

# FRAND Licensing Levels under EU Law

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# Background

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- Electronic devices (computers, smartphones, tablets, etc.) communicate thanks to interoperability standards: 4G, 5G, Wi-Fi, MPEG, etc.
- Standards are covered by patents – **Standard Essential Patents (SEPs)**.
- To enable widespread use and success of standards, SEP owners are obliged by **Standard Setting Organizations (SSOs)** to issue a commitment to license SEPs on **Fair, Reasonable and Non-discriminatory (FRAND) terms**.
- What exactly are FRAND terms subject to policy debates and litigation over the years.
- In this paper, we examine whether FRAND commitments impose an obligation on SEP holders to respond positively to licensing demands from implementers regardless of their level in the production chain, including demands from component manufacturers.

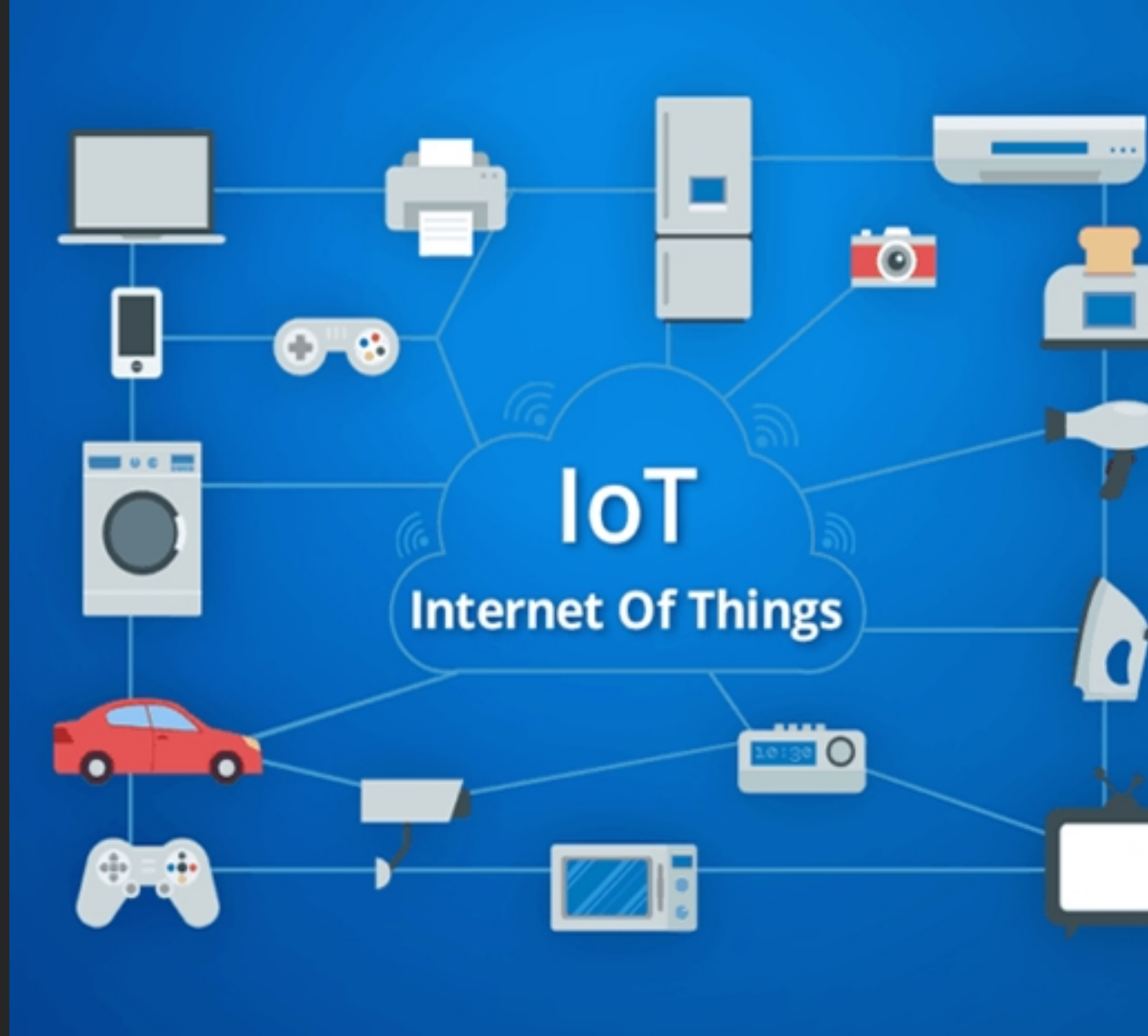
# IoT changes the licensing environment

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The current industry norm is to license SEP's on final downstream devices

Now, many different industries and objects will use 5G, Wi-Fi and other interoperability standards.

Do we need a different licensing model?



# Access-to-all v. License-to-all debate

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- Prevailing industry practice is **Access-to-all (ATA) model** – **licensing SEPs on final downstream devices**.
- ATA model generates **efficiencies**: (i) the **transaction costs savings** achieved in negotiating with one group of licensees; (ii) the **efficiencies and ease of monitoring compliance** with royalty payments and the use of products; (iii) the possibility to obtain **mutual cross-licences** between vertically integrated SEP owners; and (iv) to ensure **non-discrimination** between similarly situated licensees.
- **No firm willing to take a license was ever denied access to standardised technology, and no firm wishing to sell components to downstream manufacturers has been prevented from doing so.**
- **SEP owners only choose the level of production chain to license.** Other companies have access to standard without the need to directly obtain a license and are thus free to implement the standard.
- FRAND should be **open** and **flexible** model to accommodate needs from different industries (in some industries like smartphones, functionality of the standard is only fully realised in the end-product device).

# Access-to-all v. License-to-all debate

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- **License-to-All (LTA) approach:** licenses to SEPs should be available **to anyone who requests so, irrespective of the position in the value chain.**
- Assumption that SEPs are implemented in components (e.g. baseband chip).
- Component manufacturers are then logical counterparts in licensing negotiations.
- Licensing SEPs on end products compared to “tax on innovation” for capturing the value of unrelated technologies.

# ATA v. LTA debate is topical

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- **2017 - the European Commission, 'Setting Out the EU Approach to Standard Essential Patents'** - left open the question of the optimal licensing level for FRAND committed SEPs, stressing that there is “no one-size-fit-all solution to what FRAND is” and that what can be considered fair and reasonable differs “from sector to sector and over time”.
- **2019 – two industry groups produced two different guidelines:** CEN/CENELEC Workshop Agreement, ‘Core Principles and Approaches for Licensing of Standard Essential Patents’ (endorsing LTA); CEN/CENELEC Workshop Agreement, ‘Principles and Guidance for Licensing Essential Patents in 5G and the Internet of Things (IoT), Including the Industrial Internet’ (endorsing ATA).
- **Litigation in automotive sector** (*Daimler and Continental v Nokia*).

# Our Approach

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- **Gap in the literature** – LTA v ATA debate mostly focused on *normative arguments*, economic analysis and industrial policy consideration.
- **Instead, our paper does not seek to explore what FRAND *should* mean, but rather what it *does* imply under European law (doctrinal analysis).**
- There is no comprehensive legal survey of the requirements imposed by FRAND commitments under European and national law.
- We analyse:
  1. **General Principles of EU Law (Legitimate Expectations and Non-Discrimination)**
  2. **Patent Law**
  3. **Contract Law**
  4. **Competition Law**

# General Principles of EU Law

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## Legitimate Expectations

- *Huawei v ZTE* (C-170/13): FRAND terms “create legitimate expectations on the part of third parties” that such licenses should be given. Can this be interpreted as imposing an LTA obligation?
- *Huawei v ZTE* does not propose to read FRAND as a specific price level. Instead, the Court seems to convey a procedural understanding of FRAND that arises out of good faith negotiations (**duty to license is not unqualified**).
- Only “*precise, unconditional and consistent information*” can lead third parties to entertain legitimate expectations (T-271/04 *Citymo v Commission*). Third parties’ expectations will very much depend, in each case, on the content of the *specific* FRAND commitment given to the *specific* SSO in question, which in turn depends on the latter’s *specific* IPR policy (**no one size fits all**).
- The principle of legitimate expectations is **applied exclusively to vertical relations between the State and economic agents**. Its introduction in the context of horizontal licensing practices between SEP owners and implementers would be unprecedented and *Huawei v ZTE* clearly does not intend to make such a bold move.

# General Principles of EU Law

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## Non-discrimination

- **Under EU law, discrimination is extensively prohibited** - Articles 2 and 3 TEU; Articles 8 and 19 TFEU; Article 21(1) of the Charter of Fundamental Rights.
- **CJEU recognises that the prohibition of discrimination should have horizontal direct effect in certain situations.**
- However, the prohibition has **never been applied in relation to the position occupied by firms in licensing supply chains.**
- A vertical non-discrimination requirement in licensing supply chains would make it almost impossible for SEP owners to ensure horizontal non-discrimination.

# General Principles of EU Law

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- In *Huawei v ZTE*, the CJEU implicitly held that the SEP holder enjoyed the possibility to differentiate FRAND terms across levels of production.
- Para. 64: “in the absence of a public standard licensing agreement, and where licensing agreements already concluded with other competitors are not made public, the proprietor of the SEP is better placed to check whether its offer complies with the condition of non-discrimination than is the alleged infringer”.
- This means that **the patent holder’s obligation to equal treatment only applies to the licensee and its “*competitors*”, that is players located at the same level in the value chain *and* in the same product and geographic market.**

# Patent Law

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Some basic principles of patent law:

- 1) If a product or process falls **within the scope of the claims** of the patent, it is said to be **infringing** the patent.
- 2) Patent owner has the **right to exclude others from using its invention** without his permission (in legal terms, a “licence”).
- 3) As a rule, patent holders are free: to **decide whether to license their patents** (they may refrain from licensing), to **consent to infringement** without seeking to enforce their rights or, if they **do decide to make licenses available, to set the terms of the license**.

# Patent Law

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- Unless explicitly stated by the text of the FRAND commitment, **the question of who needs to take a licence remains determined by basic principles of patent law. Only those that infringe patent claims need to take a licence and then only if the patent holder so requires.**
- The **FRAND commitment does not negate the substance of patent rights** (*Huawei v ZTE* para 59).
- From patent law perspective, **the first step is to analyse patent claims.**
- If the claims of SEPs are limited only to specific component(s), then a natural choice for concluding licensing agreements would be with component manufacturers.
- However, if SEPs claims are broader – for example, they read on final downstream devices or networks – then the situation is more complicated. In this variant, it may be equally legitimate for patent holders to seek licences from downstream producers.

# What do SEPs Protect?

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- Putnam and Williams (2016) analysed claims of Ericsson's 2G/3G and 4G SEPs.

Found that claims of Ericsson's SEPs read on: i) **various components alone**; ii) **various components in combination**; iii) **complete handsets alone** and iv) **complete handsets in networks**.

**None of Ericsson's SEPs claimed *only* the baseband chip.**

**Around 71% of SEPs claimed some aspect of user equipment (i.e. downstream products), either alone or in combination with claims to the network.**

- **Confirmed by litigated SEPs that were found to be valid and infringed:** see e.g. UK *Unwired Planet v Huawei*; Germany *Saint Lawrence v Deutsche Telekom*, *Philips v Archos*.

# What do SEPs Protect?

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## Conclusion:

- 1) In complex standards, SEPs cover technologies that cannot be reduced to one single component, such as a **baseband chipset**. While *some* SEPs involve claim over chipsets, they also often claim downstream products, networks and/or combination of components.
- 2) Under patent law principles, **if a product is not covered by claims of the patent, it does not infringe, and component manufacturer would not need a licence**. As not all SEPs read on one component (i.e. a chipset) this means that chipset manufacturers would not need and be able to request a license from SEP holders.
- 3) **Implementers could potentially request a license only for a subset of SEPs that read on components**. However, under patent law, **they would not have an active right to force licensing, as patent law permits patent owners to choose whether they want to enforce their patents (or not)**.

# The Doctrine of Patent Exhaustion

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- Patent exhaustion means that the first authorised sale of a patented item terminates all patent rights to that particular item.
- Practical implication - a patent holder may license only once in the production chain per patent. **The patent owner can thus license its SEPs either to component or end-device manufacturers.**
- **Under the LTA approach:** a component maker receiving a license would exhaust a subset of SEPs covering a standard. But end-device manufacturers would still need a licence for remaining SEPs that read on downstream devices and networks. This would complicate and duplicate licensing, increase transaction costs and uncertainty. **Licensing would be done at multiple levels of the production chain.**
- **ATA resolves this** - by licensing at end-device level, exhaustion principles ensure that those downstream of the licensed party do not need a licence, while **upstream parties (component makers) are protected by “have made” rights. Licensing is needed only at one point in the supply chain.**

# Contract Law

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- FRAND commitments are widely recognised as being of contractual nature.
- However, their wording and the intention is different between SSOs, and their scope and purpose may vary.
- Whether a FRAND commitment imposes a duty to license at every level of the supply chain therefore depends on the particulars of that specific commitment and varies from SSO to SSO.
- We examine the text of the FRAND commitment in one of the largest and most important SSOs – ETSI – whose IPR declaration database contains a large number of patents declared essential for 3G, 4G and 5G standards.

# The Nature of the ETSI FRAND Commitment

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- ETSI is a European standard setting organisation headquartered in France, that creates globally applicable standards for the telecommunications industry.
- ETSI is incorporated **under French law as an *association***, i.e. a non-profit organisation, and its by-laws are **governed by French law**.
- The ETSI commitment is usually regarded as creating a *jus quaesitum tertio* (*stipulation pour autrui*) benefitting potential licensees.
- Under the commitment, **SEP holders are obliged to negotiate in good faith with potential licensees with a view to concluding a licence on FRAND terms**.

# Who are the Beneficiaries of ETSI's FRAND Commitment?

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## The non-discrimination prong of the FRAND commitment

- Non-discrimination in the context of the ETSI FRAND commitment does not mean that anybody interested in a licence, whatever their position in the production chain, is entitled to one.
- Non-discrimination in French contract law only applies in certain contexts and for certain types of discrimination, when the law so provides.
- When applied, the non-discrimination requirement means that those who are subject to it are not entitled to treat differently persons in the same or similar situation.
- **To treat differently companies holding different positions in the production chain is not discrimination prohibited by French law.**

# Who are the Beneficiaries of ETSI's FRAND Commitment?

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## The text and context of the ETDSI FRAND commitment

- Contradicting positions taken by two former high ranking ETSI officials - Karl Heinz Rosenbrock (2017) and Bertram Huber (2017).
- Debate revolves around clause 6.1 of IPR Policy: "...is prepared to grant irrevocable licences on fair, reasonable and non-discriminatory ("FRAND") terms and conditions under such IPR to at least the following extent:
  - MANUFACTURE, including the right to make or have made customized components and sub-systems to the licensee's own design for use in MANUFACTURE;
  - sell, lease, or otherwise dispose of EQUIPMENT so MANUFACTURED; [...]"
- At clause 15, the ETSI IPR Policy further defines "MANUFACTURE" as the "production of 'EQUIPMENT", and "EQUIPMENT" as "any system, or device fully conforming to a STANDARD".
- More precisely, **the core question is whether the word "equipment" at clause 6.1 covers all types of devices, or only end-user devices.**

# Who are the Beneficiaries of ETSI's FRAND Commitment?

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Under French law, a contract should be **interpreted in accordance with the parties' intention** when entering that contract. Only when the **intention of the parties cannot be discerned regard should be had to the meaning which a reasonable person would give to the disputed terms** (Article 1188 Civil Code).

- 1) **The intention of the parties** – difficult to ascertain, conflicting testimonials. However, there is indirect evidence: ETSI resisted proposals to modify its IPR Policy in order to explicitly acknowledge that SEP owners should be ready to grant licenses also to component-makers – whereas the IEEE has recently officially endorsed the LTA approach.
- 2) **The reasonable person's interpretation** – at the time when the ETSI IPR Policy was adopted, the common practice in the telecom industry was to grant licenses at the end-user device level, and not at the component level. Also, IPR Policy uses the word “device”, and avoids words such as “element”, “component”, “part”, or “unit”.

# Who are the Beneficiaries of ETSI's FRAND Commitment?

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- **Conclusion:** a “right to be granted a licence on FRAND terms and conditions” only applies under ETSI to manufacturers of end-user devices, and not to all operators of the production chain, including component makers.
- SEP owners are **only *bound* to negotiate in good faith towards** a licence on FRAND terms **with *manufacturers of end-user devices***, when they intend to assert the patent. This **does not mean**, of course, that SEP owners **are not *allowed*** to license their SEPs to component makers if they voluntarily choose to do so.

# Other SSOs

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Two categories:

- 1) **One imposes an LTA obligation directly:** IEEE IPR Policy defines “Compliant Implementation” as “*any product (e.g., component, sub-assembly, or end-product)* or service that conforms to any ... IEEE standard”
- 2) **Others use unclear wording:** require licences to be available to “unrestricted number of applicants” or to “all applicants.” Used in ITU-T, ISO and IEC.

Question: who are “applicants”?

In our view, it is wrong to impose wide LTA obligation in case of unclear contractual interpretation because: i) SSOs could change their policies to clearly include an LTA obligation as IEEE did; ii) the wide industry practice in case of SEPs appears to be licensing on downstream level, and iii) SEPs have wide claims that are not necessarily implemented in one single chip.

# Competition law

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## Abuse of dominant position (Article 102 TFEU)?

Refusal to license legal test (*Magill*, *IMS Health* and *Microsoft*):

- i) refusal to license IPRs relates to a product or service that is *indispensable* to the exercise of a particular activity on a neighbouring market;
- ii) the refusal to license IPRs is of such kind as to *exclude any effective competition* on that neighbouring market;
- iii) the refusal to license IPRs *prevents the appearance of a new product* for which there is a potential consumer demand.

**None of these conditions are fulfilled in case when SEP owner adopts a policy of licensing SEPs only on end-device level.**

# Competition Law

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## **Refusal to license $\neq$ refusal of access to the standard**

- Component manufacturers are not prevented from selling to licensed end-device manufacturers.
- More broadly, not having a licence does not automatically equal exclusion (licensing typically starts *after* products appear on the market; patent owner has to go to court, prove infringement and validity of the patent and obtain injunction – non of which are certain).
- Abusive refusal to license would requires an extreme set of facts (SEP owner reserving the implementation only for itself and preventing others from using the standard), that has never happened in practice.
- Interesting to compare with *FTC v Qualcomm 2019* (refusal of Qualcomm to license to competing chip manufacturers a violation of Section 2 of Sherman Act). But: i) the US has a different legal test; ii) specific facts – Qualcomm as a chip manufacturer refused to license to other competing chip manufacturers – not universally applicable as other SEP owners are either active only at licensing level (non-practicing entities) or active at different levels of the production chain (end-devices, networks).

# Competition Law

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## Anti-competitive discrimination (Articles 101 d) and 102 c) TFEU?

- Para 285 HCG: “In order to ensure effective access to the standard, the IPR policy would need to require participants wishing to have their IPR included in the standard to provide an irrevocable commitment in writing to offer to license their essential IPR to ***all third parties*** on fair, reasonable and non-discriminatory terms.” **All third parties = LTA?**
- HCG provides **safe harbour, not an antitrust obligation** – para 279: “The non-fulfilment of any or all of the principles set out in this section will not lead to any presumption of a restriction of competition within Article 101 TFEU”
- “All third parties” **not further defined** – as seen SEPs have wide claims covering end-devices, networks and combination of components; the understanding of “all third parties” must be industry and sector specific.
- HCG are about **access to the standard not LTA** – “*the standard-setting organisation's rules would need to ensure effective access to the standard...*” (para 283); *FRAND commitments “are designed to ensure that essential IPR protected technology incorporated in a standard is accessible to the users of that standard”* (287); “*assessment of whether the SSO IPR policies restrict competition will focus on “access to the standard”*” (para 294).

# Conclusion

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- **EU law** (general principles, patent, contract and competition law) **does not require LTA from SEP owners**. Exception only if specific SSO IPR Policy expressly requires licensing at all levels.
- **EU law only requires access to the standard.**
- Access to the standard can be achieved in various ways:
  - 1) Having a direct licence;
  - 2) Indirectly benefiting from a licence by selling components to licensed end-device manufacturers;
  - 3) Concluding non-assertion agreements;
  - 4) Or not having a licence at all if the patent owner does not monetize patents and does not have licensing program.

# Conclusion

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Practical application of FRAND licensing level under EU Law:

- 1) **Consult the text of FRAND commitment** (IEEE imposes LTA obligation – component manufacturers would have a contractual claim to demand licences; but most SSOs do not, like ETSI).
- 2) **SEP owners, if they decide to monetise patents, should adopt a licensing strategy and chose the level of the production chain at which they wish to license** (patent exhaustion doctrine would prevent licensing same patents further downstream, while upstream manufacturers would be protected by “have made” rights).

So far, the empirical economic track record from 2G, 3G, and 4G suggests that this mode of licensing has delivered successful results.