyright Reform in China?*, 3 J. INFO. POL'Y 77, 89–90 (2013), *available at* http://jip.vmhost.psu.edu/ojs/index.php/jip/article/view/118/75 (discussing the 2008 litigation between Baidu and the Music Copyright Society of China).

51. Copyright Law of the People's Republic of China, *supra* note 21, art. 50.

52. *See* Dan Harris, *Protecting Your IP in China with an Injunction. Yeah, That's the Ticket*, CHINA L. BLOG (Oct. 20, 2012), http://www.chinalawblog.com/2012/10/protecting-your-ip-in-china-with-an-injunction-yeah-thats-the-ticket.html ("The problem with injunctions in China . . . has been its courts do not always have or employ the tools to make sure their injunctive orders are obeyed. This makes protecting your IP in China all that more difficult . . . .").

53. *See* DIMITROV, *supra* note 9, at 14, 221–47; MERTHA, *supra* note 9, at 133–47.

54. *See* Priest, *supra* note 9, at 812–15, 825–26; Request for Consultations by the United States**,** *supra* note 40**.**

55. *See* DIMITROV, *supra* note 9, at 234–35.

56. *See* Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 91–114.

associated with Harvard Law School professor William Alford, holds that China's political culture is primarily responsible for impeding the flourishing of copyright norms in China.[57] In particular, China's Confucian tradition of deemphasizing novelty and innovation while emphasizing mastery through emulation, coupled with the historical and enduring importance to the Chinese state of central information control, has rendered China's cultural soil relatively inhospitable to transplanted laws and norms aimed at establishing exclusive private property rights in creative works.[58] Others have argued that as China's developing economy further integrates into the world economy and its knowledge industries and innovative capacity mature, China will reach a "crossover" point at which it will transform from a net infringer of IP into a net producer and protector of IP.[59] This line of reasoning posits that piracy is endemic because China lacks IP stakeholders in sufficient numbers, that IP protection in China primarily benefits foreign rights holders, and that China will "get serious" about IP protection only when doing so is in its stakeholders' best interests.[60] As Chinese IP owners and the government recognize the value of China's indigenous IP, they will begin to improve rights consciousness and enforcement.[61] Another explanation, closely associated with the "crossover" theory, is that China's relatively poor overall economic conditions exacerbate piracy because much of China's population still has difficulty affording expensive legitimate goods.[62] According to this view, as China further develops economically and the average income rises, people will choose to purchase legitimate products over cheaper, pirated ones.[63]

Recent statistics, however, have called some aspects of these theories into question. The notion, for example, that China lacks sufficient numbers of IP stakeholders is undermined when one considers

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57. *See* ALFORD, *supra* note 9, at 1–2, 9–29.

58. *See id.*

59. *See, e.g.*, Peter K. Yu, *Intellectual Property, Economic Development, and the China Puzzle*, *in* INTELLECTUAL PROPERTY, TRADE AND DEVELOPMENT 173, 202–20 (Daniel J. Gervais ed., 2007) (examining the internal and external relationships that affect private investment decisions to forecast when China will reach a crossover point and find strong IP protection to be in its best interest).

60. *See, e.g.*, Patrick Brzeski, *China's Looming Entertainment Problem: Not Enough Lawyers*, HOLLYWOOD REP. (June 21, 2013), http://www.hollywoodreporter.com/thr-esq/chinas-looming-entertainment-problem-not-572629; *see also* Raustiala & Sprigman, *supra* note 1, at 30 ("Chinese attitudes and practices toward copying cannot be expected to change quickly. As China's economy advances further, perhaps the balance of interests will shift, and the country might adopt a less permissive approach.").

61. *See* Priest, *supra* note 9, at 828; Peter K. Yu, *supra* note 59, at 220.

62. *See* Priest, *supra* note 9, at 828–29. For an indication of relatively poor economic conditions, consider that China still ranks ninetieth in the world in gross national income per capita. *China Overview*, THE WORLD BANK, http://www.worldbank.org/en/country/china/overview (last visited May 7, 2014).

63. *See* Priest, *supra* note 9, at 828–29.

that China is already the most IP-litigious society in the world.[64] Moreover, almost ninety-eight percent of all IP litigation in China involves only Chinese parties; in 2011, a mere 2.27 percent of IP cases disposed by Chinese courts involved a foreign party.[65] These statistics suggest that many Chinese entities now value obtaining and protecting IP rights and believe that enforcing those rights is in their best interests.

Likewise, there is little evidence that high piracy rates directly correlate with poor economic conditions, or that piracy rates decrease as economic circumstances improve. In fact, a recent study by the China Publishing Science Research Institute suggests that wealthy and educated Chinese consume as much or more pirated content than the poor and less educated.[66] More than half of those surveyed holding college and graduate degrees purchased pirated content.[67] Likewise, by profession, farmers, laborers, and military personnel were less likely to buy pirated goods than enterprise leaders, management, and professionals, of whom nearly sixty percent bought pirated goods.[68] Lit-Literacy and awareness of copyright infringement issues are likely important variables in the study, but these statistics suggest the majority of educated professionals buy pirated content.[69] This casts doubt on the hypothesis that China's economic conditions prolong endemic piracy.

In short, piracy's root causes evade simple explanations and solutions, and piracy remains a serious obstacle to the successful moneti-

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64. *See* RICHARD P. SUTTMEIER AND XIANGKUI YAO, NAT'L BUREAU ASIAN RES., SPECIAL REP. NO. 29, CHINA'S IP TRANSITION: RETHINKING INTELLECTUAL PROPERTY RIGHTS IN A RISING CHINA 13 (2011).

65. *See* ZHONGHUA RENMIN GONGHEGUO ZUIGAO RENMIN FAYUAN (中华人民共和国最高人民法院)[SUP. PEOPLE'S CT.], ZHONGGUO FAYUAN ZHISHI CHANQUAN SIFA BAOHU ZHUANGKUANG (中国法院知识产权司法保护状况（2011年）) [INTELLECTUAL PROPERTY PROTECTION BY CHINESE COURTS IN 2011] 26–27 (2012), *available at* http://chineseip.jmls.edu/sites/en/sites/default/files/2011_CN_IP_Whitepaper.doc (reporting that in 2011, the number of civil IP cases accepted for trial in China totaled 59,612; those disposed totaled 58,201, of which just 1321 (about 2.27 percent) involved foreign parties, a decline of more than three percent from the previous year).

66. ZHONGGUO CHUBAN KEXUE YANJIUSUO (中国出版科学研究所) [Chinese Publishing Science Research Institute], QUANGUO GUOMIN YUEDU DIAOCHA BAOGAO (2008) (全国国民阅读调查报告(2008)) [China's National Reading Survey Report (2008)] 257 (2008).

67. *Id.*

68. *Id.* at 256.

69. *See, e.g.*, Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 32 (citing a 2006 study of consumers in Hong Kong, Wuhan and Shanghai finding that "[h]eavy purchasers of pirated DVD discs tend to be males, with tertiary education in white-collar occupations" and that this "tendency is strongest in Hong Kong, followed by Shanghai and Wuhan"); Priest, *supra* note 9, at 829 (noting that because pirated goods are always cheaper than their legitimate counterparts, and because the quality of pirated goods continues to improve and close the gap with legitimate goods, "improved economic conditions alone will not suffice to wean even well-to-do Chinese consumers off cheap pirated goods").

zation of creative works in China. For their part, copyright owners in China focus on the pragmatics of how to subsist as copyright extremophiles, surviving in inhospitable conditions.

III. THE CHINESE FILM AND MUSIC INDUSTRY ECOSYSTEM: EXCLUSION ECONOMICS, CENSORSHIP, AND PROTECTIONISM

A. Introduction

Despite the extremely challenging piracy conditions outlined in Part II, the situation for some copyright owners in China has been improving. Greater copyright enforcement is not a sufficient explanation for this improved situation. Though a few Chinese copyright owners have achieved directly beneficial results through traditional copyright enforcement measures — filing lawsuits and initiating administrative enforcement actions — the creative industries in China have monetized their works primarily through alternative, non-copyright based models. To understand how piracy affects these industries, it is important to understand their business and regulatory environments. This Section, therefore, provides an overview of the business and regulatory environments in which China's music and film industries operate. In particular, it highlights three defining characteristics of their business models and environments: exclusion economics, censorship, and protectionism.

Exclusion economics: The ability to exclude is usually crucial to the monetization of film and musical works. Therefore, in the absence of effective *legal* exclusion in the form of a functioning copyright system, most revenue is derived from services based on physical or technological exclusion. Both the music and film industries in China follow that model, deriving ninety percent of their revenues from excludable services that do not directly rely on copyright exploitation — box office receipts in the film industry (physical exclusion)[70] and wireless music service downloads, such as ringback tones, in the music industry (technological exclusion).[71] Can copyright owners offset lost revenue from declining DVD, CD, and digital download sales by employing excludable services that do not rely directly on copyright

70. *See* OFFICE OF THE U.S. TRADE REP., 2013 SPECIAL 301 REPORT 35 (2013) [hereinafter OFFICE OF THE U.S. TRADE REP., 2013 SPECIAL 301 REPORT] (reporting that "90 percent of the revenue generated by U.S. films in China comes in the form of box office revenues, compared to 25–30 percent in the United States").

71. Francis Tan, *Online Music Sales in China up by 14 Percent*, NEXT WEB (Mar. 10, 2011, 6:53 AM), http://thenextweb.com/asia/2011/03/10/online-music-sales-in-china-up-by-14/ (referring to 2011 MOC report). This is the case in the music industry despite the fact that the vast majority of ringback tone gross revenues actually accrue to mobile providers, not copyright owners. *See infra* Part III.C.1.c.

exploitation and therefore are less susceptible to illicit copying?[72] The answer in China is that under current conditions, box office revenue is sufficient to fuel film industry growth, while ringback tone revenue is insufficient to fuel music industry growth. As this Article argues in Part V, piracy remains the biggest hindrance to music industry growth and has significant detrimental effects on the film industry as well, despite that industry's present growth.

Both the film and music industries have, however, begun to benefit from the emergence of copyright licensing revenue from online services. This new but relatively small revenue stream does not rely on physical or technological exclusion. Rather, it relies on legal exclusion via an increasingly functional copyright regime for the protection of content online. This new revenue stream could represent a first step in the evolution of music and film industry business models to include copyright-based revenue streams, but it will be extremely difficult for these revenue streams to reach their potential while so many sources of free, unlicensed content remain available.

Censorship and protectionism: The content industries are inextricably bound up with Chinese politics and state information control policies.[73] Producers, importers, and distributors of music and audiovisual works in China engage in politically sensitive activities — i.e., producing and disseminating information — and are therefore strictly regulated and scrutinized by Chinese authorities.[74] Chinese authorities view cultural products as inherently ideological and therefore subject to strict state control.[75] Government regulations define what content is culturally or politically appropriate, restrict whether certain types of content may be produced, imported, or distributed, and determine whether private domestic or foreign investment is allowed.[76]

Censorship in China's entertainment industries has two predominant effects. First, it helps China's one-party state keep seditious and socially objectionable content (however the state chooses to define those terms) out of public view.[77] Second, it establishes legal barriers to foreign participation in content production and distribution. This ostensibly carves out space for domestic creative industries to avoid

72. For a discussion of this debate, see, for example, Sean A. Pager, *Accentuating the Positive: Building Capacity for Creative Industries into the Development Agenda for Global Intellectual Property Law*, 28 AM. U. INT'L L. REV. 223, 268 (2012), and Mark F. Schultz, *Live Performance, Copyright, and the Future of the Music Business*, 43 U. RICH. L. REV. 685, 694–701 (2009).

73. *See generally* Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 122–43; MONTGOMERY, *supra* note 1, at 72–73.

74. *See infra* Parts III.B.2, III.C.2.

75. *See infra* Parts III.B.2, III.C.2.

76. *See infra* Parts III.B.2, III.C.2.

77. *See* Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 113–14.

being overrun by imports,[78] even though such space no longer appears necessary for domestic industries to compete, if it ever was.[79] Foreign copyright owners have long complained that piracy is exacerbated by Chinese regulations that permit only certain state-owned Chinese companies to distribute audiovisual and musical works in China, that require official approval of content, and that permit Chinese authorities to set film release dates.[80] Such rules, they contend, delay or frustrate their ability to distribute their works, giving pirates a comfortable head start from which it is virtually impossible for copyright owners to recover, and giving an unfair advantage to domestic industries that do not have to contend with such a long pre-release delay.[81]

78. See MONTGOMERY, *supra* note 1, at 65 (discussing the protectionist effects of censorship policies in China's music industries). Some experts argue that there is little if any protectionist agenda underlying media control regulations, such as the annual thirty-four film import quota, *see infra* Part III.B.2, and that the impetus behind them is primarily if not entirely information control. *See* Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 189 ("Even where there is an obvious international aspect, where the question on how to deal with foreign media products is discussed, the barriers to entry for foreign products are not protectionist measures as narrowly defined."); Mathew Alderson, *Protecting Hollywood Films in China Makes Sense for China*, CHINA L. BLOG, (Sept. 12, 2011), http://www.chinalawblog.com/2011/09/protecting_hollywood_films_in_china_makes_sense_for_china.html ("It is not the local Chinese film industry that wants to stop foreign films. Far from it."); Dan Harris, *There Is No Protectionism in China*, CHINA L. BLOG, (Nov. 12, 2011), http://www.chinalawblog.com/2011/11/there_is_no_protectionism_in_china.html (arguing that the foreign film quota is a censorship rule, not a protectionist rule, because the Chinese government does not especially care about protecting the business interests of the Chinese film industry, but rather "cares almost exclusively about the Chinese government"). Nevertheless, some acts of content control seem overtly protectionist. For example, the government manipulates film release dates in what are widely regarded even in China as protectionist measures, pitting Hollywood blockbusters directly against one another at certain times, and at other times ensuring that domestic films have no foreign competition at all. *See, e.g.*, Ben Fritz et al., *In China, Hollywood Blockbusters Face Off on Same Days*, L.A. TIMES, Aug. 28, 2012, http://articles.latimes.com/2012/aug/28/entertainment/la-et-ct-china-movies-20120828. Even Chinese media referred to June and July 2012 as "domestic movie protection month" because theaters nationwide in China screened only domestic productions for nearly two months. *See* Wei Xi, *Belay for Hollywood*, GLOBAL TIMES, June 4, 2013, at P19, *available at* http://www.globaltimes.cn/content/786370.shtml#.Uz_NmVIZ_jM (describing the domestic-film-only period of June–July 2012 but noting that the "self-evident domestic protection manner is looser [in 2013] than 2012" because of better box office performance by Chinese films in 2013).

79. *See infra* Part V.F.

80. OFFICE OF THE U.S. TRADE REP., 2013 NATIONAL TRADE ESTIMATE REPORT ON FOREIGN TRADE BARRIERS 87–88 (2013) [hereinafter OFFICE OF THE U.S. TRADE REP., 2013 REPORT ON FOREIGN TRADE BARRIERS]. The United States successfully mounted a WTO challenge to another contentious provision that copyright owners argued exacerbated piracy: Article Four of China's Copyright Law, which altogether denied copyright protection to unapproved works. Report of the Panel, *supra* note 43.

81. *See, e.g.*, OFFICE OF THE U.S. TRADE REP., 2013 REPORT ON FOREIGN TRADE BARRIERS, *supra* note 80, at 87–89.

B. China's Film Industry

1. Exclusion Economics

a. The Box Office Boom

The film industry, which has been expanding by leaps and bounds, is the most visible of the copyright industries experiencing growth in China. In 2005, box office revenue in China totaled a mere $248 million;[82] by 2008 it had nearly tripled to $630 million,[83] and in 2012 it soared to $2.74 billion, thrusting China into its position as the world's second largest box office.[84] To keep up with demand, China has furiously added theater screens at the pace of eight to ten per day.[85] By 2011, China had 10,700 screens nationwide,[86] many of which contained digital projectors.[87] However, there remains significant room for further growth, since China has only one-third the number of film screens of the United States despite China's much larger population.[88] At its current pace, China will eclipse the United States as the world's largest film market by 2018.[89]

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82. *See* Priest, *supra* note 9, at 798.

83. Patrick Brzeski & Pamela McClintock, *How Hollywood Can Break Through China's Box Office*, HOLLYWOOD REP. (Mar. 9, 2012 5:28 PM PST), http://www.hollywoodreporter.com/news/china-trade-deal-hollywood-box-office-revenue-297719.

84. *China Is World's 2nd Largest Film Market*, CHINA DAILY EUROPE (Jan. 9, 2013, 7:00 PM), http://europe.chinadaily.com.cn/business/2013-01/09/content_16100261.htm; *see also* Clifford Coonan, *China's 2011 Box Office Take Tops $2 Billion*, VARIETY (Jan. 10, 2012, 6:23 PM PT), http://www.variety.com/article/VR1118048424; Pamela McClintock, *China Box Office Revenue Hits $2.7 Billion in 2012, Second Only to North America*, HOLLYWOOD REP. (Mar. 21, 2013, 1:15 PM), http://www.hollywoodreporter.com/news/china-box-office-revenues-hit-430267 ("Box office revenue reached a staggering $2.7 billion in China in 2012, even more than expected and up 37 percent year over year."). It should be noted that box office figures in China are notoriously dubious due to widespread reporting scams by exhibitors and distributors. *See* Raymond Zhou, *Cinema Scams*, CHINA DAILY USA (Feb. 26, 2014, 08:47), http://usa.chinadaily.com.cn/epaper/2014-02/26/content_17306872.htm. However, industry insiders believe that, if anything, revenues are underreported. *Id.*

85. *See* Alexis Lai, *Blockbuster Growth in China's Film Industry*, CNN (Feb. 19, 2013, 11:46 PM), http://www.cnn.com/2013/02/19/world/asia/china-film-industry-advancer.

86. Zheng Yangpeng, *China's Movie Sector Becomes 2nd-Largest*, CHINA DAILY, Apr. 13, 2012, 10:37, http://www.chinadaily.com.cn/bizchina/2012-04/13/content_15040274.htm.

87. Coonan, *supra* note 84.

88. Jonathan Landreth, *Hollywood and China: In Figures*, THE ATLANTIC (Nov. 7, 2013, 7:00 AM ET), http://www.theatlantic.com/china/archive/2013/11/hollywood-and-china-in-figures/281222/ (reporting that the United States had 39,662 screens and China had 13,118).

89. *See* Pamela McClintock & Kim Masters, *Hollywood Studios Haven't Been Paid by China in Months (Exclusive)*, HOLLYWOOD REP. (July 29, 2013, 3:11 PM PDT), http://www.hollywoodreporter.com/news/hollywood-studios-havent-been-paid-594939.

China's importance to Hollywood is difficult to overstate.[90] China can be a lucrative market for foreign producers whose films are approved for theatrical release.[91] Foreign films — particularly Hollywood blockbusters — have had success at the box office in China and now account for about half of Chinese box office revenues.[92]

A healthy box office is vital to the success of China's film industry. Due in part to piracy, the vast majority of film industry revenue in China is generated from theatrical distribution, which monetizes the movie-going experience rather than the sale of copyrighted products.[93] The theatrical experience is easy to monetize because it excludes non-paying customers from the premises and is difficult for unauthorized providers to replicate, especially now that Chinese consumers are accustomed to viewing movies in state-of-the-art cinemas with stadium seating and digital 3D projection.[94]

Despite the rapid growth in China's box office revenues, copyright piracy remains a vexing problem for the film industry. Piracy undercuts box office revenues because many consumers will not pay to watch popular first-run movies in the theater when pirated copies are cheaply or freely available for home or mobile viewing.[95] Piracy also has a significant impact on aftermarket revenues, such as DVD and Blu-Ray sales.[96] The inability to stem offline and online piracy to a point that would permit development of a viable market for physical media, or legitimate online movie distribution (until a few years ago), left copyright owners of audiovisual works with virtually no aftermar-

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90. *See, e.g.*, Beh Lih Yi, *China's Just the Ticket for Studios' Future*, CHINA DAILY, Apr. 9, 2012, http://www.chinadaily.com.cn/bizchina/2012-04/09/content_15002468.htm (commenting on Hollywood's interest in China's booming movie industry in light of slowdown in North America).

91. *See infra* Part III.B.2.

92. *See* Melanie Lee, *Hollywood Studios Find Online Channels Key to China*, CHINA DAILY, Aug. 9, 2011, 8:37, http://usa.chinadaily.com.cn/us/2011-08/09/content_13074501.htm ("Although they form a small percentage of movies screened, Hollywood films drew 44 percent of all 10 billion yuan in sales receipts in 2010.").

93. *See* Zheng Yangpeng, *supra* note 86 (stating that box office receipts account for ninety percent of film industry revenues in China, as compared with the United States where they account for just thirty percent of a film's gross revenue).

94. *See* Coonan, *supra* note 84 (noting that "[o]f the 803 cinemas that opened [in China in 2011], 90% were equipped with digital projectors"); Frank Langfitt, *What a Show! China's Movie Theaters Have Improved Dramatically*, WGBH (May 25, 2012, 11:34 AM), http://www.wgbhnews.org/post/what-show-chinas-movie-theaters-have-improved-dramatically (describing the author's trip to a Shanghai movie theater with "stadium seating, assigned seats, three-story screen and English with Chinese sub-titles," and concluding that the experience was "as good as anything you would find in a Western, post-industrial country and probably better than some").

95. Priest, *supra* note 9, at 828–29.

96. *See* Dan Levin & John Horn, *DVD Pirates Running Rampant in China*, L.A. TIMES, Mar. 22, 2011, http://articles.latimes.com/2011/mar/22/entertainment/la-et-china-piracy-20110322 (describing the detrimental effects piracy has had on legitimate aftermarket sales in China, and quoting one Chinese home video consumer as saying, "Legal DVDs are like democracy — they don't exist in China").

ket revenue in China.[97] This represents significant loss; in the United States, aftermarket revenue from DVD sales and television distribution rights can exceed $100 million for a single major film.[98]

b. The Growth of Internet Video

Fortunately, in the past few years, the prospects for generating aftermarket revenue in the online video space have improved. Before 2009, Chinese online video services such as industry leaders Youku and Tudou were notorious for serving full-length, unlicensed and unremunerated movies and television shows, both domestic and foreign, together with UGC.[99] With pirated premium content readily available for free, online license fees for film and TV programs were meager.[100] The market for online content licenses has improved dramatically, however, with online video piracy on China's major UGC video streaming websites experiencing a remarkable downturn.[101] The sites began to purge pirated content primarily due to their perception that major international brands, which were key advertisers on the video sites, had grown concerned about underwriting and being associated

97. Zheng Yangpeng, *supra* note 86 (contrasting "overwhelming dependence" on box office receipts in China with United States aftermarket revenues that amount to as much as seventy percent of a film's gross revenues and come primarily from DVD sales and television distribution). "[C]ontent theft," according to Mike Ellis, Asia-Pacific president of the Motion Picture Association of America, "has prevented China from developing a film industry value chain based on copyright trade." *Id.* For an example of the type of online video piracy site that continues to plague the movie industry, see Sophie Song, *China Closes Giant Movie Downloading Website, Accusing It of Being Nation's Largest Illegal Such Service; Other Movie Piracy Sites Voluntarily Shut Down*, INT'L BUS. TIMES (Apr. 26, 2013, 11:10 AM), http://www.ibtimes.com/china-closes-giant-movie-downloading-website-accusing-it-being-nations-largest-illegal-such-service#_jmp0_ (detailing how authorities shut down China's "largest illegal high-definition movie downloading site" that boasted a workforce of more than 100 employees and was earning as much as $135 million annually from 1.4 million subscribers who each paid a monthly fee of $8 to access unlimited downloads from the site's more than 10,000 high quality HD films and television dramas).

98. Charlie Jane Anders, *How Much Money Does a Movie Need To Make To Be Profitable?*, IO9 (Jan. 31, 2011, 2:24 PM), http://io9.com/5747305/how-much-money-does-a-movie-need-to-make-to-be-profitable.

99. *See, e.g.*, Bruce Einhorn, *The YouTube of China Goes Legit*, BLOOMBERG BUS. WK., Apr. 4, 2011, at 44, 47. ("Youku launched in 2006 as a local version of YouTube, which China's censors have long banned, and quickly became a premier place to download pirated movies and TV shows.").

100. *See* Wang Fei'er, *The Copyright Clash*, GLOBAL TIMES, Jan. 12, 2012, 13:53, http://www.globaltimes.cn/content/691864.shtml (noting that in 2009 it cost websites a mere 10,000 RMB (approximately $1500) per episode to license the most popular television show in China at the time).

101. *See* Clifford Coonan, *'Saturday Night Live' Launches on Chinese Video Site Sohu*, HOLLYWOOD REP. (Jan. 2, 2014, 12:03 AM PST), http://www.hollywoodreporter.com/news/saturday-night-live-launches-chinese-668177 (quoting Charles Zhang, CEO of Chinese Internet giant Sohu.com, as saying that "for domestic TV drama and American TV series, the majority of the Chinese audience is now watching legitimate content . . . . This is an industry with law and order.").

with pirated content.[102] The situation came to a head in 2009 when Coca-Cola and PepsiCo were sued as contributory copyright infringers after ads for their products were associated with unlicensed videos on Youku.[103]

Concerned about their relationships with their biggest advertisers, Youku, Tudou, and other online video portals proactively purged their services of unlicensed content, have sought exclusive licenses from copyright owners, and have been willing to pay top dollar for them.[104] A content licensing bubble has developed, in which the market price for online licenses of popular Chinese television series experienced as much as a one-hundred-and-eighty-fold increase in just two years.[105] Content acquisition accounted for one-half of Youku's total expenditures in 2012, as Youku paid out over $100 million in content licensing fees to Chinese and foreign copyright owners,[106] including Hollywood studios.[107] The content licensing bubble comes as a wind-

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102. *See* Eric Priest, Acupressure: The Emerging Role of Market Ordering in Transnational Copyright Enforcement 37–38 (Apr. 21, 2014) (unpublished manuscript) (on file with author); *see also* Loretta Chao, *Top China Video Site Steps Up Its Piracy Fight*, *supra* note 18 ("Youku is betting [that its] new [antipiracy technology] will help it improve its reputation among advertisers who don't want to be associated with piracy. That association can be risky. Last year, an antipiracy group of Chinese Internet companies filed a number of lawsuits against Youku in Chinese courts, including one that alleged that a Coca-Cola Co. ad had run on Youku accompanying a clip from a Chinese TV show that Youku hadn't licensed."). Several other factors probably helped motivate the Chinese video websites' reduction in pirated content, but none satisfies as the primary explanation for the change. These factors include that the websites: (1) were concerned about copyright liability and litigation and therefore decided to "clean up their acts"; (2) buckled under pressure from Chinese authorities; (3) sought to burnish their reputations ahead of initial public offerings in the United States; and (4) were motivated to improve copyright compliance because they viewed subscription and on-demand, pay-per-view content delivery as an important next-stage business model. *See* Priest, *supra*, at 14–22 (discussing each of these factors and explaining why it was not the primary motivation for Chinese video websites to purge unlicensed content).

103. *See* Wang Xing, *Web Video Piracy War Heats Up*, CHINA DAILY, Sept. 29, 2009, http://www.chinadaily.com.cn/bw/2009-09/28/content_8744294.htm#_jmp0; Loretta Chao, *Top China Video Site Steps Up Its Piracy Fight*, *supra* note 18.

104. *See* Priest, *supra* note 102, at 14–22.

105. The price for online licenses for popular Chinese shows increased from 10,000 RMB (approximately $1500) per episode in 2009 for the most popular show of that year to more than 1.85 million RMB (approximately $270,000) per episode for one of the most popular shows of 2011. *See* Wang Fei'er, *supra* note 100. The high-water mark was $320,000 per episode, paid by Baidu-owned video portal Qiyi.com for a top-rated Chinese drama. Simon Montlake, *Go Big or Go Home*, FORBES, Dec. 10, 2012, at 52.

106. *See* Montlake, *supra* note 105; YOUKU TUDOU INC., FORM 20-F: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15 (D) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2012 74 (Apr. 26, 2013) [hereinafter YOUKU TUDOU INC., 2012 ANNUAL REPORT].

107. *See* Steven Millward, *Youku Inks Deal with Warner Bros, Will Add 400+ Premium Titles*, TECHINASIA (June 28, 2011, 5:30 PM), http://www.techinasia.com/youku-warner-bros-deal/ (reporting on deal signed between online video site Youku.com and Warner Home Entertainment by which Youku acquired licenses to 400 to 450 Warner Bros. titles to Youku's pay-per-view premium site, although not providing information on the licensing fees).

fall for video copyright owners who, just a few years earlier, had no options for meaningful aftermarket earnings.[108]

The growth in licensed video online also presents an opportunity for independent filmmakers. Short films called "micro movies" — so-named because they are short and promoted through micro-blogging services — have become immensely popular in China.[109] Micro movies are produced on a low budget in a short time frame (typically within a few days), and are distributed for free via online video portals.[110] The immense popularity of micro movies online and the low barriers to entry have provided new, inexperienced directors with a platform for professional development and self-promotion.[111] Micro movies currently generate revenue for producers through advertisements, either through revenue sharing with video portals or through product placement advertisements.[112]

2. Censorship and Economic Protectionism

a. Production and Market Access Restrictions

The film industry's transition from a centralized, state-funded production model to a market-based production model has set the stage for a gradual expansion of the scope of acceptable content. Until 2002, only state-owned entities could produce feature films, which was a holdover from the days when film was primarily a propaganda tool.[113] Today, private entities (other than wholly foreign-owned enti-

108. *See* Clifford Coonan, *Hollywood's New Chinese Gold Mine: Youku Tudou*, HOLLYWOOD REP., Aug. 30, 2013, at 36. Even though Youku merged with Tudou largely to reduce the price-inflating competition for exclusive content licenses, *see* Montlake, *supra* note 105, the bubble has not yet burst. *See* YOUKU TUDOU INC., 2012 ANNUAL REPORT, *supra* note 106, at 74 ("[T]he average [Youku] license fee for both television serial dramas and movies increased in 2012 by more than 203% as compared to 2011."). However, consolidation among online video portals, as well as the fact that major portals such as Youku remain unprofitable, may mean video license price inflation will slow down, likely sooner rather than later. *See* Montlake, *supra* note 105.

109. *See* Clarissa Sebag Montefiore, *Micro Movies Beat China's Censors*, BBC (Aug. 12, 2013), http://www.bbc.com/culture/story/20130812-micro-movies-beat-chinas-censors; Tang Lei, *Micro-Movies Move Toward Mainstream*, NEWS CHINA (Jan. 2012), http://www.newschinamag.com/magazine/move-toward-mainstream.

110. *See* Montefiore, *supra* note 109; Tang Lei, *supra* note 109.

111. *See* Tang Lei, *supra* note 109 (citing @Who Who, a micro movie that attracted more than ten million views in the first few days after its release); Press Release, Youku Tudou Inc., Tudou Video Festival Empowers UGC Talents with Sponsors and Marketing Support (June 13, 2013), *available at* http://online.wsj.com/article/PR-CO-20130613-904937.html (announcing Tudou.com's new fund and revenue-sharing program for users "who [can] apply [to] . . . receive extensive financial, technical, and marketing support, including having their videos prioritized in search results on Tudou").

112. *See* Tang Lei, *supra* note 109; Press Release, Youku Tudou Inc., *supra* note 111.

113. *See* Dianying Guanli Tiaoli (电影管理条例) [Film Administrative Regulations] (promulgated by the St. Council, Dec. 25, 2001, effective Feb. 1, 2002) (Westlaw Chi-

ties) are eligible to produce feature films in China, but the process remains highly regulated via state permitting requirements.[114] Likewise, a latticework of regulations governs who can produce television content and what type of content they can produce.[115] Private enterprises other than wholly foreign-owned enterprises may establish television production operations in China, but must receive approval from the State Administration of Radio, Film, and Television ("SARFT") to produce a television program.[116]

Some areas of the film business remain off limits to private enterprise. In particular, SARFT tightly controls the importation and distribution of foreign films.[117] State-owned China Film Group ("CFG") and state-owned Huaxia Film Distribution exclusively possess SARFT-conferred licenses to distribute foreign films in China.[118] In 2007, the United States mounted a largely successful WTO challenge ("*China — Publications and Audiovisual Products*") against Chinese regulations restricting foreign participation in the market for importation and distribution of copyrighted works, including films for theatrical release and audiovisual home entertainment products.[119] Despite this victory, China has at best only partially complied with the WTO ruling.[120]

Censorship rules greatly limit the number of revenue-sharing foreign films imported for theatrical release.[121] The thirty-four import

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na万律 (Westlaw China)), art. 8 (China) [hereinafter Film Administrative Regulations]; Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 100.

114. Radio and Television Program Production Business Management Regulations (promulgated by the State Admin. of Radio, Film and Television, Jul. 19, 2004, effective Aug. 20, 2004), art. 5 (China), *translated in* CHINA COPYRIGHT AND MEDIA, http://chinacopyrightandmedia.wordpress.com/2004/07/19/radio-and-television-programme-production-business-management-regulations (last visited May 7, 2014).

115. *Id.* Production of news programming is strictly limited to a narrow range of approved government entities, *id.* art. 21, while the range of potential producers of television dramas is broader but still closely regulated. *Id.* arts. 23–30.

116. *Id*. art. 5.

117. Shalia Sakona, *Frankly, My Dear America, We Don't Give a Damn: Comparing Chinese and European Trade Barriers to American Audiovisual Works and the American Response*, 54 B.C. L. REV. 1385, 1390 (2013).

118. *Id.*

119. Report of the Panel, *China — Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products*, WT/DS363/R (Aug. 12, 2009).

120. *See* OFFICE OF THE U.S. TRADE REP., 2013 SPECIAL 301 REPORT, *supra* note 70, at 26. The United States stopped pressing the issue at the WTO when China signed a Memorandum of Understanding in which China agreed to increase market access for foreign films (though not for film distributors) and increase the revenue share for foreign film owners. *See* OFFICE OF THE U.S. TRADE REP., 2013 REPORT ON FOREIGN TRADE BARRIERS, *supra* note 80, at 68.

121. *See* Scott Ross, *Biden Convinces China To Grant Hollywood Greater Access*, NBC NEW YORK (May 30, 2012, 2:46 PM EST), http://www.nbcnewyork.com/blogs/popcornbiz/Biden-China-Hollywood-139709713.html. The thirty-four foreign film quota applies only to revenue-sharing theatrical releases. *See* Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 113. The limit would not apply to films distributed in China

slots currently available are highly coveted and often go to established studios and blockbuster films.[122] Hollywood film studios touted their 2012 Memorandum of Understanding, in which the Chinese government increased the number of annual slots from twenty to thirty-four and increased the foreign film box office revenue share to twenty-five percent.[123] The quota increase will only subtract screen time and revenue from other foreign films, however, as SARFT still requires theaters to allot two-thirds of their screen time to domestic productions.[124]

b. Content Restrictions

Unsurprisingly, even entities that obtain state approval to produce audiovisual content are not afforded carte blanche. Every project must undergo official content review through submission of a script outline to SARFT before production commences.[125] SARFT officials have sweeping discretionary power to censor audiovisual productions based on verboten political or social content.[126] For example, films that, in the authorities' view, contain content or subject matter that is seditious, divulges state secrets, endangers national security, incites hatred or discrimination, "propagates evil cults or superstition," or disturbs the public order, are disallowed.[127] In addition, films cannot contain elements that criticize revolutionary heroes or important historical figures or works of literature, nor can films "maliciously" criticize the People's Liberation Army or other public security or judicial organs.[128] Officials are not merely concerned with curtailing politically sensitive expression; the regulations also incorporate a powerful strain of paternalistic social censorship.[129] For example, regulations require filmmakers to edit or revise films containing "intermittent" sexual content including promiscuity, sexual behavior, homosexuality, and

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under a non-revenue-sharing agreement, such as a flat-fee arrangement. *Id.* This is a far less desirable arrangement for filmmakers than revenue-sharing deals, however, even if China is below the international standard revenue-sharing rate. *Id.*

122. *See, e.g.*, Brzeski & McClintock, *supra* note 83; Ross, *supra* note 121.

123. *See* Brzeski & McClintock, *supra* note 83. The prior revenue share for foreign films ranged from thirteen to seventeen percent. *See* McClintock & Masters, *supra* note 89.

124. Film Administrative Regulations, *supra* note 113, art. 44.

125. *Id.* art. 13.

126. *See* Dianyingjuben (Genggai) Beian, Dianyingpian Guanli Guiding (电影剧本（梗概）备案、电影片管理规定) [Film Script (Outline) Filing, Film Management Regulations] (promulgated by the St. Admin. of Radio, Film, and Television, Apr. 3, 2006, effective June 22, 2006) arts. 4, 14 (China) [hereinafter Film Script (Outline) Filing], *translated in* CHINA COPYRIGHT AND MEDIA, http://chinacopyrightandmedia.wordpress.com/2006/05/22/film-script-outline-filing-film-management-regulations (last visited May 7, 2014).

127. *Id.* art. 13.

128. *Id.* art. 14.

129. *Id.*

"filthy lines, songs, background music and sound effects."[130] Paternalism in SARFT's censorship rules is further apparent in regulations requiring the editing or revision of films that contain "intermittent content such as murder, violence, terror, monsters, occultism, etc., value orientations reversing true and false, good and bad, beauty and ugliness, blurring the basic nature of righteousness and unrighteousness," and even "excessively displaying excessive drinking, smoking and other bad habits."[131]

The approval and review process is not the only tool Chinese authorities use to control content. In addition to the "stick" of content review and affirmative censorship practices, authorities shape the production of audiovisual content by providing the "carrot" of incentives for producing works that promote party objectives.[132] Such incentives include subsidies and favorable release windows.[133]

Although regulations such as the film script rules quoted above may appear sweeping and unfathomably restrictive on their face, SARFT does not always enforce them to the letter. SARFT stakes out its territory in advance by announcing sweeping content restrictions, expressly reserving the right to enforce them strictly but doing so at its pleasure.[134] Foreign and domestic producers and distributors are all on notice about what constitutes acceptable film content, but SARFT's application of the rules is inconsistent, nontransparent, and subjective.[135] One recent example involves the 2012 science fiction blockbuster film *Looper*, a Sino-American joint production involving time-traveling hit men.[136] *Looper* appears to repeatedly violate SARFT rules by portraying graphic violence, murder, and mayhem — some of

130. *Id.*

131. *Id.* Indeed, the prohibition on horror and monsters in film is quite detailed in practice. Films cannot portray real ghosts because that encourages superstition, so ghosts in Chinese films can only appear in dreams, imagination, or if real individuals pretend to be ghosts as an element of the plot. *See* Li Anlan, *Why Scary Chinese Movies Are So Scarce*, SHANGHAI DAILY, Oct. 30, 2012, at B1, *available at* http://www.shanghaidaily.com/feature/Why-scary-Chinese-movies-are-so-scarce/shdaily.shtml. There is, however, an exception to the rule: ghosts and monsters are permitted if portrayed in film adaptations of classical literary works that contain such horrors. *Id.*

132. *See* Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 93.

133. *Id.* Going too far to shape one's production to please censors and secure government backing and incentives can be counterproductive for producers if the content ends up being dry or unappealing. Consider, for example, the cautionary tale of the 2013 film *Young Lei Feng*, chronicling apocryphal events in the life of a famed communist revolutionary hero. Screening of the state-backed propaganda film was terminated in cinemas in several major Chinese cities after the film "failed to sell a single ticket." Clarence Tsui, *Chinese Cinemas Cancel Propaganda Film Screenings*, HOLLYWOOD REP. (Mar. 5, 2013, 11:31 PM PST), http://www.hollywoodreporter.com/news/chinese-cinemas-cancel-propaganda-film-426236.

134. *See* OFFICE OF THE U.S. TRADE REP., 2013 REPORT ON FOREIGN TRADE BARRIERS, *supra* note 80, at 87–89.

135. *See id.*

136. *See* Simon Montlake, *Hollywood's China Fixer*, FORBES, Nov. 19, 2012, at 126.

which occurs in Shanghai in the year 2074.[137] Indeed, even time travel plot elements raise SARFT's ire,[138] violating SARFT dictates that prohibit the "twisting" of culture and history and "violat[ion]" of historical facts.[139] Nevertheless, as a local co-production,[140] *Looper* underwent, and passed, SARFT's obligatory pre- and post-production censorship reviews, and was released in cinemas throughout China — murder, mayhem, and time travel notwithstanding.[141]

Why are films such as *Looper* permitted to screen in China?[142] Perhaps in this case, censorship concerns were outweighed by the Chinese government's interest in boosting cultural production and cultural exports,[143] which could be appeased with the release of a

137. LOOPER (Endgame Entertainment 2012); *see also* Zhang Zihan, *Hasta La Vista, Maybe?*, GLOBAL TIMES, Oct. 14, 2012, http://www.globaltimes.cn/content/738191.shtml.

138. *See* Gregg Goldstein, *Producer's China Endgame Goes Well*, VARIETY, Oct. 8, 2012, at 10. In 2011, SARFT publicly purported to enforce a prohibition against time travel stories in TV and film. *See* Guangdian Zongju Guanyu 2011 Nian 3 Yue Quan Guo Paishe Zhizuo Dianshiju Beian Gongshi De Tongzhi (广电总局关于2011年3月全国拍摄制作电视剧备案公示的通知) [Notice Concerning the Nationwide Television Drama Shooting Filing Announcement for March 2011] (promulgated by the St. Admin. of Radio, Film, and Television, Mar. 29, 2011, effective Mar. 29, 2011) (China), *translated in* CHINA COPYRIGHT AND MEDIA, http://chinacopyrightandmedia.wordpress.com/2011/03/29/notice-concerning-the-nationwide-television-drama-shooting-filing-announcement-for-march-2011 (last visited May 7, 2014). Most Chinese time travel serials followed the same superficially apolitical story arc: a modern-day protagonist travels in time to ancient China, interacts with inhabitants of the period, and becomes romantically involved with a famous Chinese historical figure. Olivia, *"No More Time-Travel Drama," Authority Says It Disrespects History*, CHINAHUSH (Apr. 3, 2011), http://www.chinahush.com/2011/04/03/no-more-time-travel-drama-authority-says-it-disrespects-history; Zhang Zihan, *supra* note 137. As innocuous as time travel-based fiction may seem, stories that explore alternative pasts or envision a future with divergent social structures can reverberate with messages critical of the present. *See id.* Chinese authorities are well aware that depictions of the past have long been used in Chinese literature to veil criticism of the present. *See* Rogier Creemers, *SARFT Introduces Limits on Provincial Television Dramas*, CHINA COPYRIGHT AND MEDIA (Jan. 9, 2012), http://chinacopyrightandmedia.wordpress.com/2012/01/09/sarft-introduces-limits-on-provincial-television-dramas/.

139. Film Script (Outline) Filing, *supra* note 126, art. 14.

140. In fact, SARFT was apparently dissatisfied with what it deemed an inadequate level of Chinese involvement in the film, and therefore denied *Looper*'s Chinese financiers a full co-production credit, instead giving the film only "assisted co-production" status. Goldstein, *supra* note 138. Nevertheless, the move appears to have been little more than an official slap on the wrist, as SARFT granted *Looper*'s producers the larger revenue share and favorable theatrical release conditions generally available to full co-productions. *Id.*

141. *See* Steven Zeitchik, *Extra 'Looper' Scenes for Some*, L.A. TIMES, June 21, 2012, at D2.

142. After all, *Looper* depicted not just the future, but China's future, if only fleetingly. Moreover, at the insistence of Chinese investors, *Looper*'s China release contained more footage depicting China's future than the United States release version. *See id*.

143. *See* Yu Hua, *Censorship's Many Faces*, N.Y. TIMES, Feb. 28, 2013, at A29, *available at* http://www.nytimes.com/2013/02/28/opinion/yu-censorships-many-faces.html?_r=4&utm_source=Sinocism+Newsletter&utm_campaign=cce1e9d743-Sinocism03_01_13&utm_medium=email& (describing various players and considerations involved in official censorship decisions, and observing the tensions that arise between economic interests and politics and how the former often trumps the latter).

high-profile Sino-Hollywood joint production. Or, more cynically, perhaps there were other motivations in play: the United States Securities and Exchange Commission has recently investigated some Hollywood studios for making illegal payments to Chinese officials in return for their approval of films for theatrical release,[144] a potential violation of the United States Foreign Corrupt Practices Act.[145]

Censorship and micromanagement of film content is no small irritant to Chinese film and video producers and consumers. For example, the *Shanghai Daily* recently lamented SARFT's prohibition on horror films.[146] Chinese audiences crave horror films, the newspaper said, but "China's own horror industry seems drained of blood and vitality. Thus, viewers get their fix from abundant Asian and Western fare."[147]

c. Censorship and Internet Video

Some audiovisual content producers live in the interstices of SARFT regulation because their productions do not fall cleanly within the traditional media categories of feature film or television programs, and their works are not distributed through traditional channels such as broadcast or cable television or cinema. In the past, films produced in China without government approval were considered "underground films."[148] They could not be legally screened in China and so were usually made for overseas distribution only.[149] However, online video and micro-blogging sites present independent filmmakers with an opportunity unavailable just a few years ago.[150]

To date, censors have taken a relatively hands-off approach to micro movies,[151] thereby enhancing the format's appeal and utility to filmmakers. The short production and release schedules, free of the burdens of lengthy state licensing and content approval procedures, means more timely content and less convolution in the delivery of the director's vision to her audience.[152] This directness is refreshing to Chinese audiences and adds to the films' appeal, as the stories often

144. *See* Edward Wyatt et al*., S.E.C. Asks if Hollywood Paid Bribes in China*, N.Y. TIMES, Apr. 25, 2012, at B1, *available at* http://www.nytimes.com/2012/04/25/business/global/sec-asks-if-hollywood-paid-bribes-in-china.html?pagewanted=all&_r=0.

145. 15 U.S.C. §§ 78dd-1 to 78dd-3 (2012).

146. Li Anlan, *supra* note 131.

147. *Id.* Nevertheless, Chinese producers do attempt to push the boundaries. The aforementioned *Shanghai Daily* article, for example, cites a few Chinese films that flirt with the horror genre through plot devices — such as living characters who pretend to be ghosts — that technically adhere to the regulations but still add elements of horror. *Id.*

148. MONTGOMERY, *supra* note 1, at 1.

149. *Id.*

150. *See* Tang Lei, *supra* note 109.

151. *See supra* Part III.B.1.b.

152. *See* Tang Lei, *supra* note 109.

have a personal and unfiltered quality.[153] Said one director, "[Making micro movies] has given me more freedom to show my own message."[154] The director continues, "I received a lot of feedback . . . from the public, and as I don't have any pressure from the box office with this type of film, I can think to myself, 'why don't I shoot something different?'"[155]

In July 2012, SARFT issued a notice officially asserting its power to regulate micro movies, but this action probably does not signal an impending crackdown.[156] Rather, SARFT's admonishment that Internet video portals are responsible for filtering "unhealthy content" is likely an unsubtle reminder, of the sort SARFT often gives, that Internet video falls within its jurisdiction and that SARFT remains watchful of the developing medium.[157] In SARFT's shadow, however, pri-private self-censorship occurs within the online video community.[158] As the general manager of one small public relations company that produces micro movies put it, "Basically, there's no [official] censorship."[159] One micro movie director notes, "'Don't shoot pornography or nudity and don't talk about the Party or politics," but, "[o]ther than that, anything goes."[160]

The importation of films and television programs for online distribution through popular video portals such as Youku and Tencent also falls within a gray area to which SARFT officials take a comparatively hands-off approach.[161] Online service providers have begun

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153. See *id.*

154. Matthew Scott, *Censors Catch Up with China's 'Micro Film' Movement*, YAHOO! NEWS SINGAPORE (July 16, 2012), https://sg.news.yahoo.com/censors-catch-chinas-micro-film-movement-052603970.html (quoting Chinese filmmaker, Gu Changwei).

155. *Id.*

156. *See id.*

157. *See id.* ("State media reported last week that SARFT called on Internet video service providers to ensure 'unhealthy content' was not screened and urged them to form an association of censors to ensure content was more controlled."). The contents of SARFT's July 2012 notice concerning micro movies are not public, but indications are that the notice merely reiterates longstanding SARFT policy that "[he] who operates the web is responsible"; in other words, the video websites that publish such films are responsible for ensuring their content adheres to SARFT guidelines. Rogier Creemers, *SARFT Spokesperson Talks with Journalist on the "Notice Concerning Further Strengthening Network Drama, Microfilm and Other Network Audiovisual Programme Management,"* CHINA COPYRIGHT AND MEDIA (July 9, 2012), http://chinacopyrightandmedia.wordpress.com/2012/07/09/sarft-spokesperson-talks-with-journalist-on-the-notice-concerning-further-strengthening-network-drama-microfilm-and-other-network-audiovisual-programme-management/.

158. *See* Scott, *supra* note 154 ("[T]hose in the micro film industry say the ruling will have little impact because filmmakers already rely on web portals that employ people to pre-screen all content uploaded to the site. The mostly dramatic content is also seen as relatively inoffensive. 'There are certain rules the filmmakers have to follow — like no porn — as there are in mainstream Chinese cinema,' said [leading online video website] Youku [] [executive] Shao.").

159. Tang Lei, *supra* note 109 (quoting Song Huanyu, general manager of micro movie producer Linksus).

160. *Id.* (quoting micro movie director Jin He).

161. *See, e.g.*, Coonan, *supra* note 108.

licensing foreign as well as domestic video content, thereby creating opportunities both for foreign copyright owners and Chinese video portals. For example, despite SARFT's rules banning horror films, *The Walking Dead* became China's most popular foreign television show online in 2013 after Youku licensed the zombie series from its United States producers.[162] Internet video, therefore, might be an area where censors are willing to experiment with a more permissive approach. So far, this tactic has resulted in tangible gains for copyright owners, as it has enabled the sometimes highly lucrative licensing of domestic and foreign content that has not undergone official review.

C. China's Music Industry

1. The Failure of Exclusion Economics

Chinese netizens' appetite for music is voracious and unabated. According to Chinese government statistics, music was the third most-consumed network application in China in 2012, behind instant messaging and web search and ahead of online video and online gaming.[163] More than seventy-seven percent of China's 564 million Internet users consume music online.[164] And Chinese consumers' love of music shows no signs of ebbing: the consumption of music online in 2012 increased by thirteen percent over the previous year.[165]

The Chinese music industry should be booming as a result, but it is not. While the Chinese box office has grown so rapidly and profitably that Hollywood now routinely crafts and alters scripts to appease Chinese audiences and censors,[166] China's music industry has been decimated by piracy and is greatly impeded by its inability to fully capitalize on its most lucrative exclusion-based monetization model: mobile ringback tones. The result is that the music industry, as the China Daily recently put it, "languishes on life support . . . ."[167] In January 2012, in a move that spoke volumes about the tribulations facing the Chinese music industry, China's most prominent music executive, Song Ke, abruptly quit his job as CEO of the Mainland's

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162. *Id.*

163. *Statistical Report on Internet Development in China*, CHINA INTERNET NETWORK INFO. CENTER 38 (2013), http://www1.cnnic.cn/IDR/ReportDownloads/201302/P020130312536825920279.pdf.

164. *Id.* at 5, 38.

165. *Id.* at 38.

166. Steven Zeitchik & Jonathan Landreth, *Hollywood Gripped by Pressure System from China*, L.A. TIMES, June 12, 2012, http://articles.latimes.com/2012/jun/12/entertainment/la-et-china-censorship-20120612.

167. Chen Nan, *Staging a Comeback*, CHINA DAILY, June 29, 2012, 10:56, http://www.chinadaily.com.cn/entertainment/2012-06/29/content_15534983.htm.

most successful record company[168] in order to launch a Peking duck restaurant.[169] "When I make good roast duck," Song lamented, "people pay and thank me. When I make good music, nobody pays me and some even ridicule me."[170]

Industry revenue from the sale of recorded music in China has fallen in the past decade from an estimated $198 million in 2003,[171] derived almost exclusively from the sale of CDs and other physical media,[172] to $92.4 million in 2012, derived mostly from digital music.[173] China currently ranks as the world's twentieth largest music market with a mere one percent share of global revenue.[174] China's market for legitimate CDs is small — estimated at approximately $17 million in 2012, it accounts for 0.002 percent of the global music industry's physical-format sales.[175] Revenues are so small in part because legitimate CDs compete with pirated copies, but mostly because Internet music downloads have long been Chinese consumers' preferred method of music delivery. Piracy in the form of unauthorized downloads is thus a major source of the Chinese music industry's woes.[176] While the Chinese music industry has managed to survive on alternative revenue sources, such as licensing deals with search engine providers, live performances, and mobile ringback tones, it is far from thriving.

a. Search Engines and Unauthorized Music Downloads

For many years, major search engines were the biggest contributors to unauthorized downloading, providing consumers with deep

168. Bai Shi, *The CD Is Dying*, BEIJING REV., Feb. 16, 2012, http://www.bjreview.com.cn/life/txt/2012-02/13/content_425377.htm.

169. Mu Qian, *Music Isn't a Dead Duck*, CHINA DAILY, Feb. 24, 2012, http://www.chinadaily.com.cn/life/2012-02/24/content_14686101.htm.

170. *Id.* Song Ke returned to the music industry in June 2012 as managing director of Evergrande Music, founded by a major Chinese real estate investment group. *See Evergrande Music Lays out Grand Plans*, CHINA DAILY, June 21, 2012, 10:28, http://www.chinadaily.com.cn/entertainment/2012-06/21/content_15516703.htm.

171. IFPI, THE RECORDING INDUSTRY COMMERCIAL PIRACY REPORT 8 (2004), *available at* http://www.ifpi.org/content/library/piracy2004.pdf.

172. *See id.* at 1–2.

173. IFPI, *Recording Industry in Numbers: The Recorded Music Market in 2012*, 2013 IFPI 62 [hereinafter *Recording Industry in Numbers 2012*].

174. *Id.* at 62, 91.

175. *See Recording Industry in Numbers 2012*, *supra* note 173 at 7, 62.

176. *See* IFPI, *Digital Music Report 2013*, 2013 IFPI 28–31 (noting that Internet piracy has had a "continued serious impact" on the music industry because "copyright protection and enforcement help underpin the industry's business," and discussing ways in which the industry is trying to stamp out online piracy). *But cf.* Luis Aguiar & Bertin Martens, *Digital Music Consumption on the Internet: Evidence from Clickstream Data* (Eur. Comm'n Joint Research Ctr. Inst. for Tech. Studies, Digital Economy Working Paper 2013/4, 2013) (finding no evidence of displacement of digital sales from illegal downloading in a European study).

links to illegal files.[177] Baidu, China's largest search engine with more than sixty percent of the Chinese search market, provided a music search feature called Baidu MP3 Search that enabled users to effortlessly search for and download thousands of popular recordings.[178] According to a 2008 investigative article by *The Register's* Andrew Orlowski, the majority of music files available through MP3 Search were hosted on "a network of mysterious sites with closely related domain names . . . [that] were unreachable except through the Baidu search engine."[179] Though it is uncertain whether Baidu or some other entity operated these mysterious music file-hosting domains,[180] it is clear that while Baidu was offering MP3 Search the "cumulative effect [was] to keep the 'free music flowing' for Baidu's users — with devastating consequences not just for creators, but for rival Internet businesses."[181]

In response to this threat, copyright owners have sued Baidu and other search engines in Chinese courts multiple times since 2005, with very limited success.[182] After the international major record labels sued Baidu for the third time in four years, the parties settled in 2011 (allegedly at the insistence of the Beijing Higher People's Court).[183] Baidu signed an agreement with the record companies in which the labels agreed to license a 500,000-song catalog to Baidu, and Baidu reportedly agreed to pay upfront licensing fees as well as per-stream

177. Jiarui Liu, *supra* note 9, at 628–29.

178. *Id.*

179. Orlowski, *supra* note 31.

180. At least one Chinese search engine providing music search services similar to Baidu MP3 Search was revealed to actually host the music files itself. *See id.* ("[L]egal authorities finally managed to pin down full liability on music search engine Zhongsou for hosting illegal music files on its servers . . . . Zhongsou's network of domains was registered under false names of individuals, and it required laborious investigation to track down the servers.").

181. *Id.*

182. In 2005, the IFPI sued Baidu, alleging that Baidu's provision of deep links in its search results constituted direct infringement. Seagull Haiyan Song, *supra* note 32, at 9. Baidu successfully argued, however, that it did not infringe because it is merely a search engine that provides links to content but does not actually host the content. *See id.* Six months later, the IFPI brought a similar search engine liability case against Alibaba/Yahoo! China. *Id.* In this case, unlike the Baidu case, the IFPI brought an indirect liability claim as well as a direct liability claim. *Id.* While the court again dismissed the direct liability claim, it held that the defendant was liable under a theory of indirect liability because it "should have known" of the infringing materials based on repeated takedown notices sent by the plaintiffs. *Id.* In 2008, the Music Copyright Society of China ("MCSC"), a performing rights organization, sued Baidu and sought $140,000 in damages for infringing fifty musical works. Xue "Snow" Dong & Jayakar, *supra* note 50, at 89–90. Just a few months after MCSC filed its lawsuit, three of the four major international record companies — Universal Music Group, Warner Music Group, and Sony BMG — sued Baidu, seeking $9 million in damages. *Id.* at 90. The Beijing First Intermediate People's Court again ruled in Baidu's favor, based on reasoning similar to that of the 2005 decision. *Id.* The appellate court, however, directed the parties to enter mediation due, according to one account, "to the sensitivity and international ramifications of the case." *Id.*

183. *See* Xue "Snow" Dong & Jayakar, *supra* note 50, at 90.

or per-download fees.[184] Most importantly, Baidu agreed to phase out its MP3 Search feature in favor of a new, licensed service through which users can stream or download music for free under an ad-revenue-sharing arrangement between Baidu and the major labels.[185] At the time of this writing, the MP3 Search feature appears to be no longer available, replaced by Baidu's allegedly legal music service.

Commentators suggest that a convergence of factors led to Baidu's change of heart.[186] These included a changing political environment following the United States' high-profile 2007 WTO proceeding against China;[187] recent strengthening of copyright regulations, especially with respect to online infringements;[188] heightened efforts by the Ministry of Culture ("MOC") to enforce music copyrights online;[189] concerns about the brand-tarnishing effects of piracy; and Baidu's apparent desire to build value-added services around a licensed music ecosystem.[190]

Whether or not these are Baidu's real motivations for settling, questions remain about what the licensing agreement means for copyright owners. Some commentators believe it heralds a new age in online music monetization in China.[191] Indeed, the trend is spreading,

184. *Id.* at 90–91.

185. *Id.*

186. *Id.* at 91–99.

187. *Id.* at 92–93; *see also supra* notes 40–43 and accompanying text. With regard to the issue of government pressure, the court's adjuration that the parties settle may indicate that state actors wanted to see an end to the cat-and-mouse game between Baidu and music copyright owners. Alternatively, it may have been an attempt to force the major record companies to the negotiating table with Baidu — something the record labels had resisted so long as Baidu continued to provide deep links to infringing files in its search results. Beyond this, it seems unlikely that government pressure significantly influenced Baidu's decision. While the Ministry of Culture made public efforts at the time to "punish" Baidu and other websites for providing infringing music content, few details were released about who was punished or what the sanctions were, and Baidu's punishment apparently amounted to, as The Register noted, a mere slap on the wrist. Kelly Fiveash, *China Gently Chides Baidu over Deep-Linking MP3 Naughtiness*, REGISTER (Apr. 26, 2011), http://www.theregister.co.uk/2011/04/26/baidu_illegal_music_downloads/.

188. Xue "Snow" Dong & Jayakar, *supra* note 50, at 93–94.

189. *Id.* at 94–95. This includes superintending the establishment of the Alliance of the Digital Music Industry, an "industry-coordinating organization" comprised of record labels, wireless operators, and websites such as Baidu, which reportedly joined under pressure from authorities. *See* Alex Bojalad, *Chinese Online Music Providers Form Industry Association*, BILLBOARD (June 20, 2011, 3:00 PM EDT), http://www.billboard.com/biz/articles/news/1177456/chinese-online-music-providers-form-industry-association; Xue "Snow" Dong & Jayakar, *supra* note 50, at 95.

190. Xue "Snow" Dong & Jayakar, *supra* note 50, at 96–97.

191. *See* Louis Hau, *Chinese Search Giant Baidu's Major-Label Licensing Pacts Signal a Promising Shift*, BILLBOARD (July 22, 2011, 1:46 PM EDT), http://www.billboard.com/biz/articles/news/1177005/chinese-search-giant-baidus-major-label-licensing-pacts-signal-a-promising.

as Baidu became one of several major Chinese online music services that license music.[192]

Other commentators, however, are skeptical that Baidu's agreement with the major record labels indicates marked improvement, alleging that even services that pay licensing fees to copyright owners still carry pirated content in order to drive traffic and increase ad revenue for the site owners.[193] It remains to be seen whether Baidu too will ultimately revert to what one commentator calls "partial licensing as cover for pirate activity and traffic magnet . . . ."[194] As another commentator put it, far from indicating that copyright owners are finally getting the best of infringing sites in China, deals such as Baidu's and a similar agreement between international major record labels and Chinese web portal Sohu are actually "reluctant interim concessions from desperate rights owners."[195] Further, these deals may not help independent and domestic labels and artists. "Indie labels," as one Chinese music executive said, "don't really have a say in [such] negotiation[s], since their catalogs are usually too small to matter."[196] According to reports, only about ten percent of the content licensed to Baidu was in Mandarin or Cantonese, suggesting that the deal would have little impact on most Chinese artists.[197] Most importantly, while the licensing fees were not disclosed, it is generally believed they were too small to lead to a meaningful turnaround in the fortunes of the music industry and individual musicians in China.[198] In short, the licensing agreements were a positive first step, but much room for improvement remains.

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192. According to this Author's communications with Chinese music industry sources, Internet giant Tencent's QQ Music, Internet portal Sina, music downloading and streaming start-up Xiami, and Internet music streaming service Douban.fm all pay copyright owners for content. Indeed, there is a confluence of evidence indicating that broader change is afoot. The Alliance of the Digital Music Industry exemplifies more high-profile government efforts to bring together copyright owners and online service providers, and in 2012 new regulations went into effect requiring entities that publicly perform music, including radio stations, TV stations, and business establishments, to pay public performance royalties to musical composition copyright owners. *See* Music Copyright Society of China, 电视台使用音乐作品付酬协议集体签约仪式在京隆重举行, 中国音乐著作权协会 (Jan. 12, 2012), http://www.mcsc.com.cn/informationSociety.php?partid=13&pid=973.

193. *See* Mathew D, *China Aims To Redress Copyright Burden of Proof Imbalance*, GLOBAL OUTPOST (May 5, 2011, 2:22 PM), http://www.theglobaloutpost.com/archives/45.

194. *Id.* (internal quotation marks omitted).

195. Ed Peto, *Majors Settle with Sogou MP3 Search*, OUTDUSTRY (Mar. 5, 2013), http://outdustry.com/post/44612920249/majors-settle-with-sogou-mp3-search.

196. *Building China's Music Industry, from the Internet up*, KNOWLEDGE@WHARTON (July 18, 2012), http://www.knowledgeatwharton.com.cn/index.cfm?fa=viewfeature&articleid=2628&languageid=1 (quoting Felix Cheng, music blogger and A&R executive at Universal Music China).

197. Dan Levine, *China's Biggest Search Engine, Known for Illegal Downloads, Makes Music Deal*, N.Y. TIMES, July 19, 2011, http://www.nytimes.com/2011/07/19/technology/baidu-chinas-search-giant-announces-music-licensing-deal.html.

198. *See id.*

b. Alternative Revenue Streams: Live Performance and Corporate Sponsorship

Because recordings are extremely difficult to monetize, many labels and artists naturally emphasize developing "alternative" revenue streams — that is, revenue that does not derive directly from copyright exploitation. Live performance income is an extremely important revenue stream for pop superstars. Similar to in-theater movie screening, live musical performances by well-known artists are highly monetizable and less vulnerable to piracy because non-paying individuals can be excluded from the experience of seeing a performer live. Yu Quan, one of China's most successful pop music acts since 2000, reportedly earns $25 million annually from live performances alone.[199] Only superstars can reach this level of live performance income. However, increasingly numerous concerts and multi-day, government-sponsored music festivals provide a growing source of income to the best-known alternative musicians,[200] and corporate and commercial gigs can be profitable for mid-level pop artists.[201] While few reliable statistics are readily available to substantiate the number and earnings of middle-class artists, the number of artists able to earn a subsistence living from festivals and commercial performances alone is likely small.[202]

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199. MONTGOMERY, *supra* note 1, at 68.

200. *See* Jonathan Kaiman, *Beijing Spends a Billion To Get China Rocking*, GUARDIAN (Dec. 25, 2012, 5:17 PM EST), http://www.guardian.co.uk/world/2012/dec/25/china-music-valley-cultural-profile ("Yan Haisong, the lead singer of the veteran Beijing rock band P.K.14, said his band made a decent living performing at festivals and producing records for up-and-coming artists."); Sinica Podcast, *The China Rock Podcast*, POPUP CHINESE (Aug. 8, 2011), http://popupchinese.com/lessons/sinica/the-china-rock-podcast (featuring a panel discussion of the China music scene in which China rock music experts Michael Pettis and Archie Hamilton noted that popular Chinese alternative rock band Carsick Cars had recently earned 90,000 RMB (about $14,400) in less than two months performing at festivals and concerts, and another "top rock band" booked a festival for a fee of "well into six figures [RMB]").

201. *See 'Chaos' of China's Music Industry*, BBC (Feb. 21, 2008), http://news.bbc.co.uk/2/hi/asia-pacific/7251211.stm (reporting that mid-level Chinese pop artist Long Kuan can earn as much as $4100 per performance at a "commercial gig" — a private or promotional corporate event); *Building China's Music Industry, from the Internet up*, *supra* note 196 ("[M]ost artists . . . rely on a combination of corporate sponsorships and events for their bread and butter . . . . [T]he most important source of revenue for these musicians is performing at corporate events . . . [where] an artist can charge anywhere from one thousand to several hundred thousand RMB a day.").

202. *See, e.g.*, A.A., *Subcultural Sounds*, ECONOMIST, (May 1, 2013, 11:36), http://www.economist.com/blogs/analects/2013/05/music-festivals (describing the burgeoning concert and festival scene in China, but noting that "with few exceptions no one can make a living out of alternative music in China"); *Building China's Music Industry, from the Internet Up*, *supra* note 196 (quoting one China music promoter as saying, "For non-mainstream artists and bands, there is no particularly viable business model and most musicians will also hold day jobs"). Anecdotally, at least, some mainstream Chinese pop stars cannot earn a living from live performances and commercial appearances, and rely on mobile music royalties. *See id.* (quoting China music promoter as saying, "I've had mid-level

Corporate sponsorship and product endorsement provide another important revenue stream for pop superstars. These opportunities can involve the use of the artist's image on products, artist appearances at promotional events, or product placement advertising in the artist's videos and live performances.[203] Of course, these revenue opportunities are unavailable to most artists.[204]

c. Mobile Music: Opportunity and Exploitation

For many recording artists and virtually all Chinese record companies, mobile music is the most important source of revenue. According to the MOC, revenue in China's recorded music industry increased by fourteen percent in 2010 over the previous year, and ninety percent of total revenue derived from mobile value-added music services[205] provided by mobile telecommunications companies China Mobile, China Unicom, and China Telecom. More than 600 million mobile subscribers — comprising approximately seventy percent of China's mobile subscribers — used mobile music services in 2010,[206] including full-track downloads and ringtones.

Color ringback tones ("CRBTs") are by far the most important source of mobile music revenue. CRBTs are especially lucrative for two reasons. First, unlike ringtones, CRBTs are not files that are downloaded or otherwise loaded onto the mobile handset. Rather, they are broadcast in real time from the mobile service provider to a caller's handset. CRBTs are thus an excludable service, not a product, which helps make them impervious to piracy. Subscribers must pay for the service, which is delivered via a centrally administered system.[207] Second, because they are purchased as an automatically renewable monthly subscription, CRBTs are "set and forget": users that order the service once often retain it and pay the recurring fee indefinitely, ensuring recurring revenue as opposed to the one-time purchase fees paid for full-track downloads. CRBT subscriptions cost as little as two RMB (about $0.32 per month),[208] making them affordable

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Chinese pop stars tell me that China Mobile is like mom and dad — the money made from China mobile is the only thing that is keeping them housed, clothed and fed").

203. *See* Jiarui Liu, *supra* note 9, at 637; *'Chaos' of China's Music Industry*, *supra* note 201.

204. *See* Jiarui Liu, supra note 9, at 637–38.

205. Tan, *supra* note 71.

206. *Id.*

207. *See* MONTGOMERY, *supra* note 1, at 71.

208. Zhu Hong, the general manager of China Mobile's wireless music division, reported that 470 million of the company's 650 million mobile users had ringback tone subscriptions in 2011, "and each of them contribute[d] around CNY2.00 per month." Joyce Fan, *China Mobile Hits the Right Note with Legit Music*, WINWIN, Dec. 2012, at 17, *available at* http://www.huawei.com/us/about-huawei/publications/winwin-Magazine/hw-201235-hw_201263-135300-135327-hw_201255.htm.

for lower-income individuals and thereby greatly expanding the range of customers paying for music services. Music industry executive Song Ke stated that mobile music sales in China in 2011 were 27.9 billion RMB, or more than $4 billion.[209] By comparison, in the United States (the world's largest recorded music market), total record industry revenue from all sources, physical and digital, amounted to $4.48 billion in 2012.[210] Royalties from mobile music have become an indispensable source of income for many labels and artists. As one Chinese music industry executive put it, "I've had mid-level Chinese pop stars tell me that China Mobile is like mom and dad — the money made from China [M]obile is the only thing that is keeping them housed, clothed and fed . . . ."[211]

The problem, according to Song and other Chinese recording industry executives, is not that digital music cannot be monetized in China; rather, it is that the revenue distribution is drastically skewed in favor of wireless service providers so that creators and copyright owners receive only a tiny fraction of gross revenue.[212] This explains why China's music industry faces dire financial circumstances despite the fact that, according to MOC statistics, 600 million people — nearly twice the entire United States population — use paid digital music services in China.[213] While the agreements between mobile service providers and record companies reportedly stipulate a fifty-fifty mobile music royalty split, in reality the mobile service providers pay music copyright owners a royalty of just two percent or less of mobile music revenue[214] — unconscionably small as compared with royalties customarily paid by major digital music retailers in the United States. Apple Inc., for example, reportedly pays copyright owners a royalty of seventy percent of the song purchase price for full-track downloads bought through its iTunes digital music store.[215] Song suggests that

209. Wang Xiaofeng (王小峰), Song Ke: Zhongguo Changpian Ye de Shuailuo Zhi Yin (宋柯：中国唱片业的衰落之因) [Song Ke: The Reason for the Decline of the Chinese Record Industry], SAN LIAN SHENG HUO (三联生活) [LIFEWEEK] (Jan. 30, 2012), http://www.lifeweek.com.cn/2012/0130/36358.shtml. A corporate magazine for Huawei Technologies, a technology provider to China Mobile, reports that China Mobile alone earned $3.55 billion from its mobile music division in 2011. Fan, *supra* note 208, at 17.

210. *Recording Industry in Numbers 2012*, *supra* note 173, at 39.

211. *See Building China's Music Industry, from the Internet up*, *supra* note 196 (quoting Nathaniel Davis, the co-founder of Shanghai-based music promotion company Split Works).

212. *See* Yang Yang, *A Record Tailspin*, CHINA DAILY, June 29, 2012, 9:00, http://usa.chinadaily.com.cn/weekly/2012-06/29/content_15534133.htm ("When talking about the music market, people always say the business is very bad. But actually, it is not bad at all. Music makes enormous money. It's only we producers don't get much . . . ." (quoting Chinese record company executive Zhan Hua) (internal quotation marks omitted)).

213. *See* Tan, *supra* note 71.

214. *See* Wang Xiaofeng, *supra* note 209.

215. *See* Philip Bump, *Apple's Streaming Music Deal Broke Down over These Few Cents*, ATLANTIC WIRE (Mar. 7, 2013, 2:43 PM ET), http://www.theatlanticwire.com/technology/2013/03/apple-streaming-music-deal/62870/.

even a sixty-forty royalty split favoring mobile providers would provide the basis for a robust, vibrant recording industry in China.[216] At present, however, the likelihood that music copyright owners can obtain that figure is remote.

The astonishing and under-appreciated fact, therefore, is that for all the attention the Chinese box office numbers receive, digital music revenue in China dwarfed China's $3 billion box office revenue in 2012. The fact that total recording industry revenue in China still amounts to less than $100 million annually indicates severe dysfunction throughout the Chinese music industry ecosystem. Major contributors to the problem, of course, are the mobile service providers, which have long managed to pay music copyright owners an audaciously low percentage of revenues. However, it is difficult to escape the conclusion that piracy still looms as the ultimate culprit. The recording industry's inability to exploit copyright leaves it vulnerable to severe bargaining asymmetries in negotiations with powerful distributors, who are free to overreach and extract unconscionable fees because copyright owners lack the leverage to negotiate a better rate or enforce the existing terms of their agreements with the distributor.

2. Censorship in China's Music Industry

Approval of music content in China lies with two separate authorities: the General Administration for Press and Publications ("GAPP") has authority over music on physical media,[217] while the MOC has authority over online music distribution.[218] Unsurprisingly, this bifurcation of authority can lead to interagency conflicts as each agency stakes out its turf in China's shifting digital media landscape.[219] (In-

216. *See* Wang Xiaofeng, *supra* note 209.

217. Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 90–91.

218. *See* Wenhuabu Guanyu Jiaqiang he Gaijin Wangluo Yinyue Neirong Shencha Gongzuo de Tongzhi (文化部关于加强和改进网络音乐内容审查工作的通知) [Notice Concerning Strengthening and Improving Network Music Content Examination Work] (promulgated by the MOC, Aug. 18, 2009), *translated in* CHINA COPYRIGHT & MEDIA (Aug. 18, 2009), http://chinacopyrightandmedia.wordpress.com/2009/08/18/notice-concerning-strengthening-and-improving-network-music-content-examination-work/ [hereinafter Network Music Content Examination Work]; Wenhuabu Guanyu Wangluo Yinyue Fazhan he Guanli de Ruogan Yijian (文化部关于网络音乐发展和管理的若干意) [Some Opinions Concerning Network Music Development and Management] (promulgated by the MOC, Dec. 20, 2006), *translated in* CHINA COPYRIGHT & MEDIA (Dec. 20, 2006), http://chinacopyrightandmedia.wordpress.com/2006/12/20/some-opinions-concerning-network-music-development-and-management/ [hereinafter Some Opinions Concerning Network Music Development and Management].

219. In one recent example, the MOC issued a list of one hundred songs by foreign artists, including popular artists from the United States, Australia, Korea, Taiwan, and Hong Kong, that it banned from Chinese websites. *See* Loretta Chao, *Culture Ministry Goes After Online Music, Again*, WALL ST. J. CHINA REAL TIME REP. (Jan. 12, 2011, 2:43 PM HKT), http://blogs.wsj.com/chinarealtime/2011/01/12/culture-ministry-goes-after-online-music-

deed, to confuse matters more, recall that the National Copyright Administration of China is yet another agency with enforcement and policy-setting authority over copyrighted works, including music.[220])

Any business seeking to distribute music online, or to import or produce music for online distribution, must obtain an MOC permit.[221] As with film, all domestic and imported music must undergo official

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again/. The ban order sowed confusion, however, because the MOC gave no reasons for the ban and GAPP had previously approved most of the same songs for CD distribution. *See id.*

220. *See supra* note 55 and accompanying text.

221. Network Music Content Examination Work, *supra* note 218, para. 2. In the wake of WTO Report WT/DS363/R, *see supra* notes 119–120 and accompanying text, China agreed to liberalize its rules concerning foreign involvement and investment in the importation and distribution of copyright-intensive works, including recorded music. To date little has happened in that regard. Wholly foreign-owned enterprises ("WFOEs") still may not directly invest in music distribution services. Sino-foreign joint ventures may distribute music on physical media (CDs). *See* Yinxiang Zhipin Guanli Tiaoli (音像制品管理条例) [Audiovisual Products Management Regulations] (promulgated by St. Council, Dec. 12, 2001, effective Feb. 1, 2002), art. 35, *translated in* CHINA COPYRIGHT & MEDIA, http://chinacopyrightandmedia.wordpress.com/2001/12/25/audiovisual-products-management-regulations-revised/ [hereinafter Audiovisual Products Management Regulations], *revised by* Guowuyuan Guanyu Xiugai "Yinxiang Zhipin Guanli Tiaoli de Jueding" (国务院关于修改〈音像制品管理条例〉的决定) [State Council Decision Concerning Revising the "Audiovisual Product Management Regulations"] (promulgated by St. Council Mar. 19, 2011, effective Mar. 19, 2011), *translated in* CHINA COPYRIGHT & MEDIA, http://chinacopyrightandmedia.wordpress.com/2011/03/19/state-council-decision-concerning-revising-the-audiovisual-product-management-regulations/ [hereinafter State Council Decision Concerning Revising the "Audiovisual Product Management Regulations"]. However, any entity engaged in distribution must first receive state approval through an opaque process subject to broad administrative discretion. *See* Audiovisual Products Management Regulations, *supra*, art. 32; *China Fails To Implement WTO Ruling in Audiovisuals Case, or What Did We Expect?*, CHINA COPYRIGHT & MEDIA (Mar. 24, 2011), http://chinacopyrightandmedia.wordpress.com/2011/03/24/china-fails-to-implement-wto-ruling-in-audiovisuals-case-or-what-did-we-expect/.

Likewise, due to political sensitivities surrounding information distribution, a foreign business must establish a Sino-foreign joint venture to operate within China as an online music distribution service — a "value-added telecommunications service[]," according to Chinese authorities. *See* Waishang Touzi Dianxin Qiye Guanli Guiding (外商投资电信企业管理规定) [Provisions on Administration of Foreign-Invested Telecommunications Enterprises] (promulgated by the Ministry of Info. Tech., Dec. 11, 2001, effective Jan. 1, 2002), art. 4, http://www.wipo.int/wipolex/en/details.jsp?id=6570. The joint venture model presents many risks, however, including the lack of foreign entity control, the potential for conflict between joint venture partners, and the transfer of proprietary information or technology. *See* DANIEL C.K. CHOW & ANNA M. HAN, DOING BUSINESS IN CHINA: PROBLEMS, CASES, AND MATERIALS 90 (2012). Most foreign-invested Internet businesses operating in China, therefore, prefer to operate as WFOEs. They typically "creatively comply" with the sole foreign ownership restrictions by establishing a "variable interest entity" ("VIE"). *See* Shen Wei, *Will the Door Open Wider in the Aftermath of Alibaba? — Placing (or Misplacing) Foreign Investment in a Chinese Public Law Frame*, 42 H.K. L.J. 561, 561, 565–70 (2012). VIEs are local companies owned by Chinese nationals nominated by the WFOE. The VIE is eligible to obtain the required permits and operate the service, but is controlled by the WFOE through a series of contracts rather than through share ownership. *See* Ke Chen, *"Rule By Law" and Its Impact on Cross-Border Transactions Affecting Chinese Interests*, 34 T. JEFFERSON L. REV. 161, 167 (2011).

content review before distribution.[222] MOC rules also oblige online distributors to review the works and guarantee their legality.[223] Despite these seemingly oppressive music censorship rules, however, Chinese music industry insiders suggest that in practice Chinese authorities are less concerned about the ideological impact of music and therefore have paid comparatively less attention to it than they do to the film industry.[224] Indeed, one Chinese music industry executive wished that Chinese censors would scrutinize the music industry as much as they do the film industry. While censorship is "very twisted," he said, "at least [the government] is providing a relatively healthy environment for the film industry. But the music industry is left on its own to take care of itself."[225]

The MOC's content examination rules highlight the nexus between administrative copyright enforcement and censorship, despite the MOC's insistence that the rules are primarily meant to address online piracy by helping the agency track and identify "illegal" music online. According to the MOC, its use of the term "illegal" refers primarily to infringing content rather than censored content, as ninety-nine percent of music content is approved by censors and is therefore "legal" in that sense.[226] Furthermore, as the MOC is a culture agency, officials say a content-oriented regulation must be in place for the MOC to be able to engage in copyright enforcement.[227] Whatever the real impetus behind the MOC's content review regulations, their effect on piracy remains dubious. Despite the MOC's closure of more than 300 websites operating without online music service permits in

222. *See* Audiovisual Products Management Regulations, *supra* note 221, art. 28; Network Music Content Examination Work, *supra* note 218, art. 8.2. Domestically-produced music must also undergo review, but ostensibly on a faster track (a maximum of ten as opposed to twenty days). *See id.* art. 8.2, 14.

223. Network Music Content Examination Work, *supra* note 218, art. 15.

224. Wang Xiaofeng, *supra* note 209.

225. *Id.* (quoting former Taihe Maitian executive Song Ke).

226. *See* Susan Butler, *6 Questions with Chen Tong*, BILLBOARD, Feb. 10, 2007, at 30 (interviewing Chen Tong, chief of the audio and video division of the MOC's Department of Cultural Market). Songs may fail to pass MOC review more frequently than Chen suggests, but in any event, when the MOC disapproves of a song the reasons are often opaque. For a colorful look at some of the songs that failed to pass MOC review, including songs from famous Western artists, see Elaine Chow, *In Pictures: Music Stars China's Ministry of Culture Doesn't Want You Listening to on the Internet Without Permission*, SHANGHAIIST (Aug. 25, 2011, 5:30 PM), http://shanghaiist.com/2011/08/25/in_pictures_music_stars_chinas_mini.php.

227. *See* Butler, *supra* note 226 ("The U.S. is a very regulated society, and [when there is] any pirated product, people who infringe can be sued through a civil case. But in China, the administration . . . has more legal power. So there needs to be a regulation first [for them to enforce]." (alteration in original) (quoting Chen Tong, chief of the audio and video division of the MOC's Department of Cultural Market) (internal quotation marks omitted)).

2010,[228] and despite other official efforts to crack down on online music piracy,[229] the problem remains as robust as ever.[230]

IV. CHINA: A CHALLENGE TO TRADITIONAL ASSUMPTIONS ABOUT COPYRIGHT?

As the previous Sections demonstrate, copyright enforcement in China remains weak. Nevertheless, creators invest in the production of thousands of new commercial works of music and film each year, generating billions of dollars in gross receipts. It is little wonder that some commentators question whether piracy is causing any discernible harm to content creators at all, or whether it in fact might be contributing to industry growth.

The standard economic rationale for copyright is that authors and creators must be able to cost-effectively exclude competitors and the public from accessing and copying their works in order to recover the investment they made in creating those works.[231] Copyright enables exclusion by creating legal barriers to access, allowing authors to capture the economic value of their works.[232] Copyright therefore increases social welfare by incentivizing creators to invest in producing and disseminating new, original works. However, efficiency requires that copyright exclude others only to the extent necessary to provide this incentive. Otherwise, the public's ability to access works of expression, and creators' ability to build upon existing works, will be unduly burdened.[233]

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228. Tan, *supra* note 71.

229. *See*, *e.g.*, Yang Yang, *supra* note 212 ("Since 2005, [the government] has been cracking down on online music piracy. Last year, the State Council . . . established the National Leading Group for IPR Enforcement . . . . In a three-month campaign in 2011, 17 major illegal websites that offered unauthorized services . . . were shuttered."). One reason such efforts appear to bear little fruit is that they focus on high-profile, campaign-style enforcement, which has been shown to be among the weakest and least effective forms of IP enforcement — they tend to be poorly organized, short-term, and inconsistent, and therefore provide little long-term deterrence. *See* DIMITROV, *supra* note 9, at 226–30.

230. *See* OFFICE OF THE U.S. TRADE REP., 2012 SPECIAL 301 REPORT, *supra* note 16, at 29.

231. *See* WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 38–41 (2003). Landes and Posner also point out that

> [t]he problem of recoupment is magnified . . . by the fact that the author's cost of creating the work, and many publishing costs (for example, editing costs), are incurred before it is even known what the demand for the work will be. Because demand is uncertain, the difference between the price and marginal cost of the successful work must not only cover the cost of expression but also compensate for the unavoidable risk of failure.

Id. at 40.

232. *See* William Fisher, *Theories of Intellectual Property*, *in* NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY 168, 169 (Stephen R. Munzer ed., 2001) (describing the standard utilitarian rationale for intellectual property).

233. *See id.*

Creative industry growth in China's high-piracy environment might appear to challenge the standard economic rationale for copyright.[234] Six related themes emerge from optimistic accounts of the relationship between piracy and creativity in China. The remainder of Part IV introduces each of these themes, and summarizes arguments in the literature advancing the viewpoint expressed in each theme. Then, Part V will critique the premises and assumptions underlying each theme, and make a normative case for why better copyright enforcement would yield more benefits to Chinese creative industries and society than widespread piracy does.

A. Theme #1: "Piracy Has Not Harmed the Chinese Creative Industries, Because Production Continues Apace and Is Even Growing."

In her book, *China's Creative Industries: Copyright, Social Network Markets and the Business of Culture in a Digital Age*, Lucy Montgomery analyzes the effect of piracy on China's music and film industries.[235] She asks whether "weaker copyright mean[s] stronger creative industries," and concludes that piracy has helped bring economic growth to China's domestic copyright industries.[236] Regarding the music industry, for example, Montgomery says that while Chinese record labels continue to produce music at a high rate, they place "less emphasis on producing popular albums and more emphasis on gaining popularity and profile through single hits that lead to lucrative product endorsement and live appearance or performance deals."[237] Such "approaches that are proving successful in China may well turn out to be at the vanguard of models for monetizing creativity in a digital age."[238] Western record companies, on the other hand, struggle in China because their traditional revenue model is based on recorded music "sold independently of the physical presence of the artist."[239] Montgomery concludes that "[t]he rapid development of the creative industries in China appears to contradict the hypothesis that stronger IP is the pathway to economic growth. Instead . . . weaker IP is a much overlooked source of evolutionary development."[240] She also argues that the protectionist effects of Chinese censorship help fuel

234. *See*, *e.g.*, Wang Xin, *Growth in Industries Based on Copyrights*, CHINA DAILY USA, June 28, 2012, 8:16, http://usa.chinadaily.com.cn/epaper/2012-06/28/content_15530641.htm; Zheng Yangpeng, *supra* note 86; Lai, *supra* note 85.

235. *See generally* MONTGOMERY, *supra* note 1. Montgomery also analyzes the role of IP in the Chinese fashion industry, but that analysis is less salient to this discussion.

236. *Id.* at 93–106.

237. *Id.* at 104.

238. *Id.* at 106.

239. *Id.* at 67.

240. *Id.* at 106.

the growth of the creative industries by raising barriers to market entry for foreign works, thereby "increasing incentives for the production of domestic content and reducing foreign competition."[241]

Media piracy researcher Joe Karaganis similarly argues that piracy has hardly dented the fortunes of Hollywood or Chinese movie studios. He points out that despite widespread piracy, China's theatrical market has emerged as the world's second largest, and domestic film production is "comparable in numerical terms to Hollywood."[242] This leads him to ask, "Where is the problem in need of an enforcement solution [in China]? Where is the evidence that piracy is undercutting production?"[243]

B. Theme #2: "Piracy Benefits Creators and Consumers by Lowering Access Barriers to a Wide Variety of Information Goods."

Montgomery argues that endemic piracy promotes economic growth in the domestic Chinese copyright industries in part by giving creators broader access to existing works on which to build.[244] Likewise, professor and filmmaker Jinying Li observes that piracy provides filmmakers with access to a vast array of films otherwise unavailable due to censorship. She chronicles how this has benefited at least one group of Chinese filmmakers: underground, independent digital filmmakers that Li dubs the "D-Generation." D-Generation filmmakers began as movie buffs weaned on pirated DVDs of films from around the world that were unavailable in China through official channels.[245] According to Li, piracy also helps to ensure that consumers can access D-Generation works by providing the filmmakers "with an important platform for distributing [their] works, which otherwise would never be able to reach a large audience."[246] Piracy networks have long served as an important form of domestic distribution for underground Chinese filmmakers, Li observes.[247] Indeed, "the viral infrastructure of piracy, with the density, ubiquity, and flexibility of its 'long tails,' has proven a suitable channel for distributing alternative cinemas that target only a niche audience."[248]

Legal scholars Kal Raustiala and Christopher Sprigman argue in their book, *The Knockoff Economy: How Imitation Sparks Innovation*,

241. *Id.* at 104.
242. Karaganis, *What Everyone Wants*, *supra* note 1.
243. *Id.*
244. *See* MONTGOMERY, *supra* note 1, at 102.
245. Jingying Li, *supra* note 1, at 552–55.
246. *Id*. at 555.
247. *Id.*
248. *Id.* at 556.

that in numerous industries copying fails to stifle innovation.[249] In fact, they conclude, in many cases copying actually *drives* innovation.[250] While their book does not discuss the creative industries in China, Raustiala and Sprigman have argued elsewhere that the lessons from their book are generally applicable to the piracy debates in China.[251] They argue that copying is a critical part of the creative process, so piracy is unlikely to have hurt innovation in China.[252] They acknowledge that piracy allows Chinese copyists to undercut Western competitors, but argue that piracy has other "irresistible benefits" for Chinese copyists, including the acquisition of design and technical skills.[253] The net social benefits, Raustiala and Sprigman conclude, are unmistakable: piracy has resulted in "affordable products and services that have allowed millions of Chinese to enjoy the trappings of a consumer society."[254] Because piracy can elevate the standard of living for many in society, the argument goes, it helps mask the widening income gap in China, which is a major threat to social stability.[255] It is in the Chinese government's interest, therefore, to enforce IP rights laxly or even encourage copying.[256]

C. Theme #3: "Piracy Incentivizes Copyright Owners To Adopt Innovative Business Models."

Montgomery argues that piracy drives business model innovation in China's creative industries by forcing creators to adapt to market conditions and explore new business models that do not rely directly on copyright exploitation. She provides examples from the music industry such as CRBTs[257] and what some refer to as "360 deals,"[258] so-called because they allow labels to partake in all "360 degrees" of an artist's potential income streams. These deals are contractual arrangements in which labels share in artists' revenues beyond record

249. *See generally* RAUSTIALA & SPRIGMAN, *supra* note 2 (canvassing the phenomenon of widespread copying and relevant norms and legal rules in diverse industries, including fashion, cuisine, comedy, and finance, and finding that "even though others can freely copy in these industries, creativity remains surprisingly vibrant").

250. *Id.* at 168 ("In some creative endeavors imitation has little effect on innovation. And in others, imitation can even spark innovation.").

251. *See generally* Raustiala & Sprigman, supra note 1.

252. *Id.* at 26 ("American anxiety and anger over Chinese piracy are misplaced. Copying is not the plague that American business leaders and politicians often make it out to be. In fact, far from always being an enemy of innovation, copying is often a critical part of creativity.").

253. *Id.*

254. *Id.*

255. *See id.* at 26–28.

256. *See id.* at 28.

257. *See* MONTGOMERY, *supra* note 1, at 66–68, 71.

258. *See* Jiarui Liu, *supra* note 9, at 642–43 (noting several shortfalls of the 360 deal model).

sales, such as income from live performances and product sponsorship or endorsement activities. Such deals are a marked expansion of the label-artist relationship in the West, where labels' income from artists was traditionally limited to record sales revenue.

D. Theme #4: "Piracy Is Especially Important for Political Discourse in China Because It Helps Information Goods Circumvent Heavy-Handed State Censorship Policies."

In her analysis of piracy and independent Chinese cinema, Li reasons that piracy helps support democratic discourse. Piracy provides underground filmmakers with the raw materials of preexisting works upon which to build at the front end, and a vast (albeit unremunerated) distribution network at the back end.[259] These provide key elements of "an alternative public sphere structured by pirate cinema" that exists outside the realm of state-sanctioned speech.[260]

E. Theme #5: "Piracy Benefits Foreign Rights Holders in China by Providing Free Advertising and Branding for Their Works."

According to Karaganis, China's creative industries are not the only ones to have benefited from piracy.[261] He argues that in the heavily censored China market, in which only a handful of foreign films are approved for theatrical release on a revenue-sharing basis,[262] affordable and ubiquitous pirated DVDs of Hollywood films have served as "brand development," exposing and acclimating Chinese viewers to Hollywood's brand of filmmaking.[263] It is far from clear that more stringent copyright enforcement would help Hollywood, he notes, as piracy is "part of the distribution, branding, and advertising system [for feature films] — not just a drain on it."[264]

Echoing Karaganis, Raustiala and Sprigman argue that piracy provides a form of advertising for the legitimate product, and that the substitution effect of piracy is overstated since those who can afford to purchase the original usually do.[265] Ultimately, Raustiala and Sprigman argue, Western businesses should take heart since the long-term benefits of piracy also accrue to them: "[T]he wealth created by

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259. *See* Jingying Li, *supra* note 1, at 555.

260. *Id.* at 558.

261. Karaganis, *What Everyone Wants*, *supra* note 1.

262. *See* Part III.B.2.

263. Karaganis, *What Everyone Wants*, *supra* note 1. This echoes Raustiala and Sprigman's argument that imitations "may serve as advertising for brands — advertising that is not only free but arguably more powerful." RAUSTIALA & SPRIGMAN, *supra* note 2, at 199 (emphasis omitted).

264. Karaganis, *Forget it, Jack, It's Chinatown*, *supra* note 1.

265. Raustiala & Sprigman, *supra* note 1, at 28.

piracy has aided the growth of an emerging Chinese middle class, which represents a massive potential pool of new customers for Western firms that sell the genuine article . . . . In the longer term, open copying may build demand for Western innovations."[266]

F. Theme #6: "Foreign Dominance Poses a Greater Threat to China's Cultural Industries than Piracy Does."

Karaganis worries that the real danger to Chinese creative industries is not piracy, but rather overexposure to Hollywood through its box office successes. This could cause China's film industry to become like that of Taiwan, where domestic films have a mere three percent market share.[267] The result in China, according to Karaganis, would be

> a high-end American-dominated market devoted to hero archetypes, violence, and spectacle (*Titanic* and *Avatar*), [with] a domestic industry bifurcated into a state-subsidized sector producing niche films and documentaries, and a commercial sector producing low-end, localized TV series and movies — the telenovelas and slapstick comedies of 21st century China.[268]

The following Part responds to and critiques each of the six themes discussed above.

V. DOES PIRACY HELP OR HINDER CHINA'S FILM AND MUSIC INDUSTRIES?

Part IV introduced six themes that have emerged from recent literature arguing that the harms of widespread copying are exaggerated and that piracy has even provided net benefits to China's creative industries and to Chinese society as a whole. This Part analyzes and responds to each theme in the context of China's music and film industries.

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266. *Id.* at 26, 29.
267. Karaganis, *Forget it, Jack, It's Chinatown*, *supra* note 1.
268. *Id.*

A. Responding to Theme #1: "Piracy Has Not Harmed the Chinese Creative Industries, Because Production Continues Apace and Is Even Growing."[269]

Despite rampant piracy in China, Chinese and foreign studios invest millions of dollars in the production of new films with China's theatrical market in mind. Independent and grassroots filmmakers in China continue to produce films as well, many with no hope of domestic theatrical distribution. Similarly, large domestic and international record companies invest substantial sums in the production of new music, and amateurs continue to write songs, mostly for free distribution on Youku and other Chinese video sites.

Why do people continue to invest in producing these works despite the high-piracy environment? One simple but incomplete answer is that, as demonstrated in Part III, even in China's suboptimal enforcement environment, theatrical distribution can be lucrative for the right films, and live concerts and product endorsements can be lucrative for music superstars. The question itself, however, assumes an overly simplistic cause-and-effect relationship between copyright incentives and the quantity of creative production. The creative industries exist within a complex system of interacting components and socioeconomic variables,[270] in which copyright is just one factor affecting the profitability and quantity of content production.[271] More to the point, Robert Merges argues that it is fruitless to ask whether or why people create even in the absence of extrinsic motivation.[272] Some artists are driven by intrinsic motivations, but that reveals little about whether copyright has social value. Instead, a more pertinent and constructive question is, "[W]hat conditions will surround and shape the work of creative persons, and will those conditions allow the creators to fully flourish — to create works of the highest quality they are capable of?"[273] The question thus phrased assumes that supporting and enabling creators, not just motivating production, is a key copyright objective. The following Section argues that it is.

1. The Importance of Supporting a Professional Class of Content Creators

Myopically focusing on the production volume of creative works unduly narrows the focus of the inquiry. When evaluating the effects of piracy, we should inquire foremost into the health and stability of

269. *See supra* Part IV.A.

270. *See generally* Michal Shur-Ofry, *IP and the Lens of Complexity*, 54 IDEA 55 (2013).

271. *See id.* at 94–101.

272. ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY 247 (2011).

273. *Id.*

the creative industries and their ability to support a professional class of creators. Well-funded creative industries that support a professional creative class are key to assuring abundant production of high quality cultural works. Professor Merges argues that robust IP regimes (and their effective enforcement) ensure to creators two things: *reward* — that is, fair compensation for their efforts, and *autonomy* — that is, the opportunity to develop their craft and pursue a chosen livelihood as creative professionals.[274] A copyright system that provides sufficient rewards and autonomy ensures that the most talented creative individuals in society enjoy the economic support and freedom to hone their craft and, in return, spend their professional lives maximizing their creative potential and publicly disseminating the fruits of those efforts. This state of affairs is not only good for creators. It benefits any society that values high quality cultural production and an endless wellspring of high quality works on which to build new works and shared cultural meanings.[275] To the extent that a creative work's popularity is a measure of its social and cultural value, then professionally produced content is the most valuable, even in (indeed, especially in) this age of user-generated content and digital distribution.[276]

An economically robust creative ecosystem also promotes creative flourishing by supporting professionals who perform functions that are necessary but peripheral to creative work, thereby enabling creators to focus on creating. These support professionals are sometimes called "channel partners" because they perform critical channel functions such as administration, provision of financial support and advances, marketing, accounting, distribution, and sales — functions that creators often cannot perform, or cannot perform as well, themselves.[277] When piracy erodes the economic support for channel partners, creators must assume the burden of these peripheral functions, and their creative productivity may suffer. Distraction can be costly: even well-known "DIY" creators have ultimately signed deals with major media companies because they found performing channel functions themselves was too difficult or detrimental to their artistic careers.[278] This argument is not a defense of the exploitative practices of

274. *Id.* at 195. Of course, autonomy also means that creators are free from having to rely on state patronage — an important consideration in China, as addressed below in Part V.D.

275. *Id.* at 223 ("[W]ithout high-quality contemporary products in accessible form, there would be a lot less material out of which we can construct our shared culture. This is why I see [creative] professionals as so important.").

276. *See* ANITA ELBERSE, BLOCKBUSTERS: HIT-MAKING, RISK-TAKING, AND THE BIG BUSINESS OF ENTERTAINMENT 150–64 (2013) (presenting data and case studies that demonstrate that professionally produced blockbuster content is far more popular than niche, "long-tail," or user-generated content, and that the trend of consumer preference for blockbuster content is intensifying, not diminishing).

277. *See id.* at 191–92.

278. *See id.* at 193–98. Elberse provides case studies, including that of author Amanda Hocking, who achieved fame and fortune by selling independently published e-books direct-

some media companies. It is, rather, recognition that an economically strong creative ecosystem, even if flawed, provides far better conditions for creative flourishing than a creative ecosystem impoverished by piracy.

Advances brought about by digital technologies are unlikely to compensate for the economic losses caused by piracy. While digital technologies increasingly enable creators to produce higher-production-value works more cheaply and to market and distribute them directly to consumers, technology cannot replace all the channel functions and partners that help ensure skilled creators have the time and focus to master their craft and produce high-quality works. Further, while technology can reduce costs, it cannot eliminate the substantial expense of producing and commercializing high-production-value content,[279] or the substantial costs of living for those involved.[280]

2. The Importance of Revenue Stream Diversity

China provides an instructive example of how copyright performs important functions beyond merely incentivizing production. One deleterious consequence of piracy that is often overlooked is its effect on revenue stream diversity. Why are diverse revenue streams important to producers? After all, film is a prime example of an industry that grew for more than half a century on a single revenue stream — box office receipts. Revenue stream diversity through home video formats is a recent phenomenon.

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ly to consumers on Amazon. However, she subsequently signed a major publishing deal because performing all the channel functions herself meant "I hardly have time to write anymore, which sucks and terrifies me." *Id.* at 196. Trent Reznor of the band Nine Inch Nails is another famous artist who employed a high-profile "DIY" strategy for several years before deciding that he was unable to adequately perform the channel functions alone. Marc Hogan, *How Radiohead Inspired Trent Reznor's Return to Major Labels*, SPIN, Oct. 15, 2012, 9:47 AM ET, http://www.spin.com/articles/trent-reznor-david-byrne-major-labels-destroy-angels-radiohead/.

279. *See* Ted Sichelman, *Taking Commercialisation Seriously*, 33 EUR. INT. PROP. REV. 200 (2011) (arguing that IP regimes should take into account the investment not only in creation of IP but also in its commercialization); Adam Mossoff, How Copyright Drives Innovation in Scholarly Publishing (Apr. 12, 2013) (unpublished manuscript) (on file with George Mason University of Law), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2243264 (arguing that current IP policy focusing on incentivizing the production of copyrighted works fails to account for publishers' significant investment in innovative manners of commercialization and distribution).

280. *See* Mark Schultz & Alec Van Gelder, *Creative Development: Helping Poor Countries by Building Creative Industries*, 97 KY. L.J. 79, 116 (2008) ("Technology is greatly changing the music business, but . . . [m]usicians still need to earn a living. Production costs have declined, but they will always exist. Distribution and marketing costs have declined, but they will always exist. Food, shelter, and other necessities of life needed by those who produce music . . . are still costly.").

The answer lies in the non-rivalrous nature of works of authorship. Because creative works can be consumed — and monetized — in a theoretically unlimited variety of formats and locales, the health of a creative industry ultimately depends on its ability to effectively monetize works for each market in which they are consumed. In Professor Paul Goldstein's formulation, the aim of copyright is to "connect [] authors to their audiences," and the best prescription for doing so "is to extend rights into every corner where consumers derive value from literary and artistic works."[281] The point of this formulation is not to argue that copyright rights should be absolute, or that every use should be monetizable.[282] Rather, Professor Goldstein's approach suggests a general recognition that audience consumption habits and technologies change, and that a core function of copyright is to create economic assets by which creators can derive value from each new market or use. For copyright to effectively support a professional creative class, the law must be able to follow works into the markets in which they are consumed.

The United States film industry grew for decades on a single revenue stream because the cinema was the only venue at which audiences viewed films. Of course, there was leakage even at that time,[283] but the industry was still able to capture most of the revenue.[284] When television began to broadcast movies into the home, a new point of consumption emerged, but copyright owners were able to capture the value through licensing fees. The advent of home video recording threatened to shift the landscape by empowering consumers to record, collect, and share copies of movies. The movie industry responded by seeking to eliminate or control the new technology.[285] The industry lost the legal battle, but it figured out how to capture a great deal of the value at this new point of consumption through home video sales.[286] The Internet presents a new front, and it remains to be seen how or whether value can be captured at its numerous points of consumption.

What happens when copyright owners are unable to monetize their works at the points where consumers derive value from them? The experience of the film and music industries in China illustrates three ways in which the diminishment of potential revenue streams

281. PAUL GOLDSTEIN, COPYRIGHT HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX 216 (Stanford University Press 2003).

282. *Id.* at 214.

283. *See generally* KERRY SEGRAVE, PIRACY IN THE MOTION PICTURE INDUSTRY 25–102 (2003) (canvassing the many ways in which films were pirated from the silent era through the introduction of the consumer VCR).

284. *See id.* at 179 ("By the mid-1970s Hollywood appeared to have piracy under control. Of course, it had not been eliminated but it was seemingly a relatively minor problem.").

285. *See* Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417 (1984).

286. *See* SEGRAVE, *supra* note 283, at 103–06.

harms producers: (1) monetization opportunities for smaller and independent producers are drastically reduced, (2) market signals sent to producers are reduced and distorted, and (3) producers are disproportionately exposed to the idiosyncrasies of peculiar markets and exploitation by intermediaries.

a. Reduced Revenue Stream Diversity Diminishes Monetization Opportunities for Smaller and Independent Producers

Fewer revenue streams mean fewer monetization opportunities for all market entrants. In the film context, theatrical distribution is a limited resource for which studios compete fiercely because there are no other comparable monetization options. While the Chinese box office may be booming, it is also a winner-take-all market in which a handful of big budget Hollywood and domestic films dominate box office availability and take the lion's share of revenue each year.[287] This makes the paucity of well-developed alternative revenue streams that much more damaging to smaller domestic producers who, unlike Hollywood studios, typically cannot soften the piracy blow with substantial revenues from other markets.[288] Legitimate online distribution has become an increasingly important source of revenue for filmmakers since major online video portals began to effectively reduce piracy and license videos, providing the first path for filmmakers to capture value from that medium of consumption.[289] However, video portal payouts still trail far behind box office revenues.[290]

It is tautological that a reduction in revenue streams leaves producers with fewer options for monetizing their works. To at least one

287. *See Entgroup Consulting, Top 10 Characteristics of China Film Industry in 2011 I*, ENTGROUP CONSULTING (Dec. 10, 2012, 14:17, Beijing Time), http://english.entgroup.cn/views_detail.aspx?id=1275 ("In 2011 . . . 16% of all movies released [in Mainland China] accounted for 70% of box office revenue. The polarization of the Chinese film market . . . concentrating in well-funded, large-scale domestic movies and imported Hollywood films, result[s] in a severe imbalance in the Chinese film industry.")

288. Of course, for many Chinese independent films made without state approval, limited foreign distribution is one of the few options for monetization or exposure — along with unofficial distribution outlets in China, such as cafes, small film clubs and societies, and Internet sites offering free downloads of independent films. *See* Reed Johnson, *China's Cinematic Revolution*, L.A. TIMES, Apr. 3, 2011, http://articles.latimes.com/2011/apr/03/entertainment/la-ca-china-film-20110403.

289. *See supra* Part III.B.1.b.

290. *See supra* Part III.B.1.b. The amount film producers can earn from online licensing is still dwarfed by box office revenues. To get a rough sense of online video licensing fees versus box office royalties, assume video websites' aggregate licensing payouts, the amounts of which are not all publicized, totaled $350 million between 2009 and 2012 — a nontrivial sum, to be sure. *See, e.g.*, YOUKU TUDOU INC., 2012 ANNUAL REPORT, *supra* note 106, at 74 (reporting the online video market leader's content-related expenditures during that period of approximately $170 million, including licensing fees, personnel costs, and in-house content production costs). That amount equals fifteen percent of copyright owners' likely China box office share during that span.

observer, however, the hundreds of Chinese films each year that never see theatrical release are evidence of *over*production.[291] It is puzzling to conclude that the China film market is saturated when over ninety percent of legitimate film revenue derives from one form of distribution — theatrical — in a nation in which 12,000 screens serve a potential audience of over one billion. If the number of films exceeds available distribution channels, the problem, it seems, is not that there are too many films but rather too few legitimate distribution channels.[292] At the very least, there is doubtless a market for more than the three hundred films released in Chinese theaters annually. Indeed, evidence from China's online streaming video market indicates that a new, legitimate distribution channel can support the development of up-and-coming filmmakers and spark the production of new films for which there is a sizable audience.[293]

b. Reduced Revenue Stream Diversity Distorts Market Signals Sent to Producers

When Chinese audiences purchase or download pirated works, producers are disconnected from those choices, undermining copyright's market signaling function. When this happens, it "deprive[s] producers of the signals of consumer preference that trigger and direct their investments" in the production of new works.[294] In the music industry, the market signals likely skew producers toward producing works that result in popular ringback tones but are not necessarily the best music by any other measure. In the film industry, where box office receipts dominate, the market signals are distorted in favor of one segment of the population — theater-going urbanites, who tend to be relatively young and wealthy — and are only meaningful to the smaller subset of producers that actually achieve theatrical distribution. As a result, feature filmmakers may seek to produce films for that demo-

291. Karaganis, *What Everyone Wants*, *supra* note 1 ("[T]he bigger problem for studios in both China and the US is probably *overproduction* . . . . For all the investment in production, only around a third of Chinese films saw domestic release in 2012. For Hollywood, the new 34-film quota may be an optimal solution that keeps attention focused on its big bets.")

292. *See* Cecily Liu, *Window of Opportunity on the Entertainment Stage*, CHINA DAILY, Aug. 5, 2013, 7:18, http://www.chinadaily.com.cn/business/2013-08/05/content_16870476.htm (quoting PricewaterhouseCoopers global entertainment and media analyst Marcel Fenez as saying, "In the Chinese market, the demand for foreign films is much higher than 34. There are definitely opportunities for foreign players, but they will have to work with Chinese partners").

293. *See, e.g.*, Isabella Tianzi Cai, *New Hit Web Movie Marks Chinese Cinema's Online Explosion*, DGENERATE FILMS (Apr. 12, 2011, 6:54 AM), http://dgeneratefilms.com/critical-essays/new-hit-web-movie-marks-chinese-cinemas-online-explosion (discussing *Old Boys*, a popular web film jointly presented by China Film Group and Youku and exclusively distributed on Youku.com, which was watched over 31 million times in the first six months after its release).

294. *See* GOLDSTEIN, *supra* note 281, at 146.

graphic with hopes of achieving theatrical distribution, when but for piracy a far broader market would signal the need to invest in a greater variety of works. Licensed Internet distribution of online video and music is beginning to fill this gap, particularly because views and downloads are tracked and quantifiable. But market signals are only helpful if online videos generate revenue for copyright owners. Signaling is just one half of the equation, after all — there must also be sufficient promise of revenue to secure the financial backing that enables investment in new, high-quality productions.

c. Reduced Revenue Stream Diversity Disproportionately Exposes Producers to the Idiosyncrasies of Peculiar Markets and Exploitation by Intermediaries

While the effects of piracy may be palliated in box office boom times, the fact that the film industry relies almost exclusively on box office revenue renders the industry extremely vulnerable to fluctuations in the performance of that dominant revenue stream. This vulnerability is largely attributable to the high piracy rate, which deprives film copyright owners of significant potential income from aftermarket sales.[295] Such sales could insulate domestic filmmakers from inevitable drops in box office attendance (nothing booms forever), thus helping to ensure continued production and the overall health of the industry. It can also help soften the blow of capricious actions by key intermediaries, such as when China Film Group recently decided to stop paying box office revenues to foreign studios pending the resolution of a tax dispute.[296]

The Nigerian film industry provides an object lesson in the dangers of relying solely on theatrical revenue. In the 1980s, an economic downturn, rampant crime, and problems plaguing celluloid film production forced theaters to close.[297] Without revenue the film industry

295. *See supra* Part III.B.1.a.

296. McClintock & Masters, *supra* note 89. It is true that disproportionate exposure to the actions of key intermediaries is as much a result of China's information control regime, which vests China Film Group with exclusive film importation authority, as it is a result of piracy. But different agencies have authority for different segments of the market — DVD importation and distribution is overseen by GAPP, for example. So diversified, robust revenue streams, even in China, would help in this regard.

297. *See* Patrick J. Ebewo, *The Emerging Video Film Industry in Nigeria: Challenges and Prospects*, 59 J. FILM & VIDEO 46, 46 (2007); Andrew Rice, *A Scorsese in Lagos*, N.Y. TIMES, Feb. 26, 2012, at MM26, *available at* http://www.nytimes.com/2012/02/26/magazine/nollywood-movies.html ("[In] the early 1990s . . . [Nigerian m]ovie theaters were closed because no one wanted to venture into the dangerous streets at night."). Thanks to Sean Pager for pointing out this instructive example.

collapsed,[298] to the point where as few as two Nigerian films were produced each year.[299]

China's mobile music market throws the piracy and revenue diversity problem into even sharper relief. Recall that ninety percent of the industry's anemic annual revenue derives from a single source: mobile music, which is largely comprised of CRBT revenue.[300] On top of that, the dominant mobile music distributor, China Mobile, is a state-controlled monopoly occupying two-thirds of the Chinese mobile market.[301] To its suppliers — music companies — China Mobile is therefore a monopsonist.[302] As is generally the case with monopsonies, the supplier is exposed to a significant risk that it cannot extract the fair value of its contribution to the service. In theory, copyright owners could negotiate higher royalty rates and exclusive licenses with competing service providers. However, this is not a realistic option where one service provider controls a large share of the market. Regardless, copyright owners likely would have little negotiating leverage even among competing service providers because consumers likely deem CRBTs to be a luxury value-add, not a primary consideration when selecting a service provider. It is unlikely that many prospective subscribers would sign up with one mobile provider over another based on CRBT song selection rather than considerations such as price or coverage.

The difference between China's music and film industries is one of degree rather than kind. Just as China's film industry's fortunes rise and fall with the idiosyncrasies of theatrical distribution, the recording industry's fortunes are inextricably tied to the idiosyncrasies of the CRBT format. If and when the CRBT format grows stale for consumers, ninety percent of music companies' income is at risk — regardless of the CRBT distributor.[303] The effect of piracy reducing the number of available revenue streams is therefore doubly damaging to the music industry, whose income is tied to the whims of a single revenue-generating format that is controlled by a monopsonist. If music companies could diversify their revenue by effectively exploiting their copyrights in China — through monetized online downloads, sub-

298. *See* Ebewo, *supra* note 297, at 46.

299. Sean A. Pager, *Folklore 2.0: Preservation Through Innovation*, 2012 UTAH L. REV. 1835, 1853 (2012).

300. *See supra* Part III.C.1.c.

301. Christina Lo, *China's Mobile Subscribers up 1 Pct at 1.13 Bln in Feb*, REUTERS (Mar. 20, 2013), http://www.reuters.com/article/2013/03/20/china-mobilesubscribers-idUSL4N0BK3J120130320 (reporting China Mobile's subscriber base was 720 million in the first quarter of 2013, approximately sixty-four percent of the total 1.13 billion wireless subscribers in China).

302. A monopsony exists when there is only one buyer of a well-specified good or service. ROGER D. BLAIR & JEFFREY L. HARRISON, MONOPSONY IN LAW AND ECONOMICS 41 (2010).

303. *See* Tan, *supra* note 71.

scription streaming, CD sales, and so on — they might be in a better position to weather fluctuations or downturns in the fortunes of the CRBT format. Equally importantly, diverse revenue streams might provide music companies with the leverage and financial fortitude to negotiate a better deal with mobile service providers or else remove their content altogether. Agreements such as the search engine licensing deals discussed in Part III.C.1.a above are a positive first step toward counterbalancing mobile music revenue, at least for the international major record labels.[304] However, to forgo, or credibly threaten to forgo, mobile music revenue, record labels must earn far more from such licensing deals than they presently do.

Finally, there is the fundamental issue of fairness. Why should others derive the vast majority of the benefits of the record label's investment in the production of the music? This highlights the point that a robust copyright system helps ensure that creators reap the fair rewards of their efforts by creating markets for diverse uses of creative works. The varied revenue streams that result not only enable copyright owners to recoup their investment, but also provide insurance and leverage against exploitation.

B. Responding to Theme #2: "Piracy Benefits Creators and Consumers by Lowering Access Barriers to a Wide Variety of Information Goods."[305]

Piracy doubtless increases public access to creative works, which leads to a short-term increase in welfare for consumers and creators of prospective works. This can be particularly helpful to creators, who draw inspiration, memes, themes, style, and countless other ideas from pre-existing works. There are two problems with the argument that piracy increases creative output in China by increasing access, however: (1) it erroneously assumes that legitimate sources of creative works are not readily available, and (2) it prioritizes short-term but lesser welfare gains over long-term, greater welfare gains.

1. Legitimate Sources of Creative Works Are Readily Available in China.

In reality, legitimate on-demand music and video have been readily available at a reasonable price for several years in China. It is true that censorship limits the availability of musical and audiovisual works through official channels.[306] However, even this problem is exaggerated. For several years, online services that often reside in the

304. *See supra* Part III.C.1.a.
305. *See supra* Part IV.B.
306. *See supra* Parts III.B.2 & III.C.2.

interstices of SARFT and MOC content regulations have provided licensed access to a surprisingly broad array of music and audiovisual content.[307] On the music front, legitimate domestic music services have been around for years, including Top100.cn, which launched a music subscription service in 2006, and 9Sky, which like Top100.cn had a large catalog of Chinese and international artists and charged a mere $3 per month for unlimited access.[308] Top100.cn eventually partnered with Google China to provide a legitimate ad-supported music download service that was free to consumers. However, neither Top100 nor 9Sky could ultimately compete with free unauthorized downloads, so Top100 was shuttered and 9Sky, while still operational, has become a marginal player in China's online music space.[309] Other domestic services have stepped in to fill the void, including domestic MP3 search services Baidu Music and Sogou, and domestic streaming services like QQ Music, Douban.fm, and Xiami,[310] which was recently acquired by Chinese e-commerce giant Alibaba.[311] While there is still some ambiguity about how much of the music in their catalogs is fully licensed, these sites are continuing to strike deals with music content owners and so at the very least are moving in the direction of legitimacy.[312] On the independent music front, since 2008 WaWaWa has made licensed music available from a vast catalog of

307. *See supra* Parts III.B.2.d. & III.C.2.

308. *See* Eric Priest, *Why Emerging Business Models and Not Copyright Law Are the Key to Monetising Content Online*, *in* COPYRIGHT LAW, DIGITAL CONTENT, AND THE INTERNET IN THE ASIA-PACIFIC 119, 133 (Brian Fitzgerald et al. eds., 2008). Even digital rights management ("DRM") has rarely been a sticking point for online content in China. For example, 9Sky reportedly did not generally wrap its digital music files in DRM, although its agreements with the international major labels apparently required it to do so. *Id.* at 10.

309. *See* Michael Kan, *Google Yanks Free Music Service in China,* PCWORLD (Sept. 21, 2012, 6:54 AM), http://www.pcworld.com/article/2010313/google-yanks-free-music-service-in-china.html (reporting that Google ended its partnership with Top100.cn because their music download service "wasn't popular enough"); Tracey Xiang, *How's the Reconstruction of China Digital Music Market Going?*, TECHNODE (Sept. 17, 2013), http://technode.com/2013/09/17/hows-the-reconstruction-of-china-digital-music-market-going/ (reporting that Top100.cn shut down one year after Google pulled out of the partnership); Ed Peto, *Music Ally Report 337 — China's Great Digital Leap Forward*, MUSIC ALLY (Mar. 5, 2014), http://musically.com/2014/03/05/music-ally-report-337-chinas-great-digital-leap-forward/ (discussing the emergence of "a handful of strong, ad-supported streaming services" in the Chinese online and mobile app music space, listing QQ Music, Kugou, Kuwo, Baidu Music, Xiami, Douban, Netease, and Nokia's MixRadio, but failing to list 9Sky among the major players in this space).

310. *See supra* Part III.C.1.a.

311. *See* Alexander C. Kaufman, *Alibaba Buys Xiami, Major Music Streaming Site, in Next Step To Take Over China's Music Industry*, INT'L BUS. TIMES (June 4, 2013, 9:43 AM), http://www.ibtimes.com/alibaba-buys-xiami-major-music-streaming-site-next-step-take-over-chinas-music-industry-1290331.

312. *See supra* Part III.C.1.a.

Chinese and foreign independent artists and labels for a mere $0.03 per song.[313]

On the video front, more recently thousands of licensed domestic, regional, and international films and TV shows have been made available on Chinese video sites such as Youku, Tudou, Tencent Video, and Sohu, some under an ad-supported model and others as "premium" content behind a paywall that charges as little as 5 RMB (less than $1) per view.[314] Youku alone has licensed more than 3,600 television shows, and more than 4,500 domestic and foreign films.[315] Since the websites' licensing deals for foreign content do not involve theatrical distribution, these films are not subject to the thirty-four-film import quota.[316] In addition, websites such as Youku feature many user-generated videos of increasingly high quality.[317] In short, the argument that piracy is required to provide reasonable access to a large amount of video and music content in China is wrong. While plenty of content remains available through piracy, over the past decade Chinese creators have had access to a multitude of legitimate, reasonably priced sources.

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313. *See* Erik Rostad, *WaWaWa*, EPR CREATIONS (Aug. 5, 2008), http://www.eprcreations.com/wawawa/; WAWAWA, http://www.wa3.cn/home.htm (last visited Feb. 10, 2014).

314. *See* Jonathan Landreth, *Youku.com Buys Online Rights to 'Inception' for China*, HOLLYWOOD REP. (Jan. 24, 2011, 6:34 PM), http://www.hollywoodreporter.com/news/youkucom-buys-online-rights-inception-68345 ("[Youku is charging] customers of its paid, advertisement-free video-on-demand service 5 yuan ($0.75) each to see the global blockbuster [Inception]."); SOHU.COM, SOHU.COM 2012 ANNUAL REPORT 8–9 (2013) (reporting that the company's "extensive and comprehensive content library comprises licensed high definition popular television dramas, variety shows, in-house produced content, and user-generated content," and that while its "online video revenues are primarily derived from advertising services," it offers "selected premium content such as high definition movies, educational content, and documentaries on [an] advertisement-free paid channel"); TENCENT, TENCENT HOLDINGS LIMITED 2012 ANNUAL REPORT 9, 18 (discussing monetization of the company's video platform through advertising and the "significant" content costs the company incurred in 2012); Steven Millward, *Tencent: Our Video Site Is Now China's Biggest, Ready To Charge for Hollywood Movies*, TECHINASIA (Dec. 21, 2012, 11:15 AM), http://www.techinasia.com/tencent-video-site-hollywood-content/ (noting Chinese web giant Tencent's investment in video content licenses and its experimentation with a premium video-on-demand service).

315. *See* YOUKU TUDOU INC., 2012 ANNUAL REPORT, supra note 106, at 40.

316. *See* Ross, *supra* note 121 and accompanying text.

317. *See* Press Release, Youku Tudou, Inc., Mobile Video Contest Co-Hosted by China Mobile and Youku Tudou Breaks New Records, Generating More than 100 Million Yuan in Mobile Box Office Sales (Jan. 8, 2014), http://ir.youku.com/phoenix.zhtml?c=241246&p=irol-newsArticle&id=1888991 (discussing amateur filmmaking competitions hosted by Youku Tudou that receive tens of thousands of submissions annually and hundreds of millions of views, designed to identify and nurture high quality user-generated content).

2. Piracy's Long-Term Harms to Creators Outweigh Its Short-Term Benefits.

More importantly, if this Article's contention in response to Theme #1 above is correct — that the key inquiry concerning the role of copyright should be whether or not the creative industries are positioned to support a professional class of creators — then the social welfare gains from piracy-enabled access are short-lived. The more meager the returns on a creative industry's investment in new works, the lower the likely number of high production value, high quality works the industry will produce.

The respective trajectories of the Chinese movie and music industries are instructive in this regard. A decade ago, piracy plagued both industries and neither had the means to monetize their works on a large scale. Revenues from both industries at that time were roughly similar — about $200 million for the music industry in 2003,[318] compared to about $250 million in annual box office revenues.[319] Then the film industry's fortunes began to change dramatically. More investment in distribution infrastructure — modern theaters — coupled with an increase in the disposable income of Chinese consumers led to the box office boom discussed in Part III.B.1, above. Now film industry revenue stands at more than $3 billion annually.[320] By contrast, over the same decade, Chinese music industry revenues have declined by more than $100 million.[321] In fact, the only reason that recorded music revenue has not collapsed altogether is that by happy circumstance, Chinese consumers like ringback tones — unlike their American counterparts[322] — and mobile companies direct a tiny percentage of CRBT revenue to the content owners.[323] The key difference between the film and music industries is that the former benefits from theatrical distribution, a scalable, exclusion-based monetization model that is moderately resistant to piracy, while the latter does not. As argued in Part V.A.2.c, above, a film industry dominated by theatrical revenue fails to capture a great deal of value from non-theatrical consumption, to the long-term detriment of the industry. But the rapid simultaneous growth of theatrical revenue and the film industry does demonstrate the direct link between increased monetization and increased investment in production.

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318. IFPI, THE RECORDING INDUSTRY COMMERCIAL PIRACY REPORT, *supra* note 171, at 8.

319. *See* Priest, *supra* note 9, at 798.

320. McClintock, *supra* note 84.

321. *Recording Industry in Numbers 2012*, *supra* note 173, at 62.

322. *See*, *e.g.*, Sandhva Raman, *Ringback Tones a Failure in the United States — But Why?*, FIERCE MOBILE IT (June 6, 2011), http://www.fiercemobilecontent.com/special-reports/ringback-tones-failure-united-states-why.

323. *See* Yang Yang, *supra* note 212.

The increase in Chinese box office revenue has been a boon for Hollywood, but the biggest beneficiary has been the domestic film industry. With resources to invest, China's movie industry is putting out more films of higher quality than ever before in its history.[324] In 2011, 791 domestically produced films were officially released in China, earning a total of $1.11 billion — 53.6% of 2011 ticket sales — with twenty films earning more than $16 million.[325] This total included many smaller domestic productions, a number of which competed well against foreign blockbusters.[326] One locally-produced hit, *Love Is Not Blind*, cost a mere $1.6 million to produce, but grossed $43 million.[327] Another low-budget comedy, *Lost In Thailand*, trounced numerous Hollywood blockbusters, including *Skyfall* and *The Hobbit: An Unexpected Journey*, at the Chinese box office.[328] In the first quarter of 2013, domestically produced films earned twice as much as imports.[329] Given the extraordinary popularity of online music in China,[330] China's domestic music industry could have the potential to experience a similar boom but for the lack of a similar exclusionary monetization model. Because the music industry's principal means of monetization, other than the CRBT model, is through exploitation of copyrights, piracy is almost singularly to blame for the industry's present woes.[331]

C. Responding to Theme #3: "Piracy Incentivizes Copyright Owners To Adopt Innovative Business Models."[332]

Regarding the claim that piracy is driving business model innovation in China, current circumstances do not present a ringing en-

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324. *See*, *e.g.*, Julie Makinen, *China's Movie Box Office Surges 27% to $3.6 Billion in 2013*, L.A. TIMES, Jan. 1, 2014, http://articles.latimes.com/print/2014/jan/01/business/la-fi-ct-china-box-office-20140102 (quoting Asia film industry expert's observation that "[a]s Chinese filmmakers continue to refine their craft, local audiences are finding relatable stories packaged together with high-production-quality content").

325. Coonan, *supra* note 84.

326. *See id.*

327. *Id.*

328. *See* Clarence Tsui & Karen Chu, China Box Office: Local Films Rule First Quarter of 2013, HOLLYWOOD REP. (Apr. 1, 2013, 9:19 AM), http://www.hollywoodreporter.com/news/china-box-office-local-films-431967.

329. *Id.*

330. *See supra* notes 163–164 and accompanying text (noting that music is the third most popular network application in China, with more than seventy-seven percent of Chinese netizens consuming music online).

331. It is worth noting that music executives decry several factors besides piracy that have led to stagnation and decline in the Chinese music industry, such as the inequitable distribution of profit by distributors, including mobile operators, to copyright owners. *See* Yang Yang, *supra* note 212. As this Article shows, however, piracy is the primary root of these evils as well, since it strips music copyright owners of the economic leverage to renegotiate and enforce their deals with distributors. *See supra* Part V.A.2.c.

332. *See supra* Part IV.C.

dorsement of piracy. There is scant business model innovation in the movie industry, which relies almost entirely on its oldest form of monetization: box office revenue. While copyright owners are licensing their works to online streaming services, there is little evidence that these deals are driven by piracy. Indeed, this form of monetization is made possible because the major online video portals have increasingly shunned piracy and purchased licenses for the films and television programs they distribute.[333] Perhaps piracy has hastened the transition to online streaming for many copyright owners, but the shift was inevitable as TV distribution is far more restricted than online distribution and Chinese are increasingly consuming their content online.

Piracy has forced record companies worldwide to scramble in an attempt to diversify their revenue streams. So far, however, the results have been underwhelming in China. Music copyright owners have experimented online with free, ad-supported MP3 downloads. The experiment failed in its first incarnation, a music service operated by Google and Chinese online music retailer Top100.cn.[334] Record labels have also supported online streaming, which is growing in popularity but is not generating significant revenue.[335] Labels did embrace mobile music and CRBTs early on, but it is unlikely that piracy was the reason. CRBTs are provided through a paid service that charges recurring monthly fees,[336] so the labels would have embraced this promising, steady revenue stream even in a low-piracy environment. Labels also routinely employ "360 deals" to partake in artists' live performance revenue and sponsorships.[337] As with box office revenue in the film industry, however, live performance and patronage are the oldest forms of music revenue and hardly smack of innovation.[338]

In short, there is little evidence that piracy has driven the adoption of new business models in the film and music industries, save perhaps hastening the inevitable move to cloud-based distribution. This benefit is hardly worth the harsh toll that piracy has exacted on China's creative industries. Indeed, it is because of piracy that labels have had so little leverage to enforce their agreements with mobile providers and maximize the CRBT revenue stream opportunity.

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333. *See supra* Part III.B.1.b.
334. *See* Kan, *supra* note 309, and accompanying text.
335. *See supra* Part III.C.1.a.
336. *See supra* note 207 and accompanying text.
337. *See supra* note 258 and accompanying text.
338. *See* Schultz, *supra* note 72, at 750.

D. Responding to Theme #4: "Piracy Is Especially Important for Political Discourse in China Because It Helps Information Goods Circumvent Heavy-Handed State Censorship Policies."[339]

Because of China's pervasive media censorship rules, many foreign and domestic films and songs have no legitimate distribution channel in China. The only way these works can be accessed in China is through illegitimate channels — in other words, piracy. Moreover, because both copyright and censorship rules limit access to information goods and involve questions of their "legality," the line between copyright enforcement and censorship often blurs. It is not uncommon, therefore, for official raids under the auspices of anti-piracy to target banned works as well.[340] The nexus between censorship and copyright raises profound issues of free expression and social welfare, and is the strongest argument that piracy improves social welfare in China.

However, copyright skeptics overestimate the role of piracy as a vehicle for free expression. Piracy does provide the public with access to a far greater variety of works and thematic content than official media sources. But piracy is far from a censorship-free safe zone. One is unlikely to find the average DVD street vendor selling hardcore pornography or video documentaries of the Tiananmen massacre, for example. Chinese websites that host unlicensed copyrighted content are even more likely to avoid or remove banned or overtly sensitive political content.[341] Purveyors of pirated works are not free speech activists; they are businesspeople.[342] Pirates are bound to self-censor as much as anyone who wants to stay in business.

More importantly, copyright skeptics underestimate the positive effect of the market on free speech in China. An inherent tension exists in China's efforts to privatize sectors of the economy once dominated by state enterprises,[343] including the media sector.[344] On the one hand, state information control remains a bedrock principle of Chinese Communist Party rule. On the other hand, as the media sector

339. *See supra* Part IV.D.

340. *See, e.g.*, Stephen McIntyre, *The Yang Obeys, but the Yin Ignores: Copyright Law and Speech Suppression in the People's Republic of China*, 29 PAC. BASIN L.J. 75, 125 (2011).

341. Clifford Coonan, *China's Censors Clamp Down on Booming Internet Video Sector*, HOLLYWOOD REP. (Mar. 20, 2014, 12:48 PM PDT), http://www.hollywoodreporter.com/news/chinas-censors-clamp-down-booming-689865 (noting that Chinese officials are strengthening the censorship review process for video content distributed online, and that to date video websites have been "doing their own internal censorship").

342. *See* MONTGOMERY, *supra* note 1, at 54 (observing that commercial piracy in China is "wholly driven by profit").

343. *See generally* BARRY NAUGHTON, THE CHINESE ECONOMY: TRANSITIONS AND GROWTH 91–98 (2007).

344. *See* Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 109–13.

becomes increasingly privatized, it becomes more profit-centered and market-oriented.[345] Copyright and First Amendment scholar Neil Weinstock Netanel argues that copyright has a "structural function" in democratic societies that is central to its role as an "engine of free expression":

> Copyright does not serve merely to attain a desired quantity of creative expression. It also underwrites a particular type of speech and speaker. Copyright supports a market-based sector of authors and publishers, those who look to paying audiences (and advertisers) [rather than to government subsidies or elite patronage] for financial sustenance. It fosters those sustained works of authorship that would unlikely be created if not for the opportunity to market copies and other forms of access. [346]

According to Netanel, this function persists even in an era of highly commercial mass communication.[347] China is far from a democratic society, but even in the shadow of authoritarianism, public exposure to commercial media "tends to erode passive acceptance of authoritarian power relations."[348]

To see how the shift toward media privatization can soften censorship around the edges, one need only look to the impetus for instituting the foreign film quota in the 1990s. Most Westerners focus on the limiting effects of the quota, but it is interesting to consider why an authoritarian state would have established a quota to ensure Western blockbusters are screened in theaters where the usual fare had been propaganda films. Unsurprisingly, blockbusters were imported to increase cinema attendance, bolstering China's film sector.[349]

The development of an economically robust and increasingly private media sector undergirded by copyright has expanded demonstrably the limits of officially tolerated speech in China. Since Chinese consumers have proven to like much of what censors aim to expurgate, media content producers and distributors continually push the envelope of permissible content, and they have been successful at

345. *See generally* DANIELA STOCKMANN, MEDIA COMMERCIALIZATION AND AUTHORITARIAN RULE IN CHINA (2013) (examining the effect of increasing marketization of newspapers on the production of news media and credibility of news sources in China).

346. NEIL WEINSTOCK NETANEL, COPYRIGHT'S PARADOX 89 (2008).

347. *Id.* at 92–94; *see also* Mark P. McKenna, *Intellectual Property, Privatization, and Democracy: A Response to Professor Rose*, 50 ST. LOUIS U. L.J. 829, 841–42 (2006) (arguing that IP rights play a valuable role in promoting democracy, and providing examples of how IP can favor "the little guy[]" as much as powerful companies).

348. Neil Weinstock Netanel, *Asserting Copyright's Democratic Principles in the Global Arena*, 51 VAND. L. REV. 217, 253 (1998).

349. *See* Creemers, Explaining Audiovisual Media Piracy, *supra* note 9, at 113.

moving the goal posts. Consider the SARFT rule excerpted in Part III.B.2.b, above, prohibiting graphic violence, murder, and excessively horrific images. There is a yawning gap between what is officially proscribed in the rule and what has actually been permitted to screen in China. For example, several recent American films have screened in China despite containing generous amounts of ostensibly verboten horror and violence, including *Resident Evil: Retribution*; *The Hobbit: An Unexpected Journey*; and *Django Unchained.* True, such films are frequently altered before they receive final SARFT approval. The bloody Quentin Tarantino western *Django Unchained*, for example, was approved for release in China, then yanked from Chinese theaters on opening day before being re-released a month later with three minutes of violence and nudity excised.[350] Nevertheless, even the sanitized versions are a far cry from pre-reform-era propaganda films and the kinds of sanctimonious socialist fare that SARFT regulations envision. The approval of violent time-travel drama *Looper* for co-production and distribution in China, SARFT time-travel bans notwithstanding, is another instructive example.[351] Piracy is an important tool of free expression in China for its ability to deliver uncensored, unsanctioned works to a mass audience. However, the real aspiration of free speech proponents in China is expanding the boundaries of *officially* tolerated expression.

Both piracy and copyright currently play important roles in advancing free expression in the shadow of China's pervasive state information controls. To maximize the creative industries' potential to pressure and change censorship policy, however, the desired trend should be toward empowering and expanding China's creative class — a goal profoundly impeded by the economic harm and exploitation wrought by piracy.[352] In the context of audiovisual works, Internet distribution could aid this trend by establishing a middle ground between monetized, official theatrical distribution and unremunerated piracy. SARFT's relatively light-handed approach to online distribution of original video content, illustrated in the micro movie trend discussed in Part III.B.2.d, allows space for independent filmmakers to openly distribute unsanctioned works and even monetize them through ad revenue-sharing arrangements with online video platforms.[353]

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350. Clarence Tsui, *'Django Unchained' Reopens in China with Nudity and Screenings Reduced*, HOLLYWOOD REP. (May 13, 2013, 2:51 AM PDT), http://www.hollywoodreporter.com/news/django-unchained-reopens-china-nudity-521650.

351. *See* discussion *supra* Part III.B.2.

352. *See* Jingying Li, *supra* note 1, at 556 (acknowledging that the relationship between copyright pirates and Chinese independent filmmakers is "no honeymoon" and reporting that "many filmmakers have complained about the exploitative nature of the pirate industry").

353. It appears that Chinese officials are taking a stronger position toward censoring online content, including a new requirement that online video sites employ government-

E. Responding to Theme #5: "Piracy Benefits Foreign Rights Holders in China by Providing Free Advertising and Branding for Their Works."[354]

The reasoning here seems straightforward. Even if consumers are only enjoying pirated copies of your product, the product is still gaining critical exposure, and surely you can monetize the resulting mind share and consumer path dependence. Unfortunately, there are serious flaws in this logic.

Entrenched stakeholders are hard to dislodge, and piracy itself can shape consumption habits. Weaning long-time users off of inexpensive pirated goods is difficult. Raustiala and Sprigman, as well as Karaganis, highlight Microsoft as an example of a company that employs a piracy-as-branding strategy.[355] Raustiala and Sprigman use it to illustrate how "[i]n the longer term, open copying may build demand for Western innovations."[356] They note Bill Gates's candid revelation in 1998 that "[a]s long as [Chinese users are] going to steal [software], we want them to steal [Microsoft's]. They'll get sort of addicted, and then we'll somehow figure out how to collect sometime in the next decade."[357] More than a decade after Gates's remark, however, not much has changed for software producers in China, including Microsoft. Software industry trade group BSA: The Software Alliance estimates that seventy-seven percent of software in China is still pirated.[358] China's entire legitimate software market remains just one-fifteenth the size of the United States market.[359] Microsoft recently reported that it generates more revenue in the Netherlands than in China, leading a CNN columnist to write that "China has been a piracy trap for Microsoft" where "profit has proved elusive."[360] As consumers migrate from PCs, where Microsoft is dominant, to newer

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approved censors to review content. Coonan, *supra* note 341. While it is too early to tell whether this signals a policy of far stricter online video censorship akin to that employed for film production and importation, the odds are that the proverbial cat is out of the bag with respect to online video, and censors will continue to be more permissive with respect to online content distribution.

354. *See supra* Part V.E.

355. Raustiala & Sprigman, *supra* note 1, at 29; *see also* Karaganis, *Forget It Jack, It's Chinatown*, *supra* note 1 (noting that "some software executives . . . can be indiscreet about the role piracy plays in their business strategies" and linking to a news article about Microsoft's acknowledgement that piracy "helps the company establish itself in emerging markets and fend off threats from free open-source programs" (quoting Charles Piller, *How Piracy Opens Doors for Windows*, L.A. TIMES, April 9, 2006, http://articles.latimes.com/2006/apr/09/business/fi-micropiracy9 (internal quotation marks omitted))).

356. Raustiala & Sprigman, *supra* note 1, at 29.

357. *Id.*

358. BUSINESS SOFTWARE ALLIANCE, SHADOW MARKET: 2011 BSA GLOBAL SOFTWARE PIRACY STUDY 4 (9th ed. 2012).

359. *Id.*

360. John Foley, *Microsoft Stages Nebulous Chinese Comeback*, CNN MONEY (May 29, 2013, 10:58 AM ET), http://tech.fortune.cnn.com/2013/05/29/microsoft-china-piracy/.

mobile devices and cloud-based computing services, where it is not,[361] Gates's piracy-to-profit strategy in China increasingly looks like a losing bet. The music industry's experience in China has been even worse. Ubiquitous music piracy has only begotten more piracy, and industry revenue is half of what it was a decade ago.[362]

Professors Mark Schultz and Alec Van Gelder highlight the implicit caveat to the piracy-as-branding rationale: In order to benefit the copyright owner, "any giveaway must serve as advertising for *some* revenue producing product or service."[363] Piracy-as-branding does not solve the systemic causes of piracy in China, and copyright owners still face the challenge of somehow monetizing their works. This is an especially difficult challenge when the primary revenue-generating product — the item being advertised — is also the item being pirated. Of course, there are monetizable services for which piracy can serve as advertising. In the music industry, some pirated songs can heighten interest in their artists' live performances. The argument that live performance income is a reasonable substitute for recorded music revenue has serious shortcomings, however.[364] Only a small percentage of Chinese artists can make a living from live performances in China, and any advertising benefit that Western artists derive from piracy in China is not helping to fill seats at many concerts.[365] There are other major shortcomings in this model as well: increasing the number of

361. Liam Tung, *Windows Phone Growth Plateaus in Europe, Xiaomi Beats Samsung in China*, ZDNET (Jan. 27, 2014, 12:57 GMT), http://www.zdnet.com/windows-phone-growth-plateaus-in-europe-xiaomi-beats-samsung-in-china-7000025613/ ("In China, [Microsoft] Windows Phone's [operating system] market share is 1.1 percent, behind iOS at 19 percent and Android at 78.6 percent.").

362. *See supra* notes 171–173 and accompanying text.

363. Schultz & Van Gelder, *supra* note 280, at 115.

364. *See* Schultz, *supra* note 72, at 750–54; Jiarui Liu, *supra* note 9, at 636–37 ("It is somewhat ironic that when Chinese artists are finally able to directly distribute their works to consumers free from the physical constraints of compact discs and record shops, they end up having to depend more on other forms of physical constraints, such as theaters or stadiums, to earn a decent living.").

365. *See China Wests Steve Sybesma: An Interview*, CHINA MUSIC RADAR (Jan. 17, 2009), http://www.chinamusicradar.com/china-west/china-wests-steve-sybesma-an-interview ("Most foreigners in China's live music game (including those in the industry) would have assumed that a megastar like Kanye [West] would be a big draw here in China; hip hop is one of the most popular genres amongst the kids in first tier cities . . . . [But] Kanye didn't approach the realm of selling out the 9,000-capacity Shanghai Grand Stage, and . . . not even the cheap seats sold out . . . . Even Avril Lavigne — the second most played contemporary international artist on Chinese radio — didn't manage to shift tickets on her Fall '08 tour."); *see also Money Money Money — 2013's State of the Union*, CHINA MUSIC RADAR (July 31, 2013), http://www.chinamusicradar.com/live-music/money-money-money-2013s-state-of-the-union/ ("[T]he overwhelming preference [in China] is still for domestic (Mandarin Chinese speaking) talent . . . . Chinese media is still relatively disinterested in all but the hottest international celebrity talent . . . so fan acquisition is an incredibly expensive exercise.").

live performances can take a serious physical toll on artists,[366] many artists do not perform live at all, and some records would be poor advertisements for the live show even if the artist were to perform.[367] To the last point, Professor Schultz observes that the Beatles' *Sgt. Pepper's Lonely Hearts Club Band* album "was an artistic and technological masterpiece, not an advertisement for a touring band," especially since the Beatles never toured again.[368]

The piracy-as-branding theory has more purchase in the context of the film industry, whose dominant revenue stream in China derives from an excludable service — theatrical exhibition — that in theory could benefit from piracy-as-branding. Piracy doubtless has exposed Chinese audiences to a broader array of genres and films than would have been possible in China but for piracy, as Karaganis suggests.[369] Still, the notion of "branding" entire filmmaking styles and genres is at best nebulous; it is difficult to measure whether piracy provides tangible marketing or branding benefits to foreign copyright owners. Is it reasonable to assume that fewer Chinese viewers would watch Hollywood movies in theaters today had previous Hollywood films not been available via piracy? Even if film piracy served to introduce Hollywood's brand of filmmaking to Chinese audiences in the 1980s and 1990s, the argument no longer has force. Chinese film audiences are now well acquainted with international films. In fact, piracy may even be *overexposing* Hollywood films to Chinese consumers, potentially contributing to genre fatigue.[370] There is simply little reason to

366. Paul Resnikoff, *Let's Add 'Burnout' to the List of Artist Problems . . .*, DIGITAL MUSIC NEWS (Apr. 24, 2013), http://staging.digitalmusicnews.com/permalink/2013/04/24/artistburnout.

367. Schultz, *supra* note 72, at 754.

368. *Id.*

369. Karaganis, *What Everyone Wants*, *supra* note 1 ("[P]iracy has a secondary function as a channel for brand development, educating Indians and Chinese in the norms and values of Hollywood. Enforcement in this context is double-edged. Would Hollywood have benefited in the past decade from stronger enforcement and diminished exposure of its films outside the few legal theatrical venues?").

370. *See* Michael Cieply, *U.S. Box Office Heroes Proving Mortal in China*, N.Y. TIMES, Apr. 21, 2013, http://www.nytimes.com/2013/04/22/business/media/hollywoods-box-office-heroes-proving-mortal-in-china.html (discussing "a rapid evolution in the tastes of Chinese audiences, which are quickly turning away from the spectacles American companies have assumed they crave"). Overexposure via piracy may be a real concern for IP owners. Raustiala and Sprigman argue that "[i]n a huge but largely untapped market such as China, exposure, and the prospect of growth tomorrow, can trump greater market share today. And although shanzhai [imitation] products are celebrated, those Chinese who can buy the original products generally do." Raustiala & Sprigman, *supra* note 1, at 28. In fact, however, luxury goods bearing brand logos such as Louis Vuitton's "LV" that seem almost ubiquitous in China are therefore increasingly viewed as commonplace, turning off wealthy Chinese consumers. Surely the great abundance of counterfeit luxury products on the market and in use by average Chinese consumers is not helping luxury brand owners in this regard. *See* Sonia Kolesnikov-Jessop, *Toning Down the Bling Factor*, N.Y. TIMES (Sept. 10, 2012), http://www.nytimes.com/2012/09/11/business/global/toning-down-the-bling-factor.html (reporting that while luxury brand revenues continue to increase in China, increasingly sophisticated wealthy consumers "'don't want Louis Vuitton any more because it's become

believe that copyright owners would be missing out on a golden branding opportunity in China if effective copyright enforcement were within their grasp.

F. Responding to Theme #6: "Foreign Dominance Poses a Greater Threat to China's Cultural Industries than Piracy Does."[371]

This theme rings of broader anxiety over "cultural imperialism" expressed by many sovereigns over the importation of large quantities of foreign content, particularly Hollywood movies.[372] The underlying concern is that "big markets," such as the United States, leverage their wealthy "home base" audience to fund bigger, more attractive productions that ride their competitive advantage over local content to widespread popularity.[373] The foreign works, cultural protectionists argue, encroach on the "cultural sovereignty" of the importing state and pollute the process of national cultural development.[374] As described in Part III, above, China's cultural protectionism is second to none.

There is great cause to doubt the validity of the cultural imperialism thesis in general,[375] however, and there is little evidence that foreign content, even Hollywood content, poses a greater threat to China's creative industries than piracy does. In fact, if anything, the evidence points in the opposite direction: domestic creative industries that can successfully monetize their works are in a better position to compete with foreign productions.[376] High piracy rates that hurt the ability to monetize creative works tend to hurt domestic productions more than imports, particularly if no other significant domestic monetization models exist. This is because smaller domestic producers are in a far worse position to withstand the effects of piracy than international producers, who can often subsidize runs in high-piracy markets with earnings from copyright-friendly markets.[377]

The Chinese music and film industries both suffer from high levels of piracy. Nevertheless, both have been able to compete well against foreign content in recent years notwithstanding high rates of

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too common'" as "'[t]hey are trying to differentiate themselves and not have the same logos and the same brands that have been so popular for the last ten years'" (quoting China consumer market analyst Shaun Rein)).

371. *See supra* Part IV.F.

372. *See* Sean A. Pager, *Beyond Culture vs. Commerce: Decentralizing Cultural Protection To Promote Diversity Through Trade*, 31 NW. J. INT'L L. & BUS. 63, 69–72 (2011) (noting that many governments perceive cultural imports from large markets as a threat to their "cultural sovereignty").

373. *Id.* at 69.

374. *Id.* at 71.

375. *See generally id.* at 74–97.

376. *See* Jiarui Liu, *supra* note 9, at 657–58; Schultz & Van Gelder, *supra* note 280, at 121.

377. *See* Jiarui Liu, *supra* note 9, at 658; Schultz & Van Gelder, *supra* note 280, at 121 (making the same argument in a generalized, not China-specific, context).

piracy. The film industry has experienced growth and increased investment in new productions because it enjoys stable and substantial theatrical revenue, and has been able to compete well with foreign films as a result. Total box office revenue from domestic films is about equal to that of foreign films.[378] Of the ten all-time highest-grossing films in China, six are domestic productions.[379] The quality of domestic films continues to improve as increased revenue allows the industry to invest more in production and benefit from gains in experience and professionalism.[380] This, in turn, should help the local industry become even more competitive. There are, of course, many factors contributing to the competitiveness of local films. Censorship rules that limit market access and screen time for foreign films, for example, doubtless create space for local industry.[381] But financial health is the biggest factor contributing to the Chinese film industry's competitiveness.

A 2010 empirical study suggested that in recent years piracy has substantially and negatively affected the Chinese music industry's ability to compete with foreign productions. The study showed that as physical format revenue sales decreased and online piracy increased in the early 2000s, the market share for foreign music increased, including songs from Taiwan and Hong Kong, while the share of the market occupied by Mainland producers decreased.[382] The study found that from 2000 to 2007, the physical format piracy rate remained constant, around eighty-five to ninety percent,[383] but sales dropped by twenty-five percent, likely due to the onset of unauthorized downloading.[384] During this decline, domestic music productions fell from a fifty-five percent market share to thirteen percent as recordings from Hong Kong and Taiwan dominated the market.[385] While the reported drop is steeper than this Author would have predicted, a significant drop in domestic market share during that period is conceivable. Although there are no reliable current statistics for domestic versus foreign share of the popular music market in China, indications are that domestic music has rebounded to a majority market share despite continued high piracy rates.[386] This rebound for

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378. *See* Melanie Lee, *supra* note 92 and accompanying text.

379. Clarence Tsui, *China Box Office: 10 Highest-Grossing Movies of All Time*, HOLLYWOOD REP. (Feb. 28, 2013, 5:13 PM, PST), http://www.hollywoodreporter.com/gallery/china-box-office-10-highest-425083#1-avatar-james-cameron-2010-2219-million.

380. *See generally* Coonan, *supra* note 84.

381. *See supra* Part III.B.2.

382. Jiarui Liu, *supra* note 9, at 658.

383. *Id.* at 631.

384. *Id.*

385. *Id.* at 635, 651–52.

386. More than two-thirds of the songs on Baidu Music's monthly top 20 downloads charts for June through August 2013 were recorded by Mainland artists. All of the foreign artists on these charts hail from Hong Kong, Taiwan, South Korea, or the United States. *See*

Mainland artists appears to result in part from a new variable — their greatly increased TV exposure on enormously popular talent shows such as *The Voice of China*.[387] In any case, the key point is that there is simply no evidence that piracy helps insulate domestic content producers from foreign content owners who allegedly threaten to dominate the film and music industries in China.

VI. IMPLICATIONS BEYOND CHINA

China is trotted out with increasing frequency as a counterfactual to the standard narrative that copyright is central to the health of creative industries.[388] Part V argued that the alleged "benefits" of piracy to creative industries — that piracy increases access to creative works, encourages adoption of innovative new business models, provides free advertising and branding, and protects local industries from foreign dominance — are exaggerated or simply wrong. So what lesson should the rest of the world really draw from China's experience with piracy?

Many of the arguments in Part V, above, have relevance beyond China, but the most salient lesson is the consequence of diminished revenue stream diversity when pirates, not copyright owners, capitalize on all but a few of the ways in which audiences consume works. As discussed in Part V.A, this harms creative professionals in a number of ways: First, it drastically reduces monetization opportunities for smaller and independent producers. Second, it disconnects copyright owners from consumer choices and therefore distorts market signals concerning the types of works in which to invest. Finally, it disproportionately exposes producers to the idiosyncrasies of peculiar markets and exploitation by intermediaries.

In the United States, creative professionals have already felt the first of these effects as a result of piracy, and particularly as a result of online file sharing.[389] For example, independent filmmakers in the United States who do not have access to monetizable "controlled spaces" — that is, theatrical distribution — must rely almost exclusively on various direct-to-consumer copyright-exploitation-based revenue streams, such as online DVD sales and video-on-demand streams, to recoup their production costs. In a recent op-ed, a United States distributor of independent LGBT films asserted that online pi-

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Yuebang (月榜) [Monthly Ranking], June 2013–August 2013, BAIDU XINGEBANG (百度新歌榜) [Baidu Top New Songs], http://music.baidu.com/top/new/month/.

387. *See 'Voice of China' Returns as King of Ratings*, ENGLISH.NEWS.CN (July 17, 2013), http://news.xinhuanet.com/english/china/2013-07/17/c_132548309.htm.

388. *See* discussion *supra* Part IV.

389. *See, e.g.*, Kathy Wolfe, *Piracy Profiteers: Time To Walk the Plank*, HUFFINGTON POST (Jan. 17, 2012, 8:37 AM), http://www.huffingtonpost.com/kathy-wolfe/piracy-profiteers-time-to_b_1210132.html.

racy "has undermined the careers of many talented aspiring filmmakers."[390] LGBT filmmakers are often forced to self-finance their works because their films are not viewed as "box office winners."[391] When unlicensed copies of their films become freely available online, filmmakers lose the ability to monetize their works and "their investment can disappear in an instant."[392] In this environment, fewer filmmakers will invest in producing a second or even first project, and as a result "these stories of diversity will cease to be told and this 'Freedom of Speech' will be compromised."[393]

United States creative industries are also experiencing the second effect of diminished revenue streams — market signal distortion. As online piracy has increasingly broken the connection between content provider, licensed distributor, and consumer in the United States, creative industries have increasingly focused their investment decisions on fewer, safer blockbuster bets.[394] In her sweeping study on creative industry business and investment strategy, Harvard Business School professor Anita Elberse argues that piracy has played a significant role in major content producers' decisions to substantially narrow the number and types of creative works they produce:

> The threat of piracy, the lower perceptions among consumers of what price is reasonable [for entertainment goods — also partly an effect of online piracy], the unbundling of content packages, and the increased concentration in retailing put tremendous pressures on existing [entertainment industry] revenue models. The bets made by content producers are becoming riskier — only those titles in greatest demand have a shot at earning back their production and marketing costs, with the remaining products more likely to fall by the wayside . . . . One way content producers can react to this new reality is by doubling down on blockbuster investments and focusing even less on smaller bets. Such a trend is already underway in several markets.[395]

Content producers feel compelled to invest in mass-market spectacles that they know in advance have the best chance of being monetized given pressured copyright revenue streams. This creates a self-reinforcing feedback loop: As producers increasingly feel compelled

390. *Id.*
391. *Id.*
392. *Id.*
393. *Id.*
394. *See* ELBERSE, *supra* note 276, at 236.
395. *Id.* at 236–37.

to forego riskier bets on unconventional or smaller productions, formulaic blockbusters make up an increasingly large share of high-profile content offerings and thus a larger share of the revenue pie. This shift biases monetizable consumption patterns toward blockbusters, which triggers an even greater share of investment in formulaic blockbusters at the expense of experimentation and diversity.

Lastly, trends in the digital content distribution space give global salience to the third effect of diminished revenue streams — the potential for exploitation by monopsonist intermediaries. Influential music and technology blogger Bob Lefsetz is fond of saying that for each type of distribution platform, there is "only one winner on the Internet."[396] Amazon is the king of Internet retail and e-book retail,[397] iTunes the king of digital download retail, Google the king of Web search,[398] YouTube the king of free online on-demand streaming video and music,[399] Netflix the king of subscription streaming video,[400] Pandora the king of Internet radio,[401] and so on. And some formats will win out over others; for example, in the United States, subscription video streaming by services such as Netflix are already outpacing and outmoding video downloading from services such as iTunes.[402] China's experience with monopsony intermediaries that pay miniscule royalties to copyright owners provides a glimpse into our own possibly dystopian future, in which a few legitimate digital distribution platforms become dominant while piracy remains unchecked online.[403]

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396. *See, e.g.*, Bob Lefsetz, *Google Set To Launch Streaming-Music Service as Early as This Week — Report*, LEFSETZ LETTER (May 14, 2013), http://lefsetz.com/wordpress/index.php/archives/2013/05/14/google-set-to-launch-streaming-music-service-as-early-as-this-week-report/.

397. *See* Laura Hazard Owen, *Apple: We Have 20 Percent of the U.S. Ebook Market,* PAIDCONTENT (June 12, 2013, 11:40 AM EDT), http://paidcontent.org/2013/06/12/apple-we-have-20-percent-of-the-u-s-ebook-market/ (noting that Amazon commands fifty to sixty percent of the United States ebook market).

398. Kevin Bostic, *Apple's iTunes Rules Digital Music Market with 63% Share*, APPLE INSIDER (Apr. 16, 2013, 12:59 PM PT), http://appleinsider.com/articles/13/04/16/apples-itunes-rules-digital-music-market-with-63-share.

399. *See* NIELSEN, THE HYPER-FRAGMENTED WORLD OF MUSIC: MARKETING CONSIDERATIONS AND REVENUE MAXIMIZATION 7 (2011); Ben Sisario, *A Stream of Music, Not Revenue*, N.Y. TIMES, Dec. 13, 2013, at B1, *available at* http://www.nytimes.com/2013/12/13/business/media/a-stream-of-music-not-revenue.html.

400. Netflix reportedly has a ninety percent market share for subscription streaming video. Brian X. Chen, *Apple and Netflix Dominate Online Video*, N.Y. TIMES BLOGS: BITS (June 19, 2013, 4:09 PM), http://bits.blogs.nytimes.com/2013/06/19/apple-and-netflix-dominate-online-video/.

401. Cameron Fuller, *Apples iTunes Radio Debuts on the Infinite Dial Survey, People Still Prefer Pandora*, INT'L BUS. TIMES (Mar. 11, 2014, 4:22 PM), http://www.ibtimes.com/apple-itunes-radio-debuts-infinite-dial-survey-people-still-prefer-pandora-1560833.

402. *Id.* ("For all the movies watched at home in the first quarter of 2013, 19 percent of consumers watched a movie using a subscription-based service like Netflix, and 5 percent downloaded a movie rental from an on-demand service like iTunes . . . .").

403. *See supra* Part V.A.2.

Portents of such a future are already emerging. Professor Elberse observes that "[b]ecause companies like Amazon, Apple, and Google dominate the sectors in which they operate, they have amassed the power to influence — and sometimes dictate — how and at what price entertainment goods are sold. This, in turn, is putting tremendous pressure on the business models of established [content] producers."[404] Developments in the online music streaming space provide an instructive example. While the space is still fragmented, there are already a few identifiable key players: YouTube is the market leader, followed by Pandora and Spotify.[405] Numerous high profile musicians protest that these services' royalty payments are unacceptably low and derive from non-transparent royalty calculation processes.[406] For example, Raymond Pepperrell, guitarist for the acclaimed punk band Dead Kennedys, publicly criticized YouTube for low royalty payments, claiming that a Dead Kennedys video with over fourteen million YouTube views netted the band a mere few hundred dollars in YouTube royalties.[407] Moreover, he claimed, "I don't know — and no one I know knows — how YouTube calculates the money."[408] Pandora, the leading Internet radio service, pays statutory royalty rates for digitally broadcasting recordings in the United States as a non-

404. ELBERSE, *supra* note 276, at 235.

405. *See* Glenn Peoples, *How Spotify's First Year Compares to Pandora, Vevo, YouTube and Others*, BILLBOARDBIZ (July 23, 2012, 8:42 PM EDT), http://www.billboard.com/biz/articles/news/1084519/business-matters-how-spotifys-first-year-compares-to-pandora-vevo-youtube (reporting that after Spotify's first year of operations in the United States, YouTube led all music streaming platforms in streams delivered, followed by Pandora and Spotify); Victor Luckerson, *Spotify and YouTube Are Just Killing Digital Music Sales*, TIME (Jan. 3, 2014), http://business.time.com/2014/01/03/spotify-and-youtube-are-just-killing-digital-music-sales/ (noting that, "[t]he most popular platform for listening to music among young people is YouTube, which is almost entirely free"). *But see* Philip Elmer-DeWitt, *iTunes Radio Overtakes Spotify, Gaining on iHeartRadio in U.S.*, CNNMONEY (Mar. 11, 2014, 6:05 AM ET), http://tech.fortune.cnn.com/2014/03/11/apple-itunes-radio-pandora-spotify/ (citing study finding that Pandora "dominates" the online music streaming field in the United States market, followed by online radio services iHeartRadio, iTunes Radio, and Spotify, but failing to mention YouTube presumably because it is an on-demand video service and not a dedicated music streaming service).

406. *See, e.g.*, Paul Resnikoff, *16 Artists That Are Now Speaking Out Against Streaming*, DIGITAL MUSIC NEWS (Dec. 2, 2013), http://www.digitalmusicnews.com/permalink/2013/12/02/artistspiracy; Charles Arthur, *Thom Yorke Blasts Spotify on Twitter as He Pulls His Music*, GUARDIAN (July 15, 2013, 3:09 EDT), http://www.theguardian.com/technology/2013/jul/15/thom-yorke-spotify-twitter; Paul Resnikoff, *Pink Floyd Blasts Pandora for "Tricking Artists Into Signing Their Own Paycuts . . ."* DIGITAL MUSIC NEWS (June 23, 2013), http://www.digitalmusicnews.com/permalink/2013/06/23/pinkfloyd; Laura Sydell, *YouTube Shares Ad Revenue with Musicians, But Does It Add Up?*, RECORD: MUSIC NEWS FROM NPR (Sept. 27, 2012, 12:01 AM), http://www.npr.org/blogs/therecord/2012/09/27/161837316/youtube-shares-ad-revenue-with-musicians-but-does-it-add-up.

407. Sydell, *supra* note 406.

408. *Id.* Similarly, the band OK Go, whose music video featuring the band members' antics on treadmills became a viral sensation garnering upwards of 200 million views on YouTube, claimed that if their YouTube earnings (which they would not reveal) were their only source of income, "it would be time not only to not quit your day job but time to get a night job to supplement it." *Id.*

interactive music streaming service.[409] Nevertheless, some musicians have criticized the payouts as intolerably low,[410] especially when Pandora lobbied Congress for even lower rates to remedy what it argues is an "astonishingly high royalty burden."[411] The reasons for the low rates are complex and beyond the scope of this Article. The point is that music streaming royalties in the United States are alarmingly low for delivery platforms that are emerging as the new consumption paradigm for legitimate content.[412] If, or when, the "winning" platform or platforms in this space emerge, become ubiquitous and reach monopsony status, they will have little incentive to maximize royalty payouts and it will be difficult for copyright owners to withhold content and reject their terms.[413] While no United States service provider, even a monopsony, is ever likely to pay out the absurdly low percentages that the Chinese mobile companies pay, the potential for unfair treatment of and harm to creative industries exists.[414] This result

409. *See* John Villasenor, *The Strangely Tilted Playing Field of Music Copyright Royalties*, FORBES (May 22, 2012, 6:50 PM), http://www.forbes.com/sites/johnvillasenor/2012/05/22/the-strangely-tilted-playing-field-of-music-copyright-royalties/.

410. Musician and copyright activist David Lowery, for example, claims that his band Cracker's 1994 hit *Low* earned a mere $42 in performance royalties for 1.15 million plays on Pandora over a three-month period in 2012, which compared unfavorably to payouts from other services such as Sirius XM. David Lowery, *My Song Got Played on Pandora 1 Million Times and All I Got Was $16.89, Less than What I Make from a Single T-Shirt Sale!*, TRICHORDIST (June 24, 2013), http://thetrichordist.com/2013/06/24/my-song-got-played-on-pandora-1-million-times-and-all-i-got-was-16-89-less-than-what-i-make-from-a-single-t-shirt-sale/.

411. Steve Knopper, *Pandora Clashes with Musicians over Song Payments*, ROLLING STONE (Dec. 3, 2012, 4:10 PM, ET), http://www.rollingstone.com/music/news/pandora-clashes-with-musicians-over-song-payments-20121203. On-demand music streaming service Spotify, for its part, has recently made efforts to be more transparent about royalty payments. *See Spotify Explained: How Is Spotify Contributing to the Music Business?*, SPOTIFY ARTISTS, http://www.spotifyartists.com/spotify-explained/ (last visited May 7, 2014). The company claims that it pays out nearly seventy-five percent of total revenues in royalties, which comes out to $6000–$8400 per one million streams of an artist's music and has amounted to over $1 billion in total royalties paid to labels, artists and publishers since Spotify's founding in 2008. *Id.* Still, Radiohead front man Thom Yorke recently pulled his solo music from Spotify to protest what he sees as unsustainably low payouts, tweeting, "Make no mistake, new artists you discover on Spotify will not get paid. Meanwhile shareholders will shortly be rolling in it." *See* Arthur, *supra* note 406.

412. *See* Sisario, *supra* note 399 ("'The buying habits of music lovers are changing,' Doug Morris, chairman of Sony Music Entertainment, told investors last month at a conference in Los Angeles. 'Rather than buying physical records, or even digital downloads, consumers are starting to prefer buying music on demand from streaming services.'").

413. *See* BLAIR & HARRISON, *supra* note 302, at 43–48.

414. Indeed, some copyright owners and music executives allege that Pandora, already a market leader, could be doing far more to monetize its service and pay more in royalties now, but that its incentives are presently misaligned with the interests of copyright owners. Claire Suddath, *Should Pandora Pay Less in Music Royalties?*, BLOOMBERGBUSINESSWEEK (July 1, 2013), http://www.businessweek.com/articles/2013-07-01/should-pandora-pay-less-in-music-royalties#p2 (quoting John Simson, co-creator and former executive director of the performing rights organization SoundExchange, as alleging that "Pandora has made a conscious choice not to monetize"); Lowery, *supra* note 410 (commenting "Why doesn't Pandora . . . get an actual business model instead of asking for a handout from congress *[sic]*

seems likely if we reach a point where a very limited number of monetization models co-exist with widespread piracy.

VII. CONCLUSION

Examine China's film and music industries, and the picture that emerges is less sanguine than some scholarly narratives suggest. The alleged benefits of piracy in China are exaggerated or illusory, and do not outweigh piracy's substantial harms. Creators and creative industries persist in China despite extreme levels of piracy, and for some observers this fact might raise doubts about the social value of strong copyright. But the mere fact that some producers have adapted to a high-piracy environment says little about the value of copyright in society, just as the existence of extremophile organisms adapted to severe living conditions tells us little about the optimal conditions for thriving biological diversity.

As Professor Merges argues, for creators to thrive, conditions must be right to afford them the two things they need most to incentivize creativity *and* support their ongoing creative development and efforts: reward and autonomy. This, in effect, means that the optimal environment for cultivating high quality creative production is one that supports a stable, economically robust professional creative ecosystem. In China's high-piracy environment, the film and music industries' monetization models have evolved to rely almost entirely on physical and technological exclusion, respectively. The resulting industries are neither robust nor stable—certainly not to the extent that they could and should be. Instead, because piracy has usurped most revenue streams, both industries are hyper-dependent on a single revenue stream — box office revenue in the movie industry and ringback tone revenue in the music industry.

This lack of revenue stream diversity distorts and undermines the creative ecosystem in at least three ways. First, the scarcity of monetization options creates a winner-take-all market dominated by big producers. The paucity of other revenue sources seriously undermines financial support for smaller, independent producers.

Second, rampant piracy and concentration of revenue streams distorts market signals to producers. For example, film producers are incentivized to invest in a relatively narrow range of works that attract

---

and artists? For instance: Right now Pandora plays one minute of commercials an hour on their free service. Here's an idea! Play two minutes of commercials and double your revenue!"); Paul Resnikoff, *How Artists Are Subsidizing Pandora's Lack of Profitability*, DIGITAL MUSIC NEWS (June 18, 2013), http://www.digitalmusicnews.com/permalink/2013/06/18/
pandoras-profitability (discussing a study by economist Jeffrey Eisenbach that concludes that Pandora has sacrificed profitability and revenue growth in order to grow market share and thereby increase the value of the company but not the royalties paid).

the audience whose tastes are most easily monetized — young, urban cinemagoers. Music producers likely are incentivized to produce music that will make the most marketable ringtones.

Third, and perhaps most importantly, reduced revenue stream diversity disproportionately exposes producers to the whims of peculiar markets and exploitation by gatekeeper or monopsonist intermediaries. China's music industry provides an especially vivid example, as ringback tones gross more than $4 billion annually, but the mobile operators who control ringback tone distribution keep more than ninety-eight percent of that revenue for themselves. The meager two percent that goes to copyright owners amounts to ninety percent of those copyright owners' total income from recorded music. So, if ringtones lose their appeal with consumers, the recording industry will collapse. Without other viable revenue streams to leverage, musicians, producers, and record labels have little choice but to grin and bear it while a state telecommunications monopoly enjoys the great bulk of the rewards of their artistic efforts.

The broader takeaway from the adaptive evolution of China's creative industries is that we can expect to see their counterparts elsewhere evolve similarly if copyright enforcement weakens. In the United States, where widespread online infringement plays a significant role in pressuring revenue streams, we already see evidence of this trend: niche and independent producers face severe challenges monetizing their works and recouping their investments; major producers concentrate investments on a narrowing range of highly monetizable blockbuster content; and market-dominating gatekeeper intermediaries dictate and drive down the prices content producers can charge.

As for the claims of piracy's benefits in China, there is either little evidence to support them or else the evidence points in the opposite direction. There is little to suggest, for example, that piracy leads the music and film industries to adopt innovative business models in which they would not otherwise have engaged. There is also little evidence that piracy is substantially benefitting copyright owners from a branding perspective. As regards the suggestion that foreign copyright owners pose a bigger threat to local industries than piracy, the evidence points in the opposite direction in China — the greater the financial health enjoyed by the local music and film industries, the better they are able to compete with foreign content that is subsidized by foreign sales. Even piracy's most pronounced benefit — enhancing free expression by providing access to banned and uncensored works — comes paradoxically at a significant cost to free expression by weakening the private media sector.

Ultimately, the persistence of China's creative industries confirms what we intuitively know: some creative people will create regardless

of the circumstances. The key question is: Does the ecosystem in which creators are working afford them the conditions in which they, and the nation, can *maximize* their creative abilities and potential? Piracy is not the only constraint on the potential of China's creators — strict state content regulations are also a limiting factor. The success of some creators in China shows that these limitations can be largely overcome. But that success mostly serves as a reminder of how much more China's creative professions and professionals would thrive in an environment more respectful of copyright, and less exploitative of creators and their works.

IP AND THE MOVIES WE WATCH

GEORGE MASON UNIVERSITY
CENTER FOR THE PROTECTION OF INTELLECTUAL PROPERTY

BEN SHEFFNER
VICE PRESIDENT, LEGAL AFFAIRS
OCTOBER 1, 2015

WHY COPYRIGHT?

Any successful market economy needs (at least) 3 things:

1. **Private Property**
2. **Freedom of contract**
3. **Rule of Law (enforceability)**

The motion picture market is no different.

How does copyright measure up for movies?

1. Copyright Act defines property rights
   - Scope of copyrightable subject matter
   - Exclusive rights in § 106
     - Make copies
     - Publicly perform works
     - Prepare derivative works

How does copyright measure up for movies?

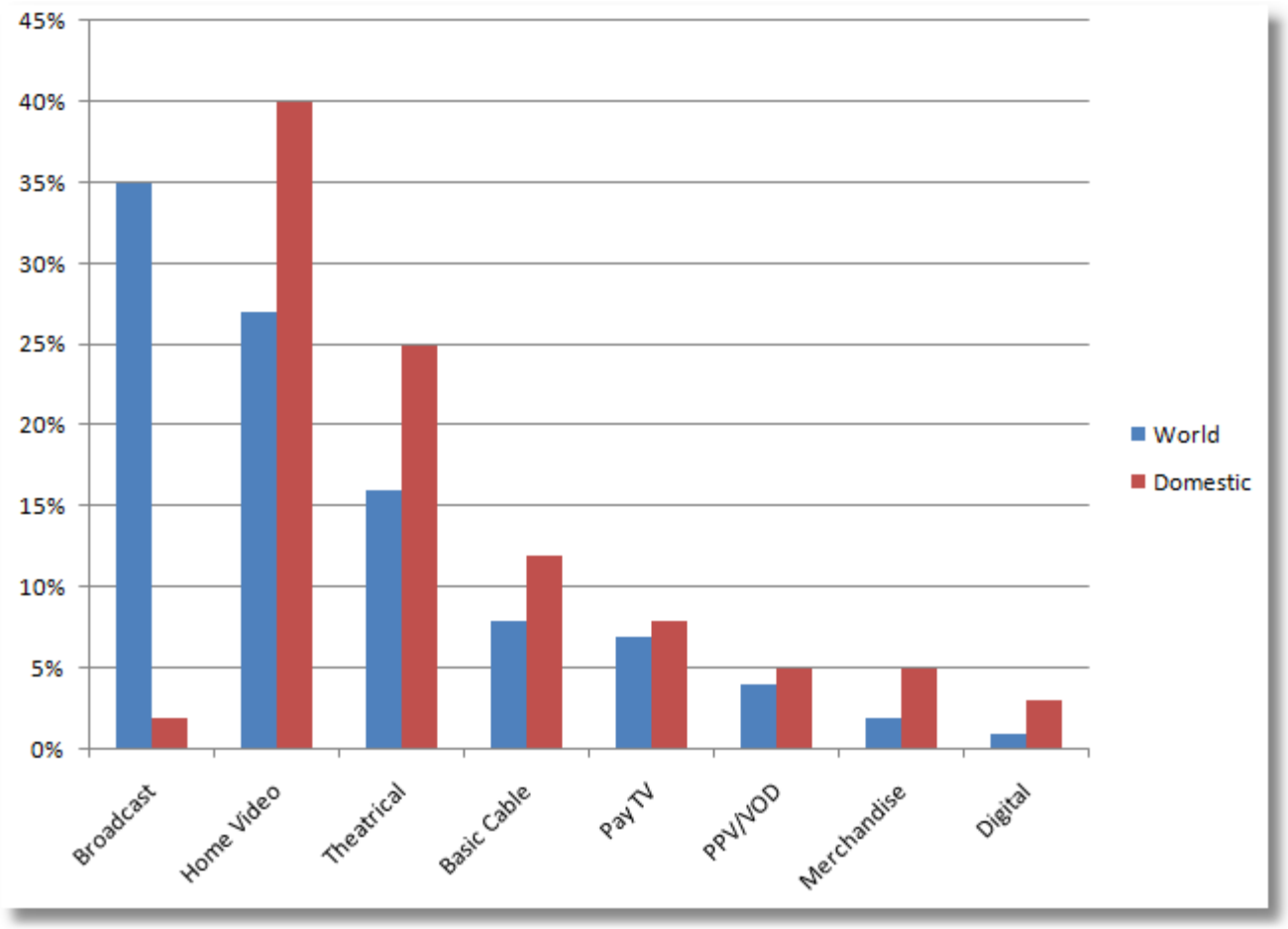
2. Freedom of Contract

- Copyright Act says (almost) nothing
  - Exceptions:
    - Compulsory licenses
      - Cable, satellite, music
    - Termination of transfers
    - FCC regulations

So what does freedom of contract give us?

- Myriad of different business models, and options for consumers. License to:
  - Traditional theaters
    - Now only 25% of revenue in US
  - Broadcast TV networks
  - Basic and premium cable networks
  - DVD & Blu-ray
    - Buy or rent
  - PPV/VOD/SVOD
  - Internet download/rental

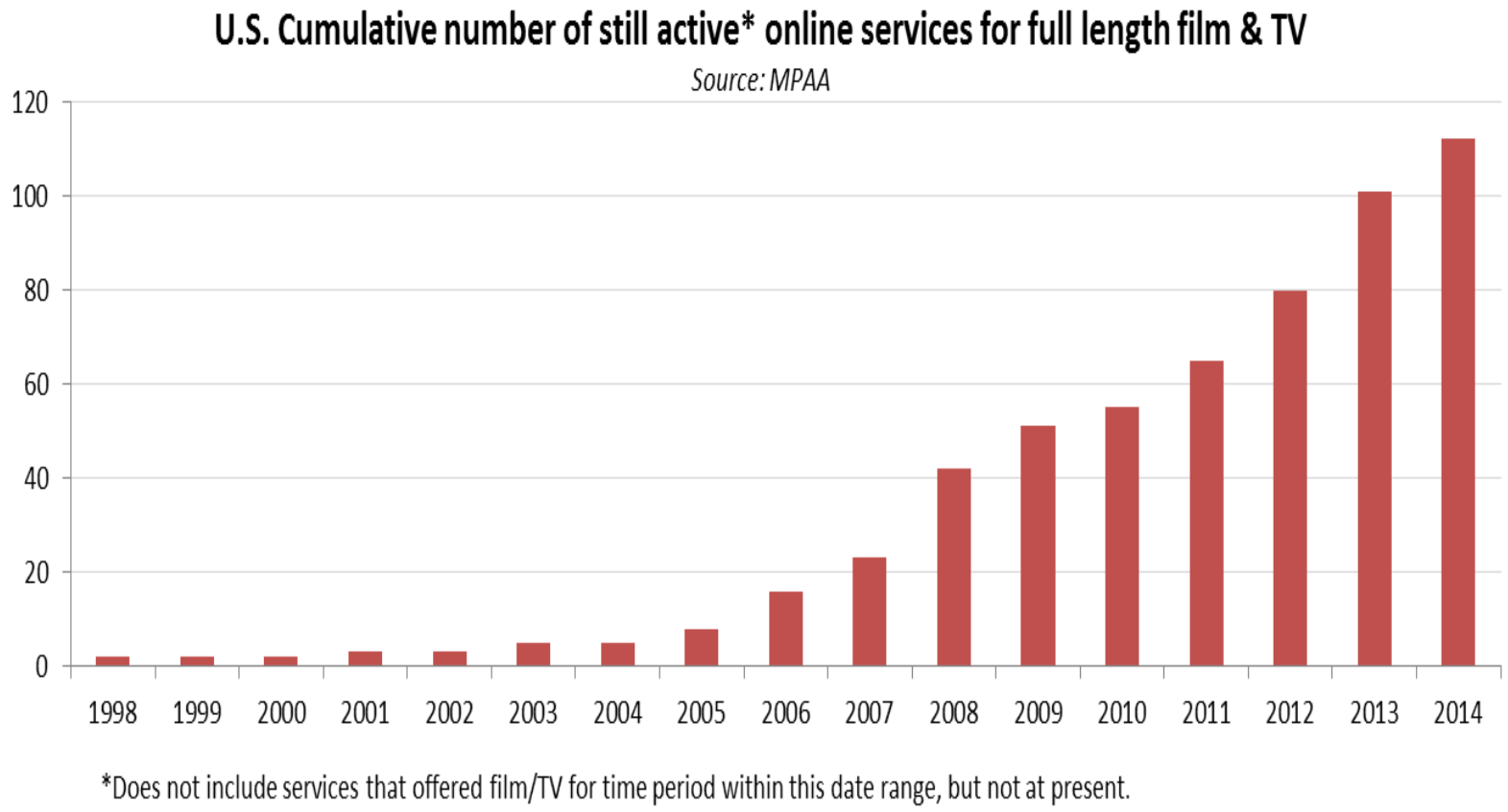
DISTRIBUTION: Revenue Sources



Credit: Professor William Greene, NYU Business School

So what does freedom of contract give us?

- 110 services for legal online TV & film content
- 66 billion TV episodes and 7.1 billion movies in 2014



MOTION PICTURE ASSOCIATION OF AMERICA

How Does Copyright Measure Up?

3. Rule of Law

- Great on paper:
  - Civil lawsuits
    - Actual damages
    - Infringer's profits
    - Statutory damages
    - Injunctions
  - Criminal enforcement
- Challenges in practice
  - Excellent enforcement in theatrical market
  - So-so for hard goods
  - Real problems online

How do we enforce?

- Goal: Create environment for legal services to thrive
  - Competition with legal services is great.
    - Competition with illegal services that free ride off studios' investments – not great
  - Directly target bad actors
    - Lawsuits
    - Criminal referrals
  - Intermediaries: focus on voluntary intiatives
      - ISPs: Copyright Alert System
      - Payment processors
      - Advertisers

Panel 6 *Innovation In IP Markets*

- **Prof. Sandra Aistars**, George Mason University School of Law, *Senior Scholar, Director of Copyright Research and Policy*, Center for the Protection of Intellectual Property
- **Prof. Stephen Haber**, Stanford University
- **Terry Hart**, *Director of Legal Policy*, Copyright Alliance
- **Brad Sheafe**, *Chief Intellectual Property Officer*, Dominion Harbor
- ***Moderator:*** **Prof. Adam Mossoff**, George Mason University School of Law, *Founder & Senior Scholar*, Center for the Protection of Intellectual Property

#cpip2015

Intellectual Property and the Wealth of Nations

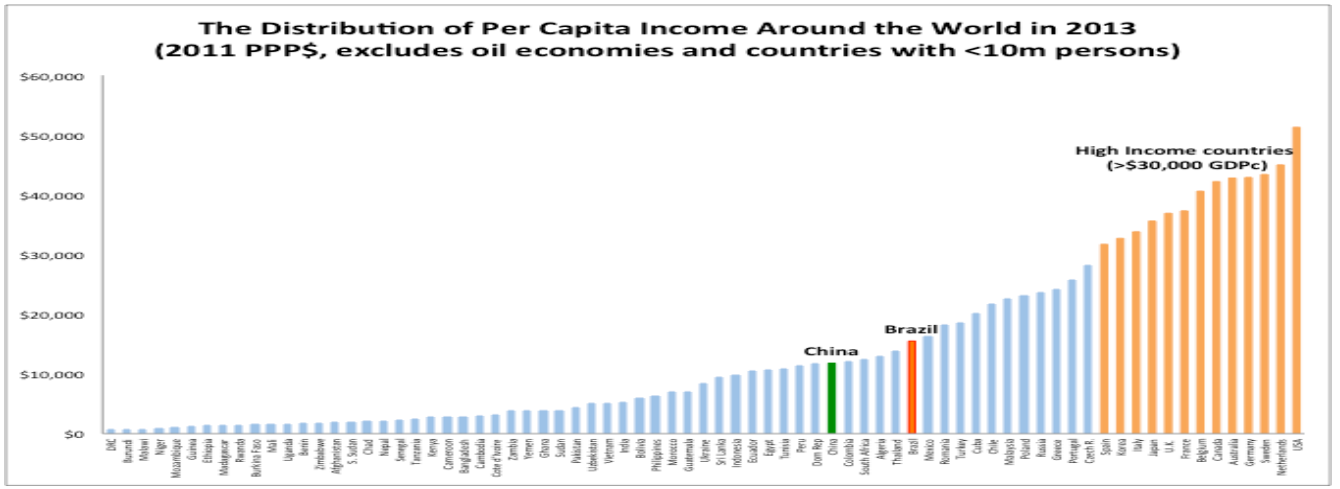
Stephen Haber

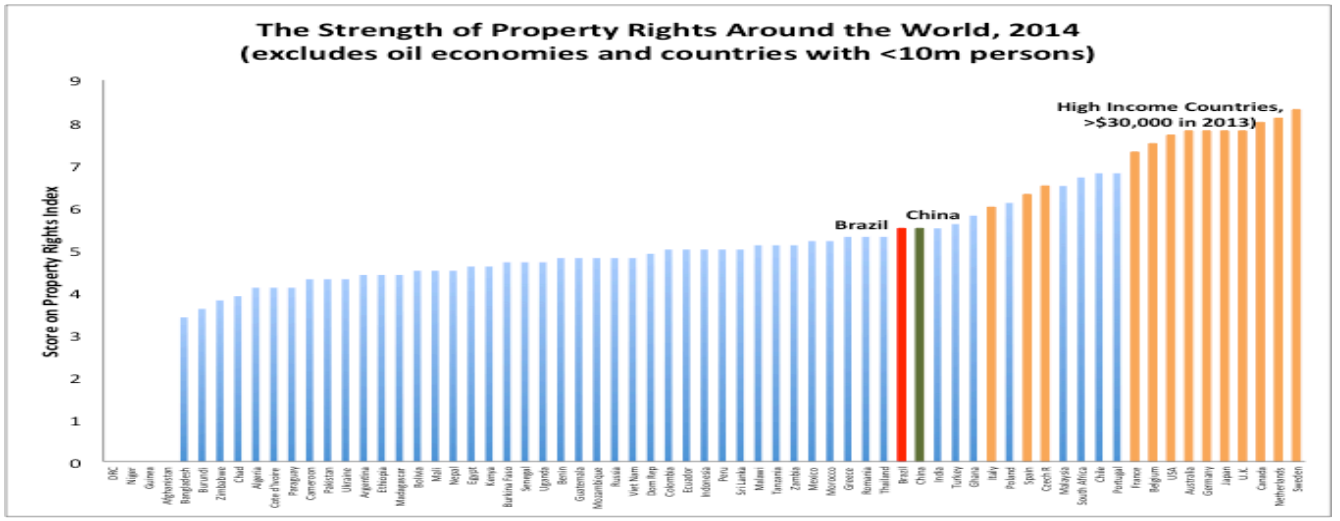
Stanford University

Presented at CPIP Conference

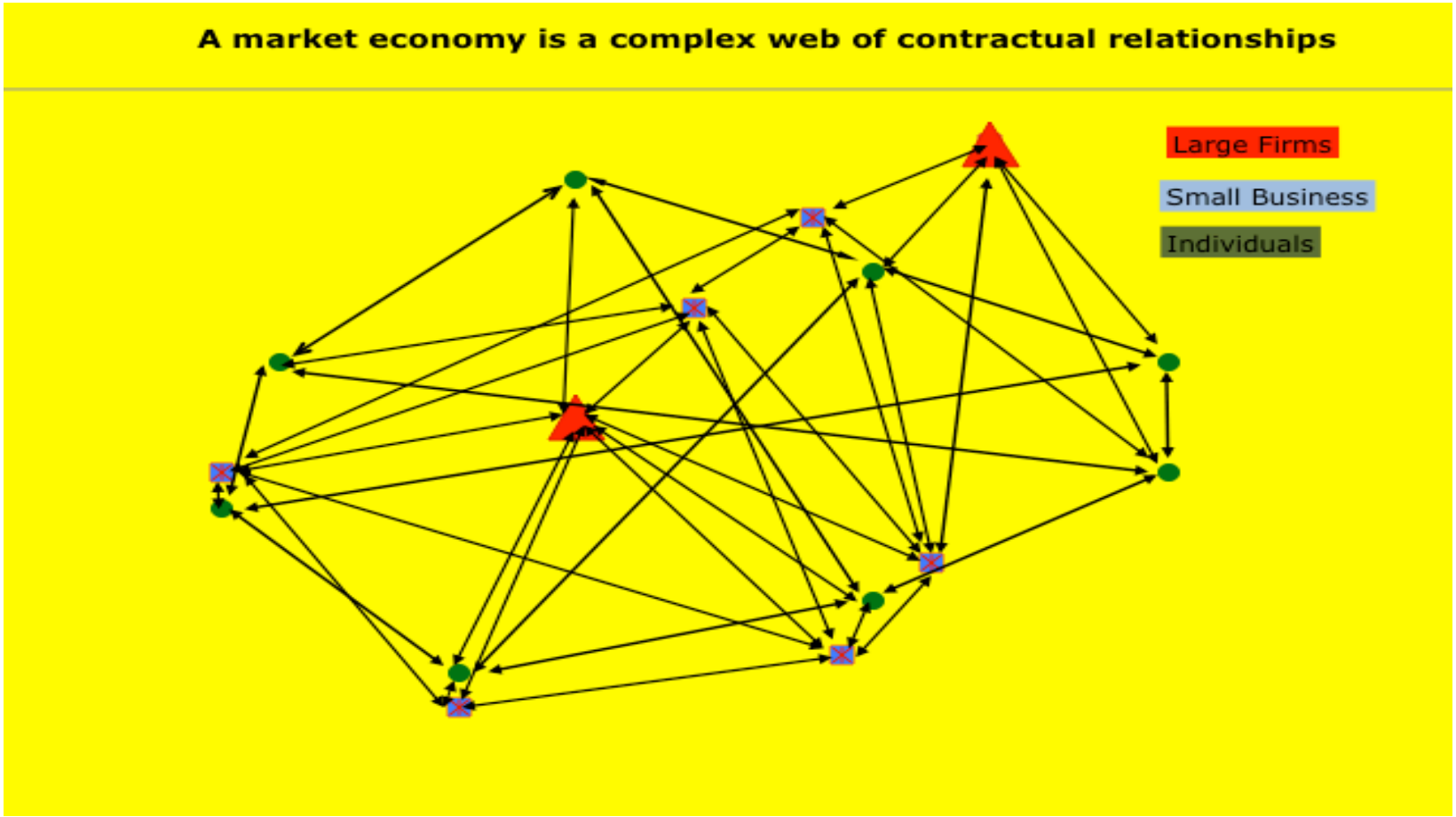
October 1, 2015

What do the high per capita income economies tend to have in common?





Why do property rights matter for economic growth? They allow an economy to operate as web of contracts, and that allows gains from specialization



A crucial component of this system: Intellectual Property Rights (IPR)

- A patent is a property right. It may be sold, licensed, or transferred.
- From the point of view of the inventor, the patent allows him to appropriate the returns from his investment in developing a technology.
- From the point of view of society, the patent is a property right that can serve as the basis for the construction of a web of contracts.
- That web can extend far beyond anything that the inventor ever imagined.

An example of how a property right allows a web of contracts

- I can lease this car because the manufacturer can enforce its property right to it.
- The manufacturer can sell my lease to an investor, because it can transfer that property right.
- The investor, in turn, can pledge the lease as collateral for a bank loan.

This web of contracts also extends to the production of the automobile

- The manufacturer can contract for parts, because the supplier has a property rights to them.
- The supplier can obtain credit, because the the right to receive income from the contract can be used as collateral.
- The supplier can now pay the royalty owed the inventor of the underlying technology.
- The inventor can contract with the supplier to use his technology, because he has an intellectual property right to it (a patent).

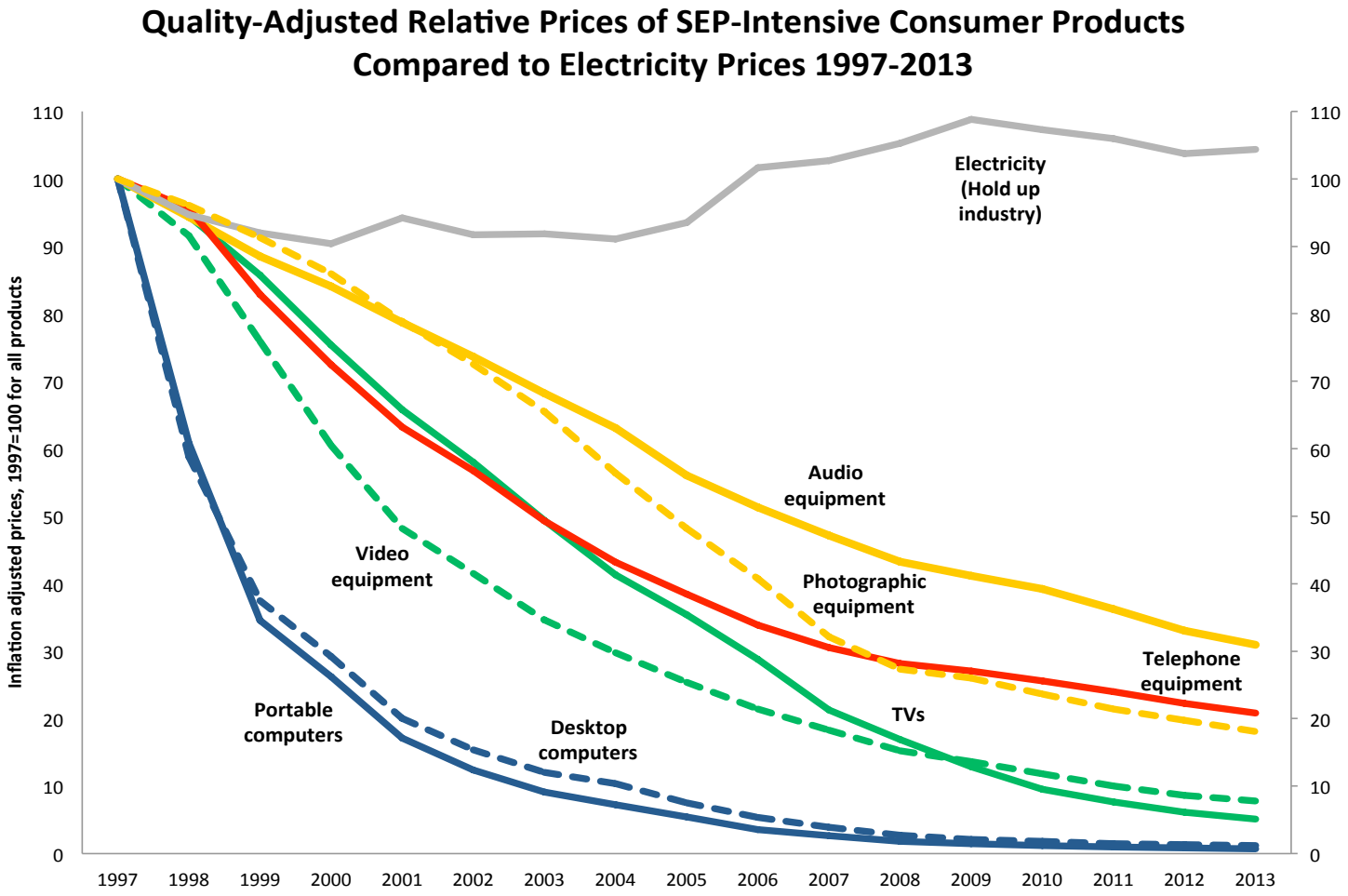
What is the role of government in the web of contracts?

Government facilitates the operation of the network by specifying and enforcing the property rights that are the basis of contracts, and it does so equally for everyone.

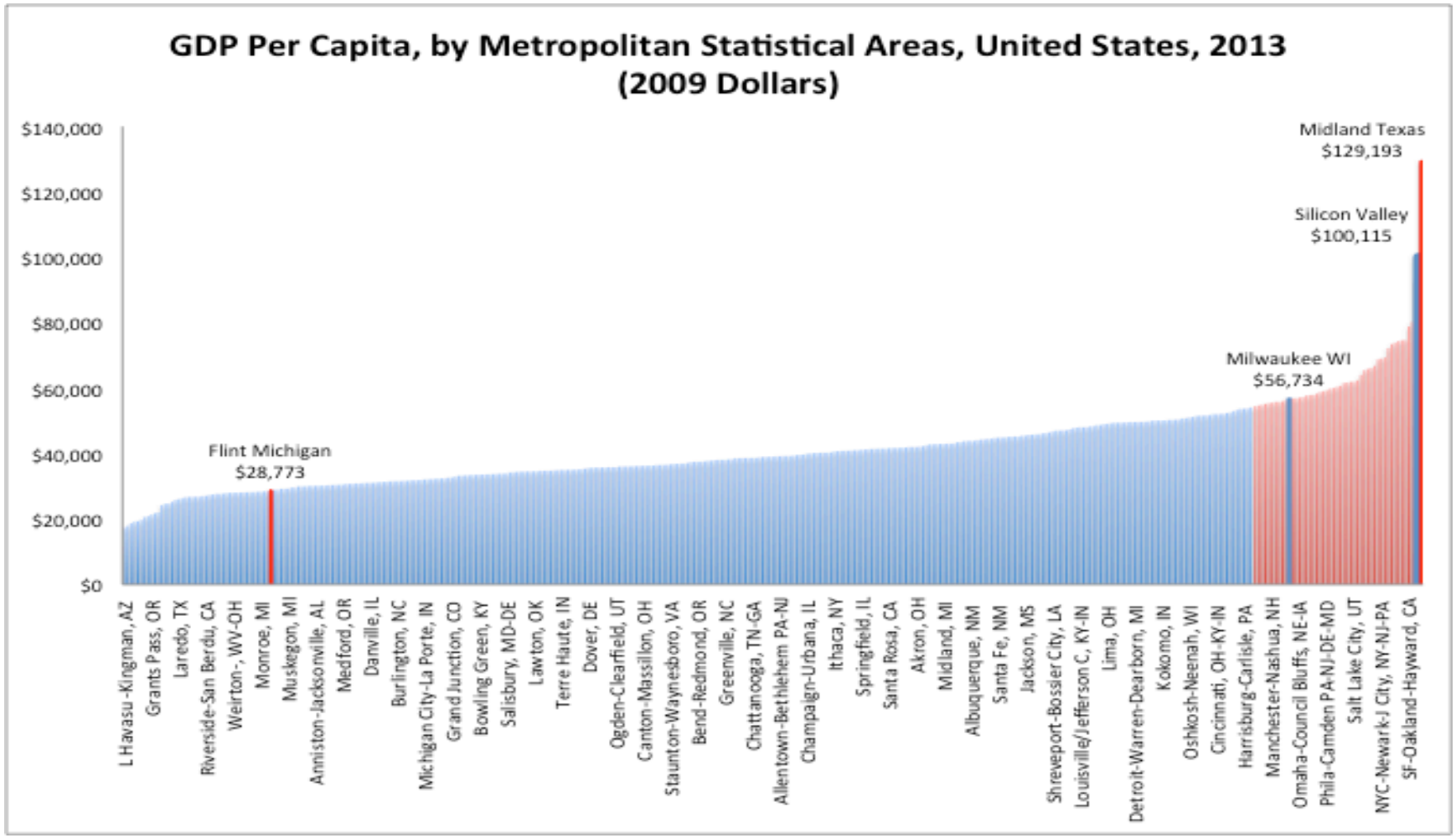
Specifically:

1. It delineates property rights by specifying their boundaries.
2. It makes those rights transparent by maintaining property registries.
3. It enforces those rights by using its police power.
4. It makes those property rights transferable by fairly adjudicating disputes over property rights and contracts.

How property rights in IP drive firm entry, innovation, and falling prices for consumers



Universal property rights → dense network of contracts → many opportunities for innovation→ broadly based economic development



It goes without saying that IPR drives Silicon Valley, but what about Milwaukee, Wisconsin?

Answer: IPR.

The major industries of Milwaukee

- Johnson Controls--a Fortune 500, diversified, multi-industrial, multinational conglomerate with 170,000 employees. It optimizes energy and operational efficiencies of automobiles, buildings, automotive batteries, and electronics.
- 3 divisions of GE Healthcare--Life Care Solutions (ECG, anesthesia delivery); Magnetic Resonance (MRI machines); Molecular Imaging & Computed Tomography (PET and CT scanning equipment).
- Rockwell Automation—a Fortune 500 company with 22,000 employees, serving customers in 80 countries, providing industrial automation services.

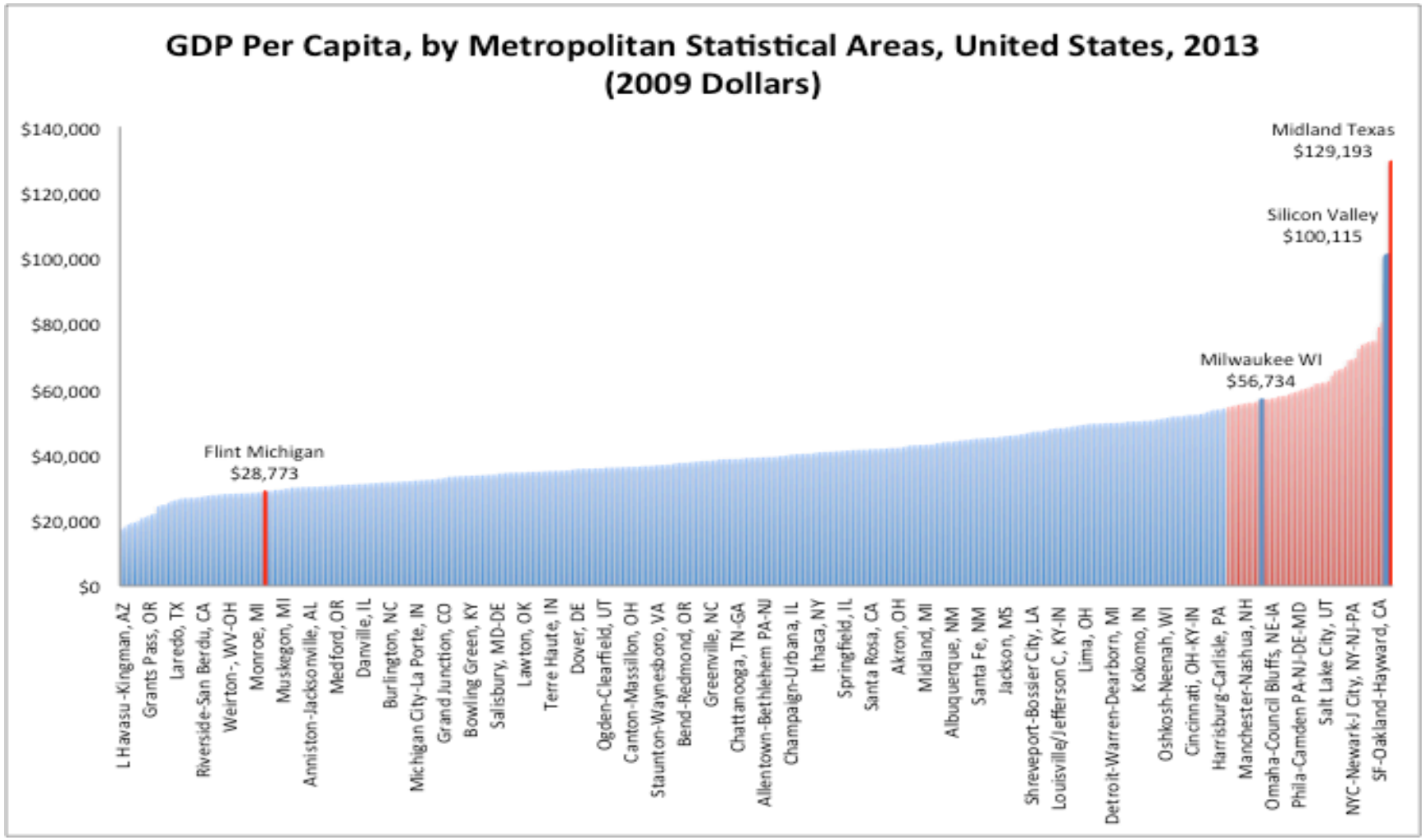
Lets take a look at one Milwaukee firm: Rockwell Automation

An example of a Rockwell patent:

20150097571 APPARATUS AND METHOD FOR AUTOMATIC GROUND FAULT LOCATION DETERMINATION IN HIGH RESISTANCE GROUNDED MOTOR DRIVE SYSTEM - A PLC or other industrial controller programmed to locate ground faults in a networked high resistance grounded multi-drive system through network communications messaging to automatically place networked motor drives in various operational states to isolate individual drives for ground fault identification testing and selectively identify individual drives as suspected ground fault locations.04-09-2015

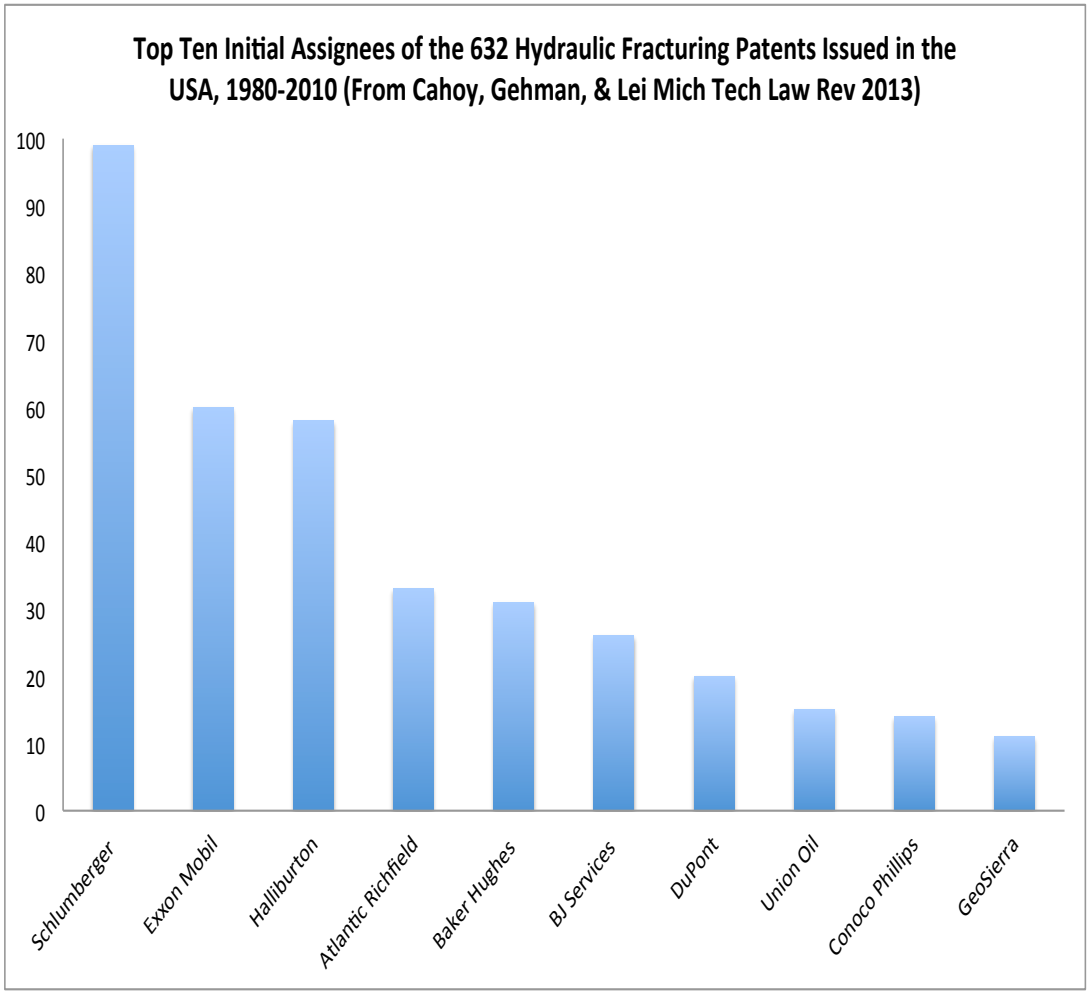
In 2013, Rockwell received 126 patents (the 226th most prolific patentee in the US).

No oil boom in Midland Texas without IPR



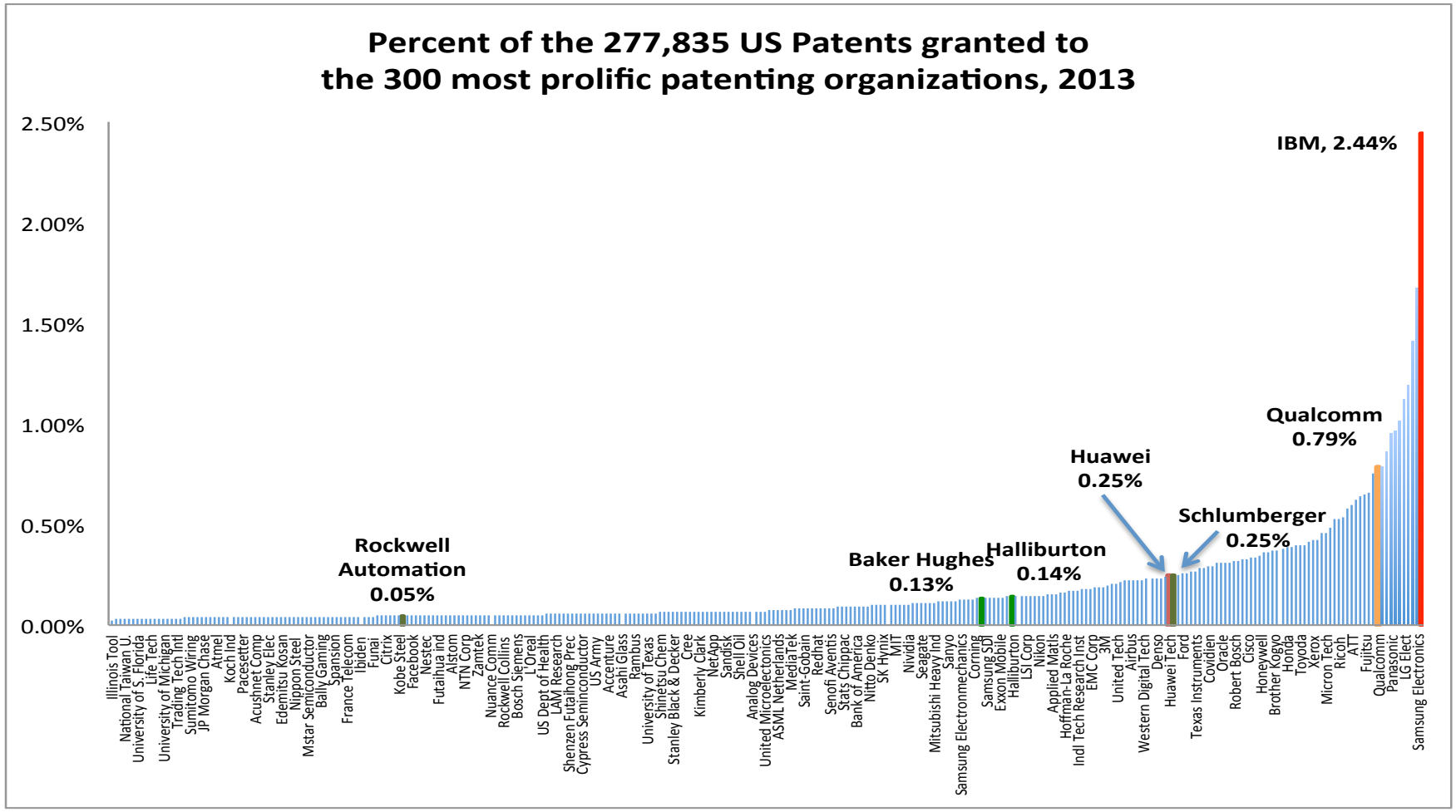
IPR and the Fracking Revolution

Fracking: the combination of horizontal drilling, slickwater fracturing, and a propping agent to release gas trapped in shale.

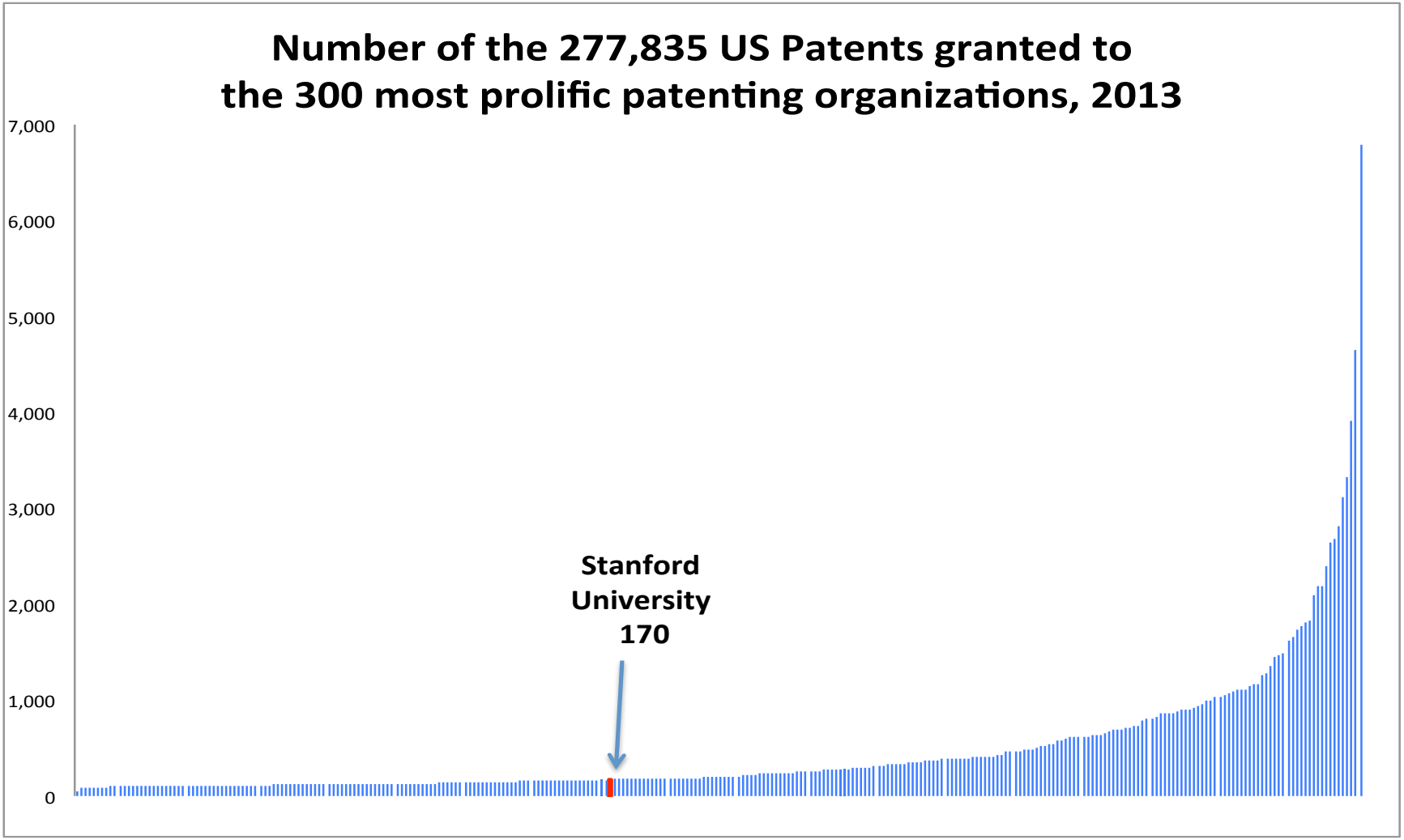


IPR is not only for large firms

(Note: Numbers of patents not as important as patent quality, which is not captured in this graph)



Major patent developers include…. Stanford University..



An example of a Stanford patent

U.S. Patent Application No. 20140348894
Engineered Protein Coating for Medical Implants
Raphel, Jordan R.
Parisi-amon, Andreina
Heilshorn, Sarah C.

This patent application would protect a bone interfacing medical implant that has a bone interfacing coating for promoting bone regeneration made up of an engineered protein containing an elastin-like structural domain and a cell-adhesive domain; the implant also comprises a medical implant with its surface covalently and directly bonded to the coating via photoreactive crosslinking. This innovation eliminates the need for applying bone cement to a patient during a surgical procedure to install a medical implant, like a dental implant or a joint prosthesis.

How are Stanford patents managed?

- Basic Rules of Licensing Income: 15% OTL to cover legal and business costs; of remainder, 33% to inventor, 33% to inventor's department, 33% to her school

Number of Licenses granted, 2013-14	106
Gross Royalties, 2013-14	$108.6m

- Basic Rules of Equity Positions: 15% to OTL, remainder 50-50

Number of Equity Positions	170
Income from Liquidated Equity	$23.2m

Examples of OTL Equity Positions

Google

Cooligy Inc (acquired by Emerson Electric)

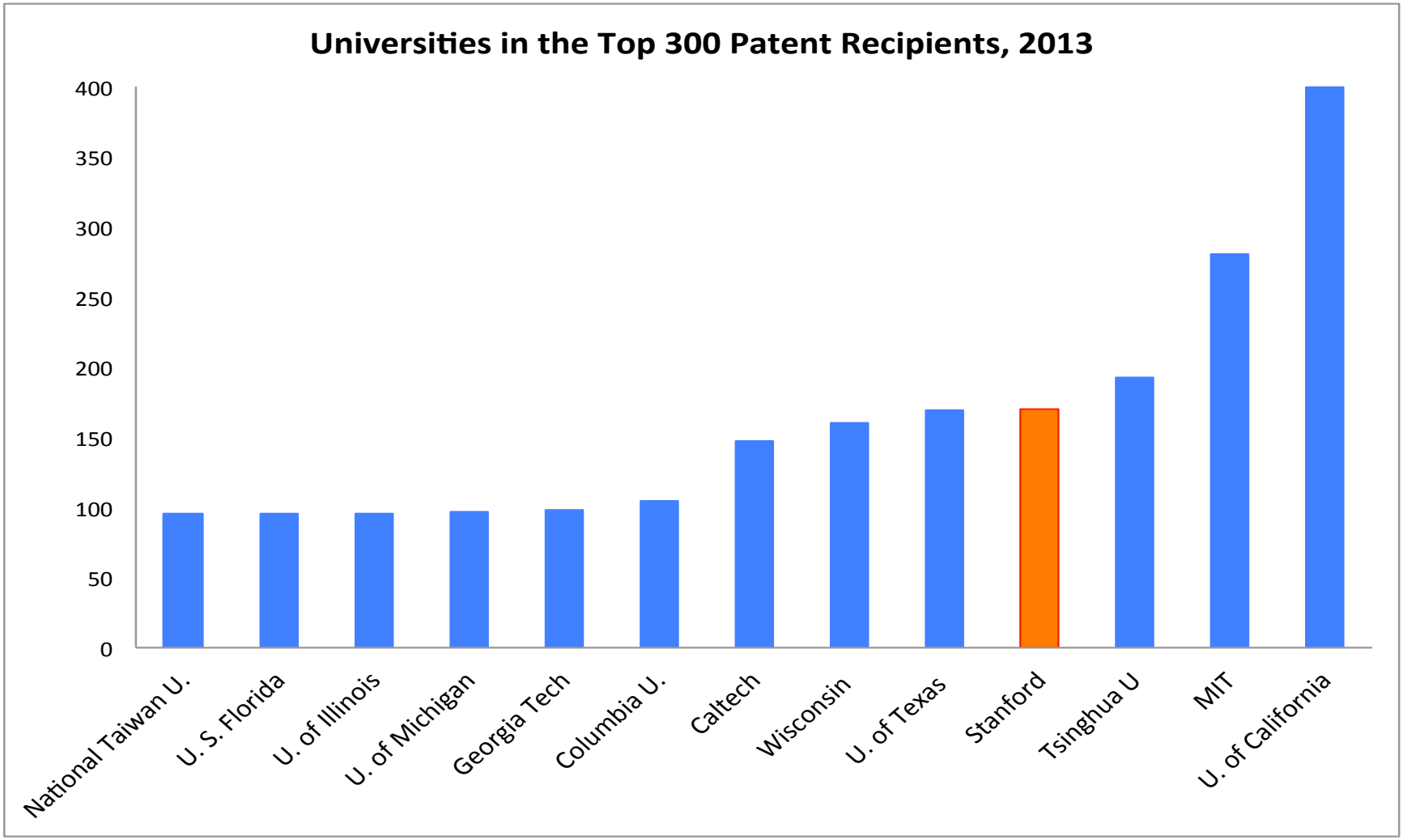
Hypnion (acquired by Eli Lilly)

Kosan Biosciences (acquired by Bristol Meyers Squibb)

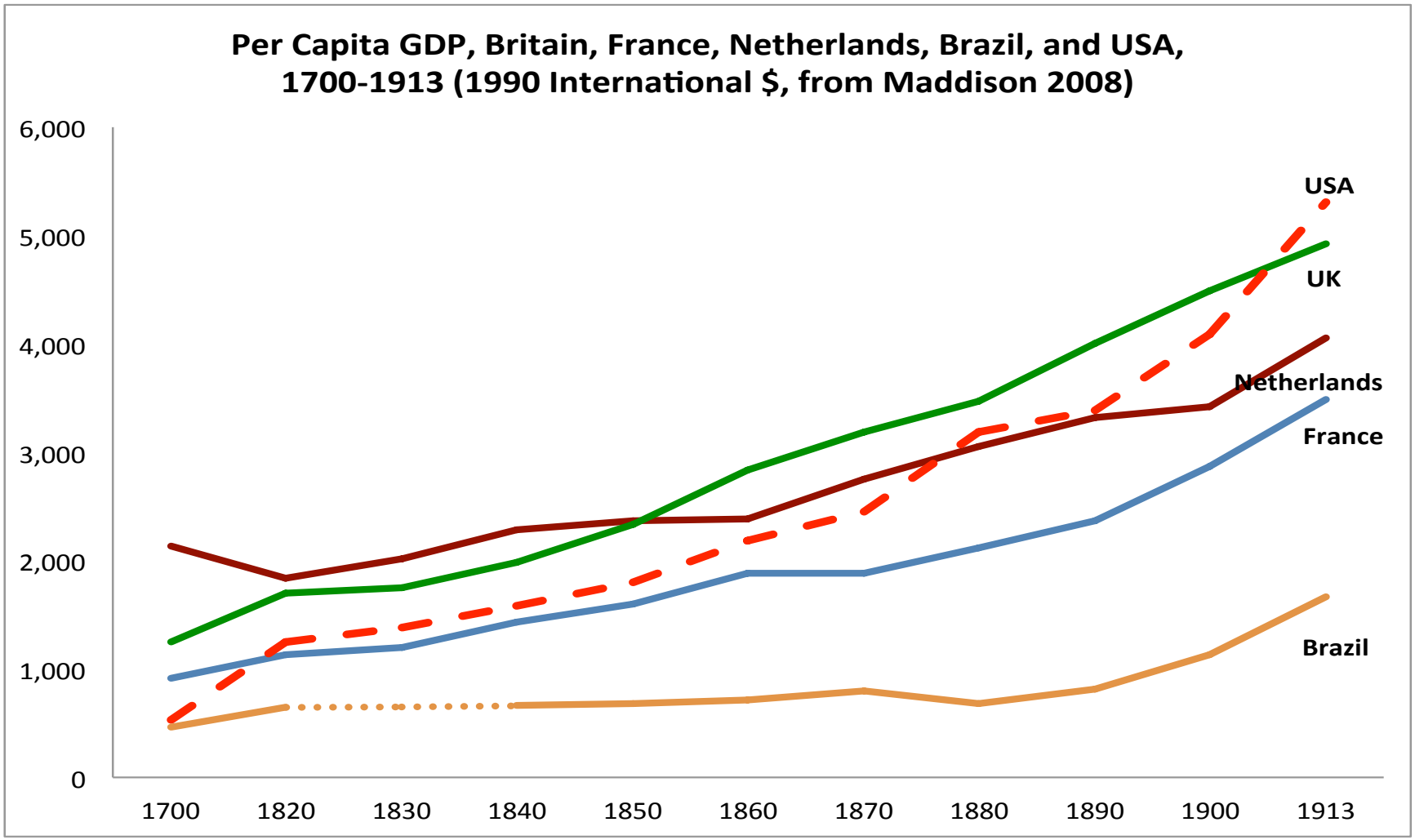
Sensant Corp (acquired by Siemens)

VMWare (acquired by EMC Corporation)

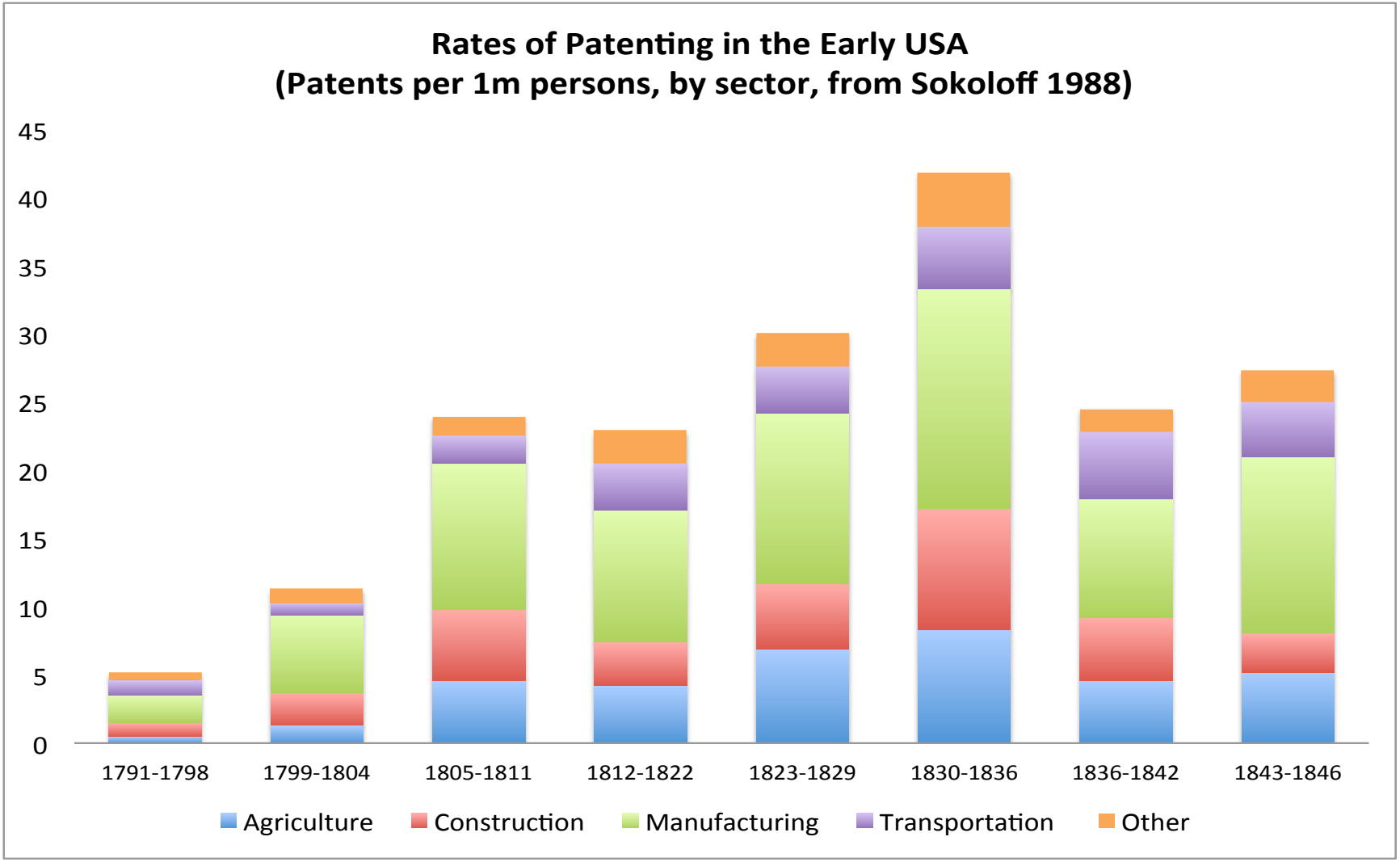
Stanford is not the only university with a large patent portfolio



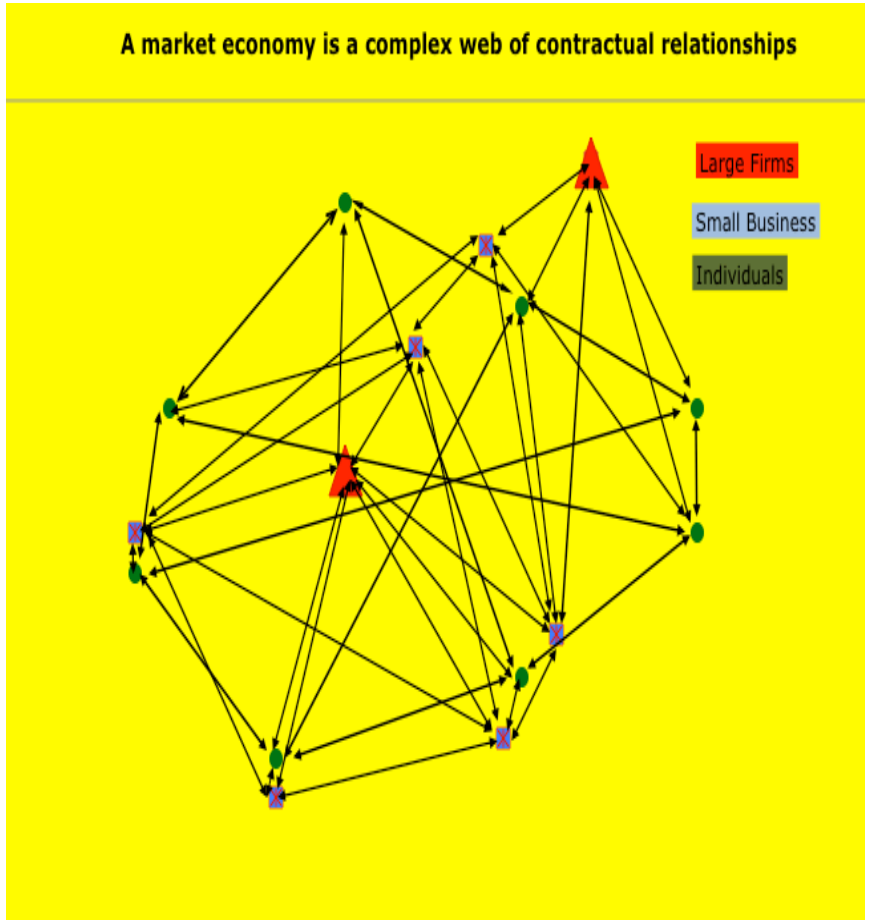
Why the emphasis on IPR throughout U.S. history? Because the US started out poor and backward

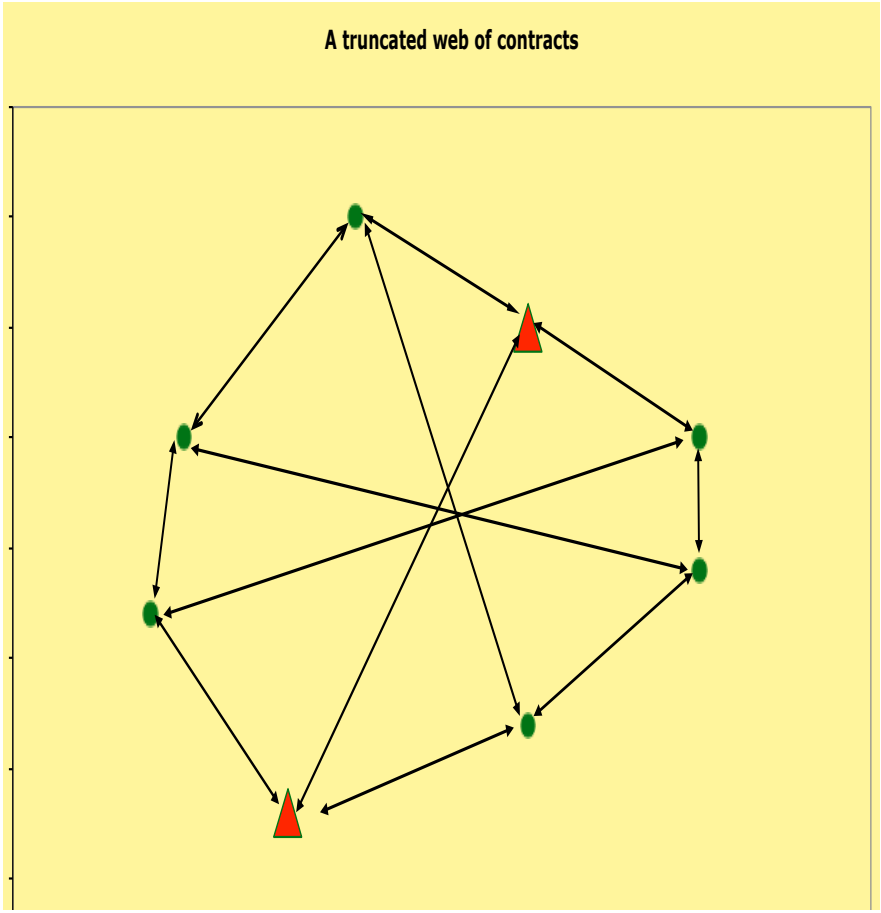


What was the outcome of the U.S. Patent Acts of 1790 & 1836? A boom in invention!



What happens when the state selectively enforces property rights or picks winners?

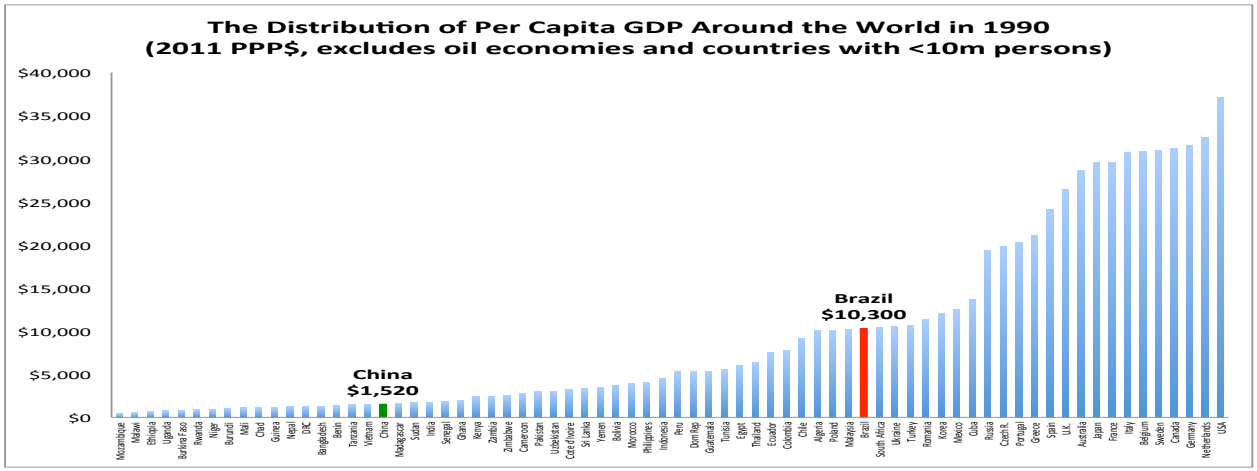


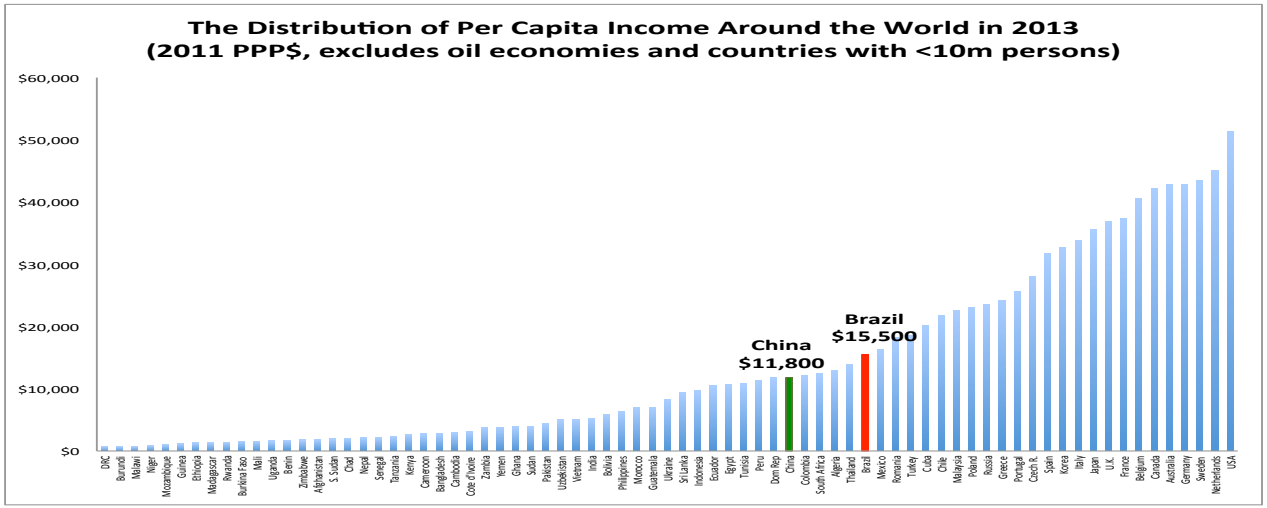


What happens when the web of contracts is truncated? An example: Brazil

- Brazil does not just have weak IPR, it has weak rule of law, and parties that stay in power by creating jobs via loans from government banks.
- To compensate for lack of IPR, the government has tried to create an IT industry since 1984, through legislation: the Lei de Informática.
- Question: How many people in this room own a Brazilian computer, smartphone, tablet?

The Brazilian economy has grown, but not fast enough to join the club of wealthy countries





Conclusions:

- IPR not only about creating a “Silicon Valley,” but about creating lots of Milwaukee’s and Midland’s.
- Milwaukee’s and Midland’s come out of economic systems characterized by webs of contracts
- Webs of contracts develop when there are property rights to serve as the basis of contracts.
- IPR is a particularly important type of property right.

Innovation in IP Markets: Remix

Terry Hart, Director of Legal Policy, Copyright Alliance

DC Comics v. Towle (9th Cir. 2015)

"In our well-ordered society, protection of private property is essential." – Batman

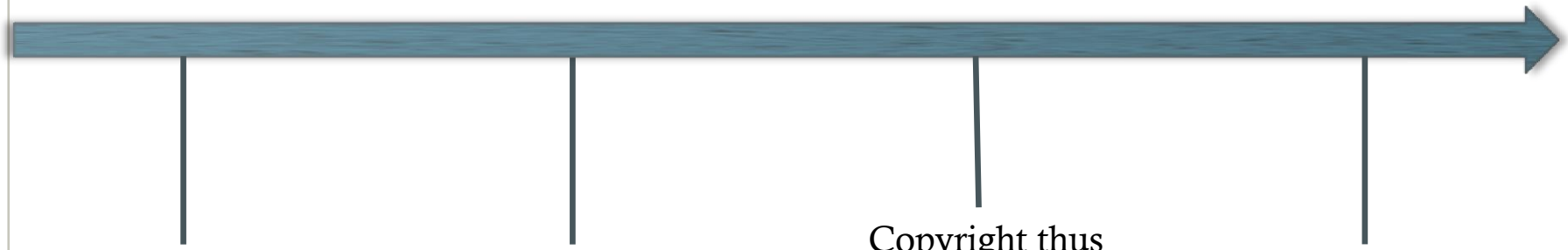
Remix Defined

A work that incorporates existing material to the extent that it would likely be prima facie infringing absent permission or a fair use defense

License to Remix

- Introduction to the background and policy developments of the "remix critique"
- Survey of remix landscape within the copyright marketplace
- Exploration of the benefits derived from the existing intellectual property legal framework

Remix Critique Key Points



All culture can be reduced to a remix of existing culture

Modern creativity is particularly reliant on explicit remixing

Copyright thus impedes culture and creativity by excluding existing works from follow-on users, absent permission

Given the expansion of copyright over time, the problem is only getting worse

The Remix Marketplace

- Retellings
  - A retelling is a recasting of a story in a different medium, such as transforming the Disney film *The Lion King* into a Broadway musical.

  ✓Adaptations

  ✓Remakes

  ✓Reboots

The Remix Marketplace

- Sequels and Beyond
  - ✓Tie-ins
  - ✓Spinoffs
  - ✓Mashups
  - Film sequels alone average nearly $2B annually in box-office revenue today, more than double what they earned in the ’90s
  - *The Lego Movie* is an example (*Who Framed Roger Rabbit* is another) of an authorized mashup; the film joins characters from the public domain, Warner Brothers, Harry Potter, Star Wars, etc. to create one storyline

The Remix Marketplace

- Raw Material
  - Stock footage and photography groups (who bring in collectively an estimated $2.4B annually) provide raw material for visual projects
  - The Harry Fox agency administers a licensing agreement between YouTube and music publishers to share in the royalties received from user-generated music videos that are posted
  - Amazon's Kindle Worlds licenses over thirty properties (including G.I. Joe and Veronica Mars) for the creation of fan fiction. So far 600 titles have been produced
  - All copyright owners are free to display a "public license," like the ones designed by Creative Commons, that define terms for public consumption

Benefits of the Copyright Framework

- Built-in audience
  - Using existing IP—even in non-theatrical markets like digital sell-through sites (iTunes, etc.)—provides a built-in consumer, explains the executive behind *Jarhead 2*
  - *The Return of Jafar (*the sequel to *Aladdin*), for example, earned Disney an additional $100M from the characters
  - Certain copyrighted stories and characters reach all media to the point of becoming a wealthy franchise with established brand power. Works to reach this level include: the Dick Tracy character, *Star Wars*, *Star Trek*, and the many Marvel Universe heroes

Benefits of the Copyright Framework

- Maximization of a work's value
  - The derivative works right incentivizes authors to maximize opportunities by producing valuable content in different mediums
  - *The Lion King, Beauty and the Beast*, and *Frozen* are all examples of franchises that Disney has successfully leveraged over the years.

Benefits of the Copyright Framework

- The right to share
  - Sharing is a gratuitous transfer where copyright owners either invite fans and audiences to use content, or choose not to enforce rights over unauthorized uses
  - E.g., songs from the *Girl with the Dragon Tattoo* soundtrack were made available for non-commercial remixing

Benefits of the Copyright Framework

- The right to exchange
  - Exchange is a transfer of content for purposes of creating new works in exchange for legal consideration
  - In 1986, Run-D.M.C. and Aerosmith fused hip hop and rock to remake the song “Walk This Way”

Benefits of the Copyright Framework

- Securing financing with licenses
  - Especially in the film industry, where production and marketing costs are high, licenses are paramount to securing financing
  - In 2005, after recovering from bankruptcy, Marvel received the necessary $525M it needed to start producing films on its characters. In the event performance targets were not achieved, the bank would be able to seize the movie rights to the characters.

Benefits of the Copyright Framework

- Risk-spreading
  - Licensing allows parties to use and enjoy copyrights without bearing much risk
  - Built-in audiences reduces the risk that a work will fail; and when a work does succeed, the profits can go to fund new works where the risk might be higher

Benefits of the Copyright Framework

- Specialization
  - Specialization occurs when a third party is forced to rely on her own strengths to create new works when a copyright holder excludes access to existing work
  - "Creativity is largely serendipitous," meaning exclusion from one work will ideally lead to the creation of new work

Benefits of the Copyright Framework

- Shepherding
  - A copyright owner shepherds their content by controlling distribution, overseeing creative decisions, and being selective in choosing who to share or exchange with
  - Before the release of *Return of the Jedi, a Star Wars* tie-in novel featured a romance between Luke Skywalker and Princess Leia. As a result of mistakes like this, LucasFilm now ensures continuity by closely vetting vendors and collaborators

Thank you!


copyright alliance
Connecting creators · Protecting creative work