THE TRUTH ABOUT STANDARDS

A return to reality October 11, 2018



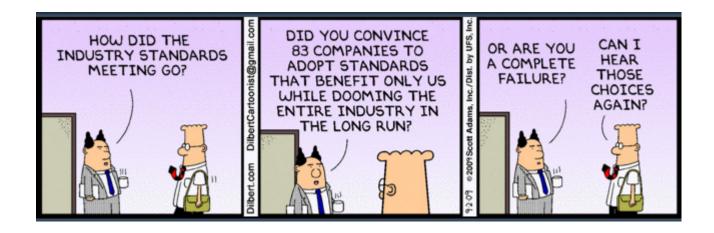


Disclaimer

Here in my own personal capacity

Views expressed are my own and not attributable to my employer.

A little levity to begin:

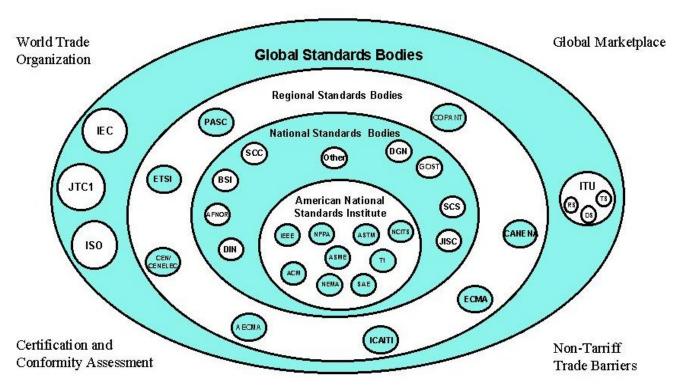


Understanding Standardization:

3GPP & 5G examples



Global Standards Arena

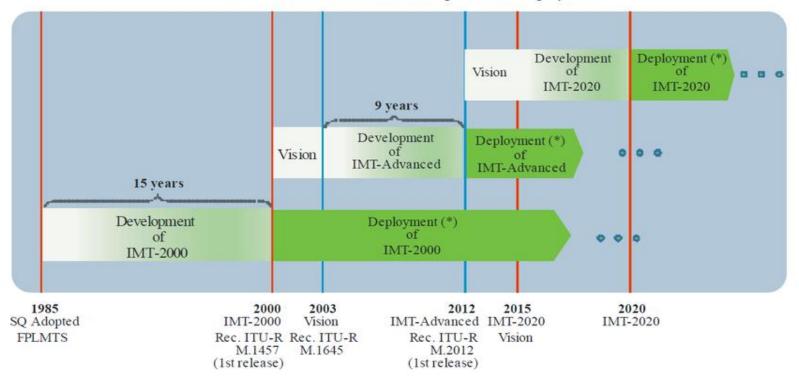


Source: http://www.crcamp.com/standards/ssm/fig3.jpg

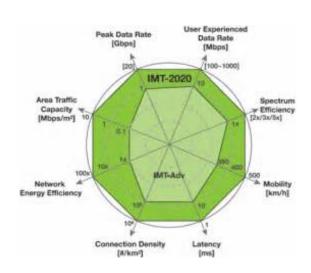


The ITU-R(adio)

Overview of timeline for IMT development and deployment



ITU 5G Vision



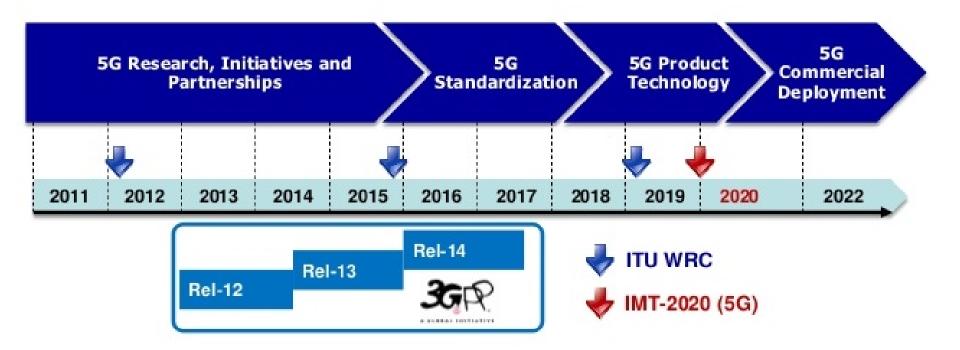
Gigabytes in a second Smart Home/Building Work and play in the cloud Augmented reality Industry automation Mission critical application Smart City Future IMT Work and play in the cloud Augmented reality Ultra-reliable and Low Long Communications Communications

Technical Requirements

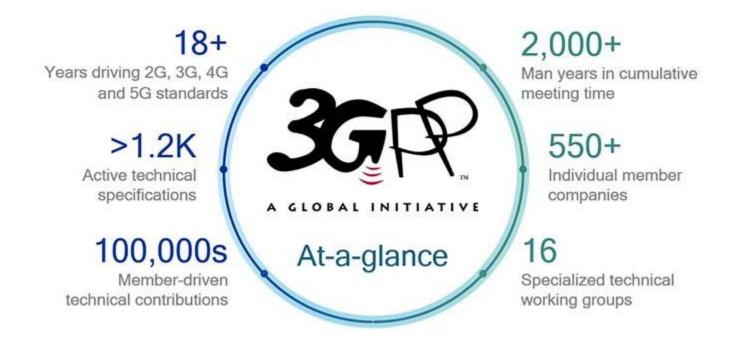
Use Cases



5G Expected Timeline



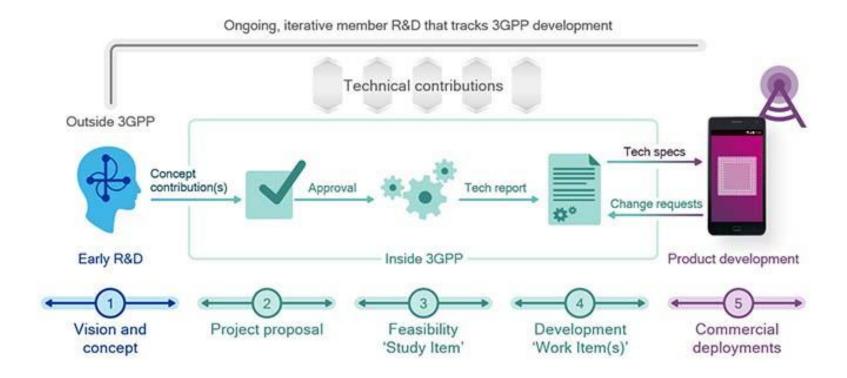
3GPP – At a Glance, 1



3GPP – At a Glance, 2



3GPP – At a Glance, 3



3GPP – Example Technical Meeting



Technical Standardization, Summary

- Technical development involved 100's of organizations
 - E.g., 3GPP TSG RAN WG1 Meeting #92, Athens Greece, 26 Feb 2 Mar, 2018
 - Everyone along technology chain involved, some competitors, most not.
- Each Meeting involves 1000's of contributions
 - E.g., 2,242 docs submitted just in the single meeting noted above
- Each single contribution could include 10+ proposals
 - E.g., R1-1801462, Agenda Item 7.1.6.1, has 10 Proposals for consideration.
- Basic principles: Open, Transparent & Consensus-based decisions.
 - At ETSI any member can join IPR SC, c.f., IEEE PatCom limited to only 7 members.
 - It's all about inter-operability. Members do not choose which technologies will be available to consumers and which technologies will be excluded, but rather work together to develop the best technology. (Think: rising tide...)



Understanding IPR Policies

ITU & ETSI examples



Generally

- Licensing Declaration
 - By the Patent Holder
 - Fair, Reasonable and Non-Discriminatory Terms and Conditions
 - Other terms:
 - Reciprocity & Transferability
- IPR Disclosure (aka, Patent Statement or IPR Information Statement)
 - Identification of specific patents
 - Issued patents and/or pending applications.
 - Includes Families
 - Might be a general declaration

ITU – Patent Statement and Licensing Declaration Form

- Document Type
 - Recommendation or Deliverable (Title/Name)
- Licensing Declaration, e.g.,
 - The Patent Holder believes that it holds granted and/or pending applications for Patents, the use of which would be required to implement the above document and hereby declares, in accordance with the Common Patent Policy for ITU-T/ITU-R/ISO/IEC.
 - Option 2, The Patent Holder is <u>prepared to grant</u> a license to an unrestricted number of applicants on a worldwide, non-discriminatory basis and on reasonable <u>terms and conditions</u> to make, use and sell implementations of the above document. Negotiations are left to the parties concerned and are performed outside the ITU-T, ITU-R, ISO, or IEC.
- Patent Statement: not required for Option 2



ETIS – IPR Information Statement and Licensing Declaration

- IPR Licensing Declaration
 - To the extent that the IPR(s) disclosed in the attached IPR Information Statement Annex are or become, and remain ESSENTIAL in respect of the ETSI Work Item, STANDARD and/or TECHNICAL SPECIFICATION identified in the attached IPR Information Statement Annex, the Declarant...are (1) prepared to grant irrevocable licences under this/these IPR(s) on terms and conditions which are in accordance with Clause 6.1 of the ETSI IPR Policy; and (2) will comply with Clause 6.1 bis of the ETSI IPR Policy.
- IPR Information Statement
 - Identified issued patents/applications. (+families)
- Clause 6.1
 - Patent Owner is <u>prepared to grant</u> irrevocable licences on fair, reasonable and non-discriminatory ("FRAND") terms and conditions ...



Understanding IPR Policies, Summary

- Goal: balance adequate reward for contributions with access.
- Licensing Declaration
 - Fair reasonable, and non-discriminatory terms and conditions.
 - FRAND is not a Rate. It's a complex business discussion of terms and conditions.
 - Essentiality: Mandatory or Option.
 - Patent holder is prepared to grant irrevocable licenses.
 - Prepared == able, willing. Cf, Commitment == promise, pledge
- IPR/Patent Statement
 - Can be specific or general/blanket.
 - Voluntarily provided & searches are not required.
- What if no Licensing Declaration provided?
 - SDO claims it will remove the covered technology.



Key Takeaways



In case you fell asleep, remember these:

- Inter-operability standards requires work in an open, transparent, and consensus based manner.
- Development is not "picking a technology" like selecting a box of cereal, but rather like baking a cake with 100's of chefs having 1000's of ingredients. A lot of trial and error == research/development.
- Submission of Licensing Declarations is voluntary, not mandatory. No quid pro quo or "but for". The IPR regime is to encourage participation.
- FRAND is for "Terms and Conditions" not Rates.



