

# Are Government Sources Reliable Evidence that Pioneer Patents Block Downstream Development?

**Ron D. Katznelson, Ph.D.\***

President, Bi-Level Technologies, Encinitas, CA

**CPIP 6th Annual Fall Conference**

OCTOBER 12, 2018

Antonin Scalia Law School, George Mason University, Arlington, Virginia

\*The Author is the Vice Chair for Patents of the IEEE-USA Intellectual Property Committee. The views expressed herein are his own and are neither the official positions of IEEE-USA nor IEEE. No other party supported or contributed to this presentation.

# Allegations that pioneer patents retard development are commonplace and often accepted by legal scholars

“We can present empirical evidence that the granting of broad patents in many cases has stifled technical advance and that where technical advance has been rapid there almost always has been considerable rivalry” — Merges & Nelson, *Columbia Law Review*, p. 877 (1990).

# Adverse narrative on pioneer patents

## ➤ Edison incandescent lamp

“the lengthy and expensive patent struggle in the lamp industry from 1885 to 1894 was a *serious damper on progress in lamp design.*” Bright (1949) 138-139. (My emphasis)

## ➤ Wright Brothers airplane

“During and prior to January 1917, the development of the aircraft industry in the United States was *seriously retarded* by the existence of a chaotic situation concerning the validity and ownership of important aeronautical patents...” *Mfrs. Aircraft Ass'n, Inc. v. U.S.*, 77 Ct. Cl. 481, 483-484 (1933). (My emphasis)

# Adverse narrative on pioneer patents (Contd.)

## ➤ **Selden automobile**

“...the Selden automobile patent “did certainly slow... [Henry Ford] down.” Merges & Nelson, (1990) 890 n217 (My emphasis)

## ➤ **Fleming diode (radio)**

“The court decided that De Forest had infringed the two-element Fleming [diode] vacuum tube, while Marconi had infringed the three-element [triode] De Forest patent. *Neither company could manufacture the triode.*” Maclaurin (1971) at 85. (My emphasis)

# In previous work we found evidence of robust development in *all* cases

- Specific allegations proven wrong
- No evidence to support allegations of development block
- Copious evidence of development
  - Exponentially increasing patenting rates;
  - Steeply rising rates of (a) investment, (b) production, and (c) new industry entrants;
  - Licensing diffused access to technology

# Previous work with co-author John Howells

- “The Myth of the Early Aviation Patent Hold-Up - How a US Government Monopsony Commandeered Pioneer Airplane Patents,” 24 *Industrial and Corporate Change*, 1-64. (2015). <http://ssrn.com/abstract=2355673>
- “The Coordination of Independently-Owned Vacuum Tube Patents in the Alleged Early Radio Patent ‘Thicket,’” (2014). <http://ssrn.com/abstract=2450025>
- “Inventing-around Edison’s incandescent lamp patent: evidence of patents’ role in stimulating downstream development,” (2018). <http://ssrn.com/abstract=2464308>
- “The 'Overly-Broad' Selden Patent, Henry Ford and Development in the Early US Automobile Industry” (2016). <http://ssrn.com/abstract=2801309>

# Why are (false) allegations of development block so widespread in the scholarly literature?

- We observe that such allegations of industry-stifling patents are made about these century-old pioneer patents but not contemporary pioneer patents
- What are the sources that distinguish the analysis of the century-old pioneer patents from current patents?

## **Significant reliance on government sources written in the heyday of antitrust investigations and enforcement actions**

- Alleged pioneer-patent blocks were part of these government investigations under the Sherman Act of 1890, the Federal Commission Act, and the Clayton Act, both of 1914, into anticompetitive practices by the newly-emerged successor oligopolies
- Reports given undue credence by contemporary scholars



# Government Sources on the Edison Patent

Pioneer Patent Enforced	Antitrust Inquiry Government Source			Ref. Citing Gov't Source
	Gov't Source	Descendants' Conduct Under Inquiry	Description of the Pioneer Patent Holder's Conduct	
1886	<i>U.S. v. GE</i> (1911).	Alleging that <b>GE</b> and other lamp manufacturers implemented illegal patent license and price-fixing arrangements in <b>1907-1909</b> , capturing 97% market share.	Identifying <b>Edison's</b> patent as conferring a lamp "Monopoly" to <b>GE</b> , which it sought to extend after the expiration in 1894 by securing tungsten lamp patents.	
	<i>U.S. v. GE</i> (1949)	Alleging that defendants <b>GE</b> and other lamp manufacturers restrained trade in lamps in the period <b>1927-1941</b> . p. 892.	Describing <b>Edison</b> patents and their "virtual monopoly of the domestic supply in electric lamps" from 1891 to 1894. p. 771	1
	FTC (1980)	Reviewing the Anti-Trust cases brought against <b>GE</b> covering the years <b>1907-1973</b> . pp. 94-130.	Describing <b>Edison's</b> successful enforcement of his patent and the formation of <b>GE</b> . p. 7-8	
	Pooling of Patents (1935)	Reproducing the Independent Lamp Manufacturers' account alleging <b>GE's</b> patent-tying antitrust violations from <b>1903 to 1933</b> . pp. 3813-55.	Through his patents <b>Edison</b> "commenced the monopoly of the electric-lamp industry in 1880." p. 3825.	2

# Government Sources on the Selden Patent

Pioneer Patent Enforced	Antitrust Inquiry Government Source			Ref. Citing Gov't Source
	Gov't Source	Descendants' Conduct Under Inquiry	Description of the Pioneer Patent Holder's Conduct	
1903	FTC (1939)	Investigated whether <b>GM, Ford</b> and <b>Chrysler</b> having combined market share that rose to 90% during the period <b>1927-1939</b> were engaged in unfair competition.	Describing the patent pool set up by the <b>Selden</b> patent owner, the <b>ALAM</b> .	
	TNEC (1940)	Alleging that during <b>1927-1939</b> , except for Ford, "the behavior of the other members of the industry is not effectively competitive." p. 198.	Describing the <b>ALAM</b> 's "attempt to subject the automobile industry to control through the exercise of patent rights." p. 194	3, 4, 5
	Pooling of Patents (1935)	Inquiry on Patent Office procedures that previously permitted <b>Selden</b> to delay prosecuting his application to final agency action. pp. 545, 555-56, 1118.	"The <b>Selden</b> patent was held secret in the patent office for years, during which time the automobile industry developed with no teaching from <b>Selden</b> , then it was issued to levy heavy tribute on an already developed industry." p. 1129.	2

# Government Sources on the Wright Patent

Pioneer Patent Enforced	Antitrust Inquiry Government Source			Ref. Citing Gov't Source
	Gov't Source	Descendants' Conduct Under Inquiry	Description of the Pioneer Patent Holder's Conduct	
1910	Atty. General (1917)	A Government legal opinion finding that the formation and operation of the <b>MAA</b> patent pool "is not in contravention of the antitrust laws of the United States." p. 172.	"The result of these [aircraft] patent claims was not only to render the cost of airplanes to the Government excessive, but also to make it difficult for the Government to get its orders filled." p. 167.	3, 6, 18, 19, 21
	Pooling of Patents (1935)	Investigating the <b>MAA's</b> patent pooling practices during <b>1917-1935</b>	Testimony alleging that the <b>Wright Bros.</b> demanded prohibitive patent license fees. Part. 1, p. 3-4.	9, 15, 20
	<i>MAA v. U.S.</i> (1933)	Evaluating the <b>MAA's</b> rights under its patent licenses to the U.S. Government during <b>1917-1928</b>	Alleging that prior to 1917, "the development of the aircraft industry ... was seriously retarded by ... important aeronautical patents." Pp. 483-484.	7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19

# Government Sources on the Fleming Patent

Pioneer Patent Enforced	Antitrust Inquiry Government Source			Ref. Citing Gov't Source
	Gov't Source	Descendants' Conduct Under Inquiry	Description of the Pioneer Patent Holder's Conduct	
1915	FTC (1924)	Investigating <b>RCA's</b> patent licensing practices in <b>1919-1923</b> ; alleging it curtailed output of tubes, "hindering the manufacture and sale of radio apparatus, such as receiving sets, by its competitors." p. 10.	Alleging that prior to 1917, <b>Marconi's</b> refusal to license the <b>Fleming</b> patent blocked radio technology development. p. 25. During its term, the <b>Fleming</b> patent conferred "an absolute monopoly" in tubes. p.4.	1, 2
	<i>U.S. v. RCA</i> (1932).	Alleging that <b>RCA</b> and its shareholding companies violated antitrust laws during <b>1919-1930</b> by using exclusive patent cross-licensing agreements to restrain trade.		

# Divergent standards of proof

- Reports and court findings recite allegations of the government as a *litigant* or interested party – not the result of impartial fact-finding
- Finding liability under the FTC Act does not require showing of actual harm – alleging “unfair *methods* of competition” with only *incipient*, or *potential* harm is sufficient
- Records do not contain evidentiary challenges to blocking statements: acquiescence in false allegations facilitated the usual outcome: settlements and consent decrees.

# Analysis

- In each case, the allegations that the “historical” subject of the action had previously impeded development helped enforcers present a more coherent “prior conduct” (false) narrative that aided the prosecution of the case at issue involving e.g. patent licensing abuses of the subject at later dates .
- Although these actions and reports had merit as pertaining to the specific alleged commercial conduct, the ancillary information on the company or its predecessor’s past enforcement of a pioneer patent was not central nor determinative of the outcome and thus was never scrutinized

# Conclusion



- Scholars should not accept without close scrutiny government sources' allegations on the effects of patent enforcement
- This is also true for contemporary sources
  - White House 2013 "PAE" Report
  - FTC 2016 "PAE" Reports
- Government sources are typically
  - Prosecutorial in nature;
  - Untasked with fact-finding on the effects of enforcing pioneer patents

# The forgoing is a summary of work with my co-author John Howells

---

## References

- Bright, Arthur A (1949), 'The Electric Lamp Industry', Macmillan: New York, 89, 138-139.
- Maclaurin, WR (1971), 'Invention and Innovation in the Radio Industry', Arno Press: New York, p85
- *Mfrs. Aircraft Ass'n, Inc. v. U.S.*, 77 Ct. Cl. 481 (1933) at 483-484.
- Robert P Merges and Richard R Nelson, "*On the Complex Economics of Patent Scope*," Columbia Law Review 90, no. 4 (1990)



# THANK YOU

Ron Katznelson  
[ron@bileveltech.com](mailto:ron@bileveltech.com)