



Rigorous empirical  
research on  
intellectual property

## License to All or Access to All? A Law and Economics Assessment of Standard Development Organizations' Licensing Rules

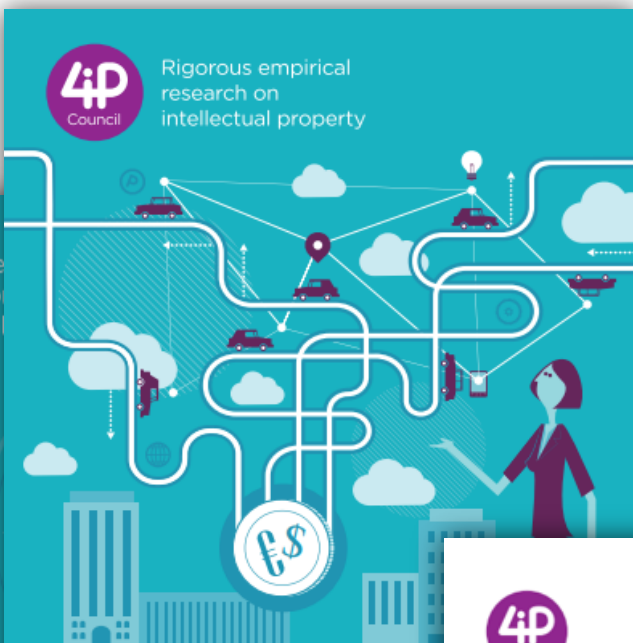
**Host:** Axel Ferrazzini, Managing Director, 4iP Council

**Presenters:**

**Anne Layne-Farrar**, Vice President in Competition Economics at Charles Rivers Associates and an Adjunct Professor at the Northwestern University Pritzker School of Law

**Richard J. Stark**, Partner in the Litigation Department of Cravath, Swaine & Moore LLP





## The Value of Connectivity in the Automotive Sector

Prof. Bowman Heiden  
Center for Intellectual Property (CIP), Chalmers University of Technology  
The Hoover Institution, Stanford University

## FRAND licensing levels under EU law

Dr Jean-Sébastien Borghetti  
Professor of Private Law at University Paris III Panthéon-Assas

Dr Igor Nikolic  
Senior Fellow at University College London (UCL) Centre for Law, Economics & Society

Dr Nicolas Petit  
Professor of Law at the University of Liege and at the College of Europe

Summary

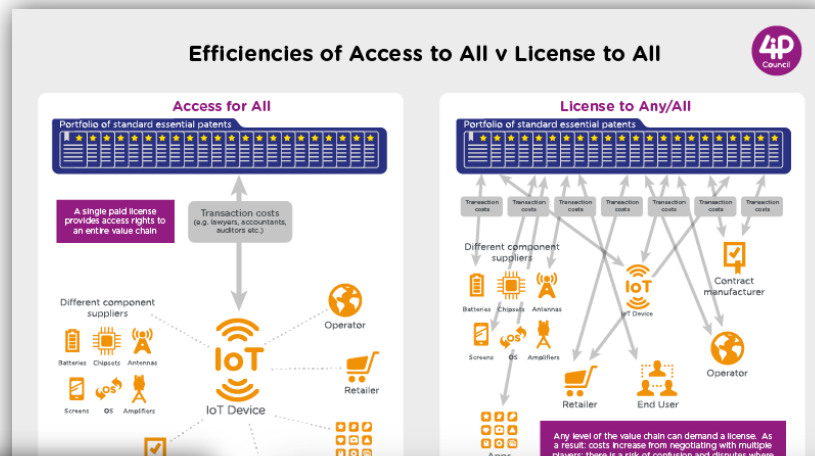
February 2020



4iP Council  
Research Award Winner 2019

## Pirates of the 3D Realm: Strategies for IP protection from the widespread adoption of additive manufacturing by consumers

by Alessandro Burro  
Candidate at Bocconi University  
LL.M. in Law of Internet Technology



## Case Law post CJEU ruling *Huawei v ZTE*

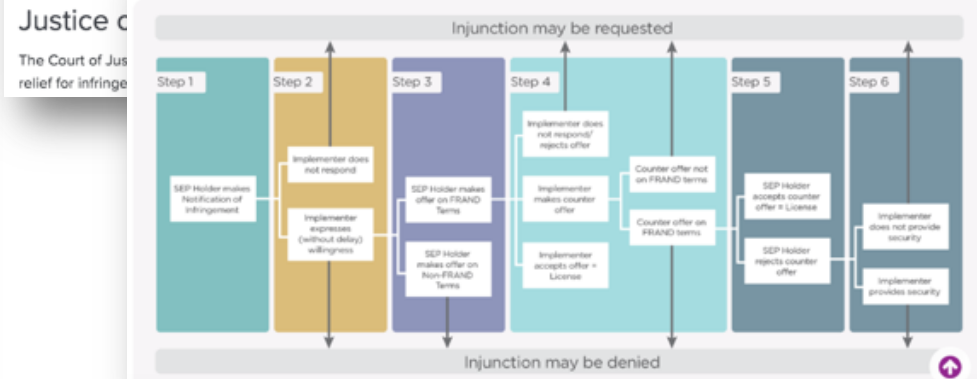
4iP Council | Case law home | CJEU *Huawei v ZTE* | German court decisions | Italian court decisions | English court decisions | English/Irish court decisions | Romanian court decisions | French court decisions | Dutch court decisions | National Courts Guidance

Authors & contributors


## National Courts Guidance

### Negotiating Licenses for Essential Patents in Europe

Increase Huawei v ZTE process



4iP
About
The Issue
Research
Publications
Webinars
Case Law Search
News
Features
4SMEs
Network



# Rigorous empirical research on intellectual property

Types of IP
Benefits of IP
IP for Business Growth
4 Reasons to Patent
4 Reasons 4 Copyright
4 Reasons 4 Trademarks
SME Features
Research

## Stay informed

To receive alerts for regular research reports, news and interviews from 4iP


Push

Click 'Stay Informed' on [www.4ipcouncil.com](http://www.4ipcouncil.com) to discover our **research news** and **future webinars** topics. And why not sign up @4ipcouncil on twitter.

### 4 REASONS TO PATENT

- 1 - MARKET ACCESS
- 2 - NEGOTIATING
- 3 - FUNDING
- 4 - STRATEGIC VALUE

Explore how patents add value with our [interactive guide](#).

### 4 REASONS 4 COPYRIGHT

- 1 - COMPETITIVE EDGE
- 2 - REPUTATION
- 3 - COLLABORATION
- 4 - FUNDING

Explore the benefits of copyright with our [interactive guide](#).

### 4 REASONS 4 TRADEMARKS

- 1 - DIFFERENTIATION
- 2 - PROTECTION
- 3 - REPUTATION
- 4 - REVENUE

Explore the benefits of trademarks with our [interactive guide](#).

### 4 REASONS 4 DESIGN RIGHTS

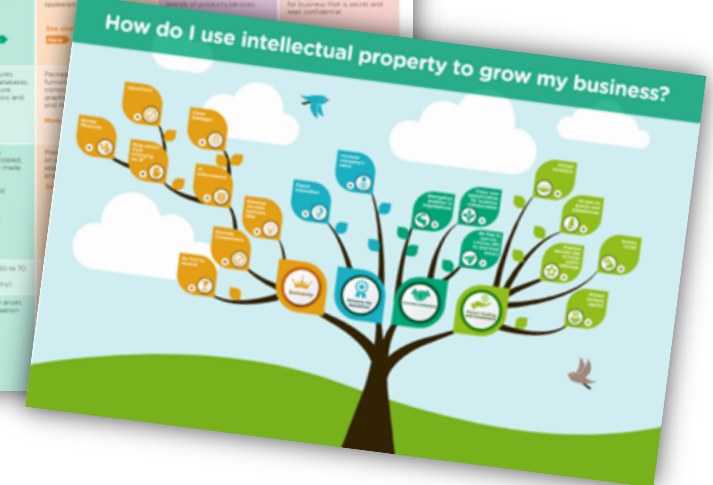
- 1 - EXCLUSIVITY
- 2 - COMMERCIALISATION
- 3 - REPUTATION
- 4 - VALUE

Explore the benefits of design rights with our [interactive guide](#).

Which types of intellectual property do you need?

Filter table columns

	PATENTS	COPYRIGHTS	DESIGNS	TRADEMARKS	TRADE SECRETS
What do they protect?	An invention, process and innovative way of doing something or solving a technical problem <a href="#">See also</a>	A work, an original intellectual creation <a href="#">See also</a>	A new and original design <a href="#">See also</a>	Any sign that identifies goods or services <a href="#">See also</a>	Any type of useful information for business that is secret and not confidential <a href="#">See also</a>
Examples of what is protected	Inventive products and processes in all types of business For examples of successful inventions see <a href="#">this</a>	Audio-visual works, pictures, graphics, architecture, databases, software, designs, literature, novels, poems, plays, music and video, graphic works <a href="#">See also</a>	Product and business process designs <a href="#">See also</a>	Product and service marks <a href="#">See also</a>	Business secrets <a href="#">See also</a>
How are my rights protected?	Prevents unauthorised making, using or selling of the patented invention	Prevents the work being copied, reproduced or made available online	Protects the integrity and attribution of the work	Related rights: Public performance and display of the work <a href="#">See also</a>	
How long is my innovation protected?	Up to 20 years	Lifetime of the author plus 70 years after their death (depending on the country)	Up to 15 years	Up to 15 years	
Do I have to register it?	Yes, filing an application to a patent office is required <a href="#">See also</a>	No, copyright protection arises automatically with its creation <a href="#">See also</a>	Yes, filing an application to a design office is required <a href="#">See also</a>	Yes, filing an application to a trademark office is required <a href="#">See also</a>	



# License to All or Access to All? A Law and Economics Assessment of Standard Development Organizations' Licensing Rules



**Anne Layne-Farrar**, Vice President in Competition Economics at Charles Rivers Associates and an Adjunct Professor at the Northwestern University Pritzker School of Law



**Richard J. Stark**, Partner in the Litigation Department of Cravath, Swaine & Moore LLP

---

# License-to-All or Access-to-All?

---

## Topics

1. The Arguments
2. Principles of Patent Law
3. Patent Licensing
4. SDO Policies (ETSI, IEEE)
5. Legal Analysis
6. Economic Issues

# The Arguments

---

- In favor of license-to-all:
  - All entities in chain of production need licenses to SEPs.
  - FRAND commitments should be interpreted to require SEP holders to grant SEP licenses to anyone who asks.
- Against license-to-all / for access-to-all:
  - Not true that all entities need licenses to SEPs.
  - Entities in the production chain need access to standardized technologies, to perform their link in the chain.

# What's really the issue?

---

- Amount of royalties.
- 1% royalty x \$1,000 device price = \$10
- 1% royalty x \$10 chip price = \$0.10

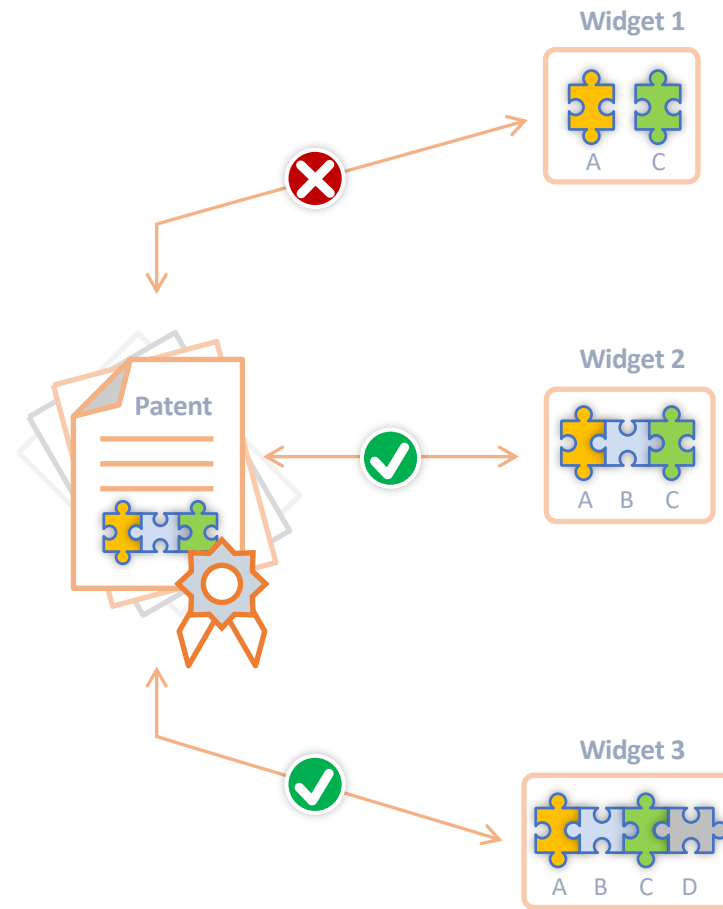
# Patent Law Principles

---

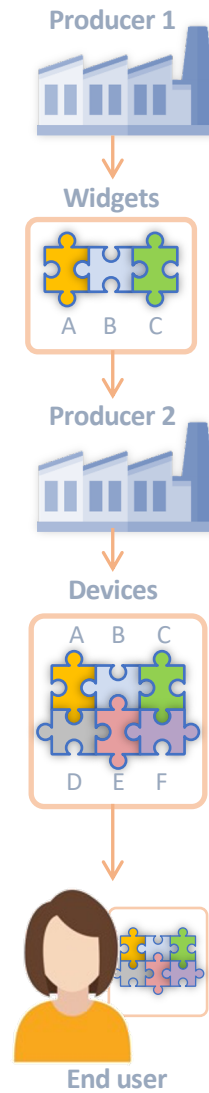
- What is a patent?
  - A patent is a grant from the U.S. government to an inventor of “the right to exclude others from making, using, offering for sale, or selling” his or her invention
  - For a limited time (20 years from the date of application)
- How is a patent enforced?
  - Litigation in national courts.
  - Patent holder must prove infringement (“all elements rule”).
  - Patent holder must overcome all defenses.
  - Remedies: damages, injunction



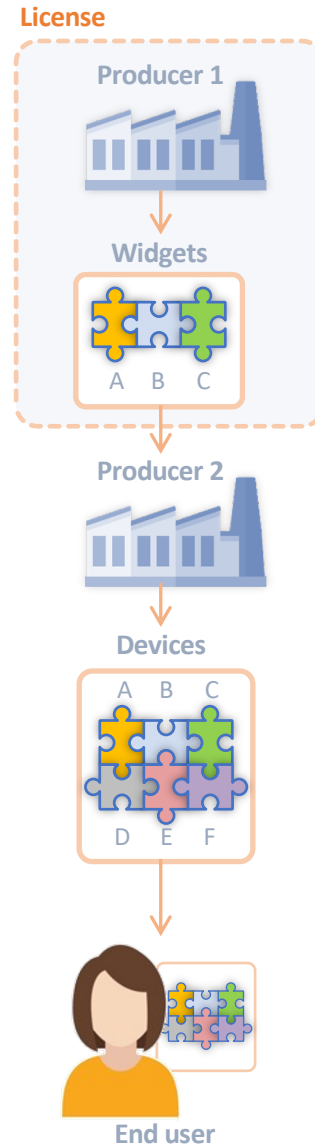
# Patent Infringement Analysis



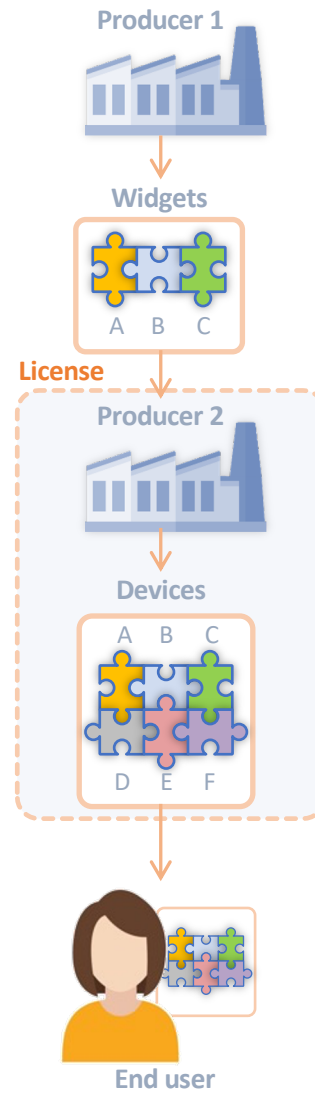
# Patent Infringement and Chain of Production



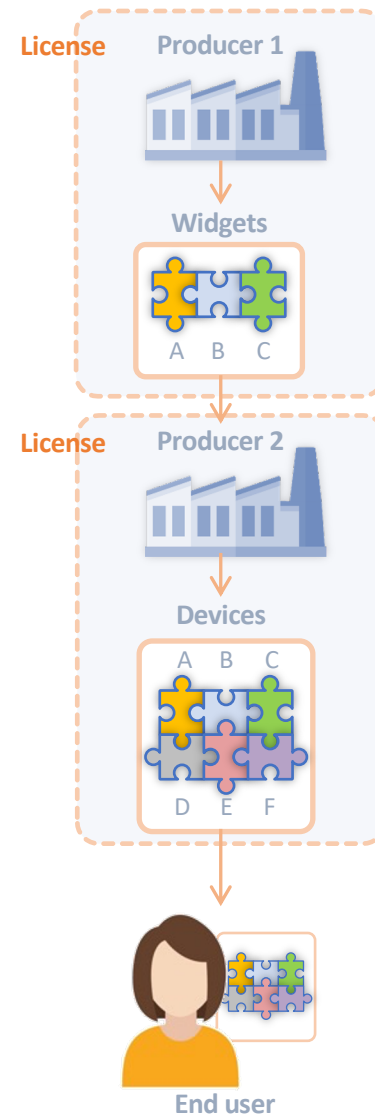
# Patent Licenses



# Patent Licenses



# Patent Licenses



# SEPs and FRAND

- Standard Development Organizations (SDOs) – there are many
- Industry standards – there are MANY

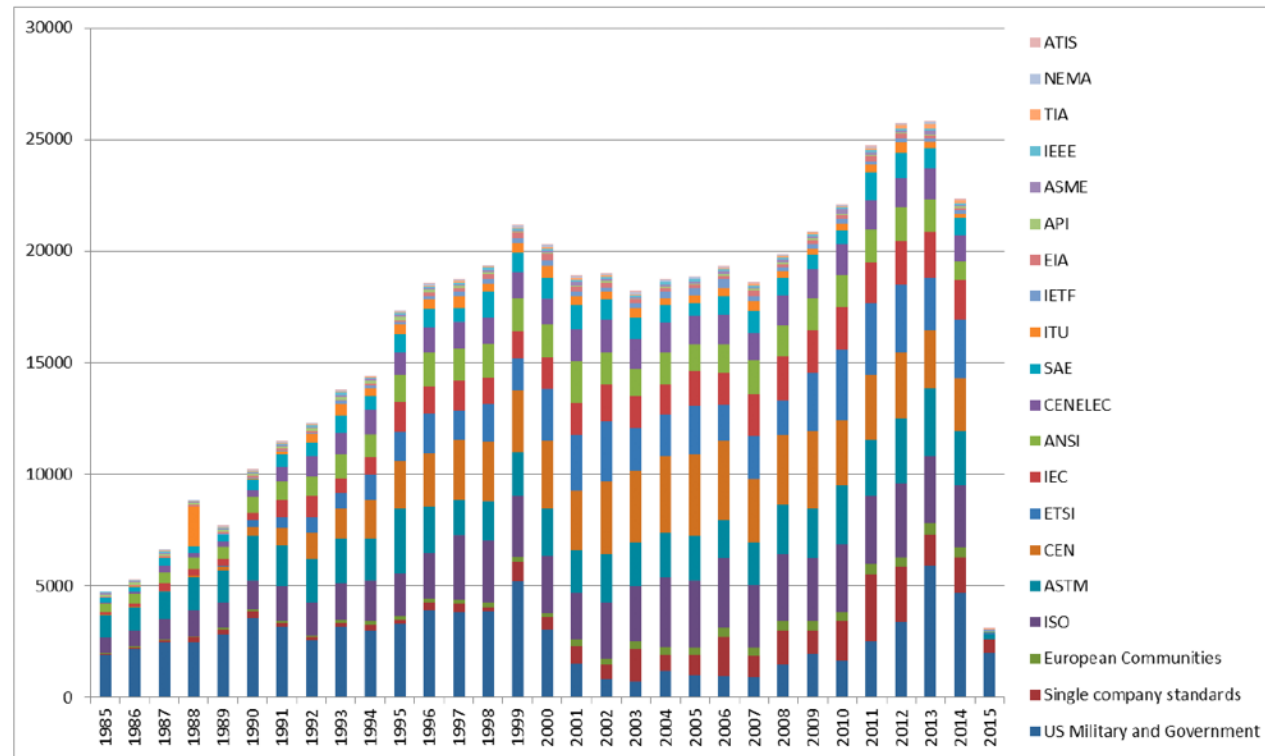
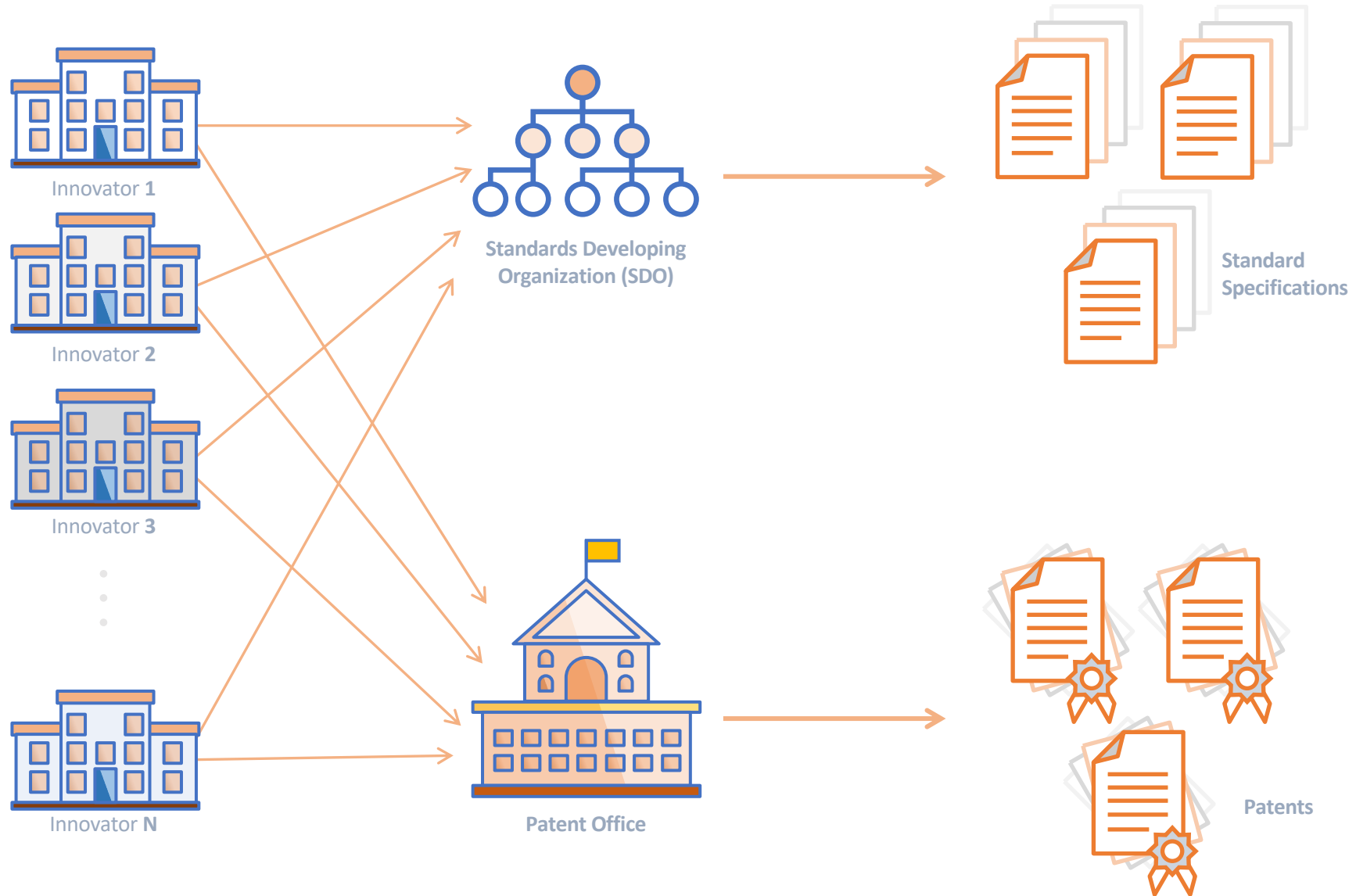


Figure 7: Number of standards issued each year by SSOs in our sample, by technological field

(Source: Justus Baron & Daniel F. Spulber, "Technology Standards and Standard Setting Organizations: Introduction to the Searle Center Database" (Feb. 2, 2018).)

# SEPs and FRAND



## SEPs and FRAND

---

- Standard Essential Patents (SEPs) – When the claims of a patent read on an aspect of a standard, so that it is not possible to practice the standard without infringing, the patent is “essential” and is referred to as an SEP.
- SDO policies/rules regarding SEPs (or intellectual property rights – IPRs – more generally).
  - Fair, Reasonable and Nondiscriminatory (FRAND) terms and conditions.



# ETSI IPR Policy

---

- Objectives
  - Reduce risk that a standard could be “unavailable”.
  - IPR holders should be adequately and fairly compensated.
- SEP owner is requested to commit that:
  - “it is prepared to grant irrevocable license on fair, reasonable and nondiscriminatory terms and conditions” “to at least the following extent”:
    - “MANUFACTURE... EQUIPMENT”
    - EQUIPMENT = “any system, or device fully conforming to a STANDARD”

# ETSI IPR Policy

---

- Does not:
  - Require licenses to the entire production chain
    - Merely asks the patent owner to agree “that it is prepared to grant irrevocable licenses”
  - Require licenses be granted to any particular entities
  - Require any particular number of licenses
- Rather, the scope of the ETSI FRAND commitment is defined in terms of subject matter: licenses for the manufacture of “fully conforming” devices and systems.

# IEEE Patent Policy

---

- SEP owner is requested to give a “letter of assurance” either that:
  - Will not enforce its SEPs; or
  - Will make available licenses “without compensation or under Reasonable Rates” to “make, have made, use, sell, offer to sell, or import any Compliant Implementation that practices the Essential Patent Claims for use in conforming with the IEEE Standard.”
    - “Compliant Implementation” = “any product (e.g., component, subassembly, or end-product) or service that conforms to any mandatory or optional portion of a normative clause of an IEEE Standard.”

# IEEE Patent Policy

---

- Does not:
  - Expressly require licenses to the entire production chain
- But unlike the ETSI IPR Policy:
  - The IEEE Patent Policy defines the scope of the license rights to be granted as covering any “Compliant Implementation”—a term that is defined to include components, subassemblies, and end-products.

# Legal Analysis

---

- Legal Analysis – Is it accurate to say that FRAND commitments require that licenses be granted to all comers?
- Are SEP licenses needed by all?
  - Legally – no.
  - Practically – no.
- Do SDO policies require licenses for all entities?
  - No.
  - FRAND commitments are contracts.
    - Must look at each specific SDO policy individually.
    - ETSI vs. IEEE
      - Neither contains an express requirement to license all.
      - Differ on scope of the licensing commitment.

# Legal Analysis

---

- Does competition law require licenses to all comers? No.
- Theories
  - “Intentionally false promise” - *Broadcom Corp. v. Qualcomm Inc.*
    - D.C. Circuit pointed out this is contrary to Supreme Court authority. *Rambus, Inc. v. FTC*
    - In any event, as the Ninth Circuit recently explained in *FTC v. Qualcomm*, the mere fact that a patent holder declined to license a subset of potential users of its technology without a finding of intentional deception does not fall within the Third Circuit’s “false promise” holding.
  - Refusal to deal – *Aspen Skiing* – very narrow
  - Refusal to license rivals contributes to monopoly power (Sherman Act section 2) - rejected by the Ninth Circuit in *FTC v. Qualcomm*.

# IEEE Patent Policy

---

- Does not:
  - Expressly require licenses to the entire production chain
- But unlike the ETSI IPR Policy:
  - The IEEE Patent Policy defines the scope of the license rights to be granted as covering any “Compliant Implementation”—a term that is defined to include components, subassemblies, and end-products.

# ROI Plays a Key Role in SDO Participation

---

- On the cost side:
  - Innovators invest in R&D, contribute technologies
  - Downstream implementers invest in turning standard specifications into commercial products
- Only incur these costs if benefits expected to outweigh them
  - Only two sources of profits:
    - 1) licensing SEPs and other relevant patents or
    - 2) selling standard-based products
  - Vertically integrated firms can benefit from both; specialists only get one
- Before ever joining an SDO, or a standard effort within an SDO, firms consider the ROI



# SDO Participation Falls as Costs Rise or Returns Fall

---

- True for both innovators and implementers
- With less innovator participation
  - Fewer new technologies contributed to standards
  - Lower quality tech contributed as higher quality held out due to lack of return
  - May get fewer standards altogether if insufficient tech submitted
- With less implementer participation
  - Less competition in downstream markets
- Both of these can affect consumer welfare, So balance matters a lot

# Rules that Tip the Balance Have Real Effects

---

- Consider IEEE
  - Very restrictive FRAND rules imposed in 2015
  - Participants began opting out immediately with “negative” LOAs
  - Increased ambiguity over FRAND
    - As of mid 2019, 77% of IEEE’s Letters of Assurance for WiFi amendment standards were negative
    - ANSI refused to approve these two standards amendments
- US DOJ issued amended BRL suggesting that IEEE consider changing its rules
  - Goals of increased clarity not achieved
  - Out of step with current court cases

## “Optimal” Royalty Base is Case Specific

---

- Cannot define the “proper” level at which to license in the abstract
  - Some patented technology as used in some standardized products will be fully valued in a component
    - SSPPU can make sense here
  - Other technologies only fully valued in end product use
    - Value is different from physical implementation
    - Example: battery tech using sensors
- Need to provide the parties flexibility in where to license
  - Only way to ensure balance and true Fair and Reasonable rates

---

## Court/Agency Interpretations of SDO Rules Affect ROI

---

- Need to be careful not to overstep contract language of SDO
  - When in doubt, do not impose LTA
  - Only apply when SDO language is 100% clear
  - Otherwise, balance will be upset and standards ecosystem can be harmed, including consumers of standardized products

# Thank you

## Q & A

(Please use the Q&A tool to submit your questions)

### Forthcoming webinars

27 Oct. 2020	<b>The value of intangible assets</b> 10am ET   4pm CET	<b>Dr. André Gorus (LESI)</b> Independent Consultant, former IP Valuation Director, Solvay
17 Nov. 2020	<b>License your valuable assets</b> 10am ET   4pm CET	<b>Presented by a member of LESI</b> Details coming soon

*Stay tuned to our website for more details and more topics and dates*