

Constructing A Self-Executing FRAND Mechanism in Global Market

在全球市场上构建一套自我执行的公平、合理 和非歧视性条款（FRAND）机制

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Background 背景

ECJ, Huawei v. ZTE, C-170/13 欧盟法院C-170/13号华为诉中兴案

A step-by-step negotiation procedure 逐步谈判程序

EC, “ICT Standardisation Priorities for the Digital Single Market” ,COM (2016) 176 final 欧委会 “单一数字市场信息与通信技术(ICT)标准化优先事项” , (2016)176号通信最终稿

1. opaque information on SEP exposure 有关标准必要专利(SEP)披露的信息不透明
2. unclear valuation of patented technologies and definition of FRAND 专利技术的评价和FRAND的定义不清晰
3. risks of uncertainty in enforcement of SEPs 标准必要专利的执行存在不确定性风险

EC, “Setting Out the EU Approach to Standard-essential Patents” , COM (2017) 712 final 欧委会 “欧盟标准必要专利相关办法” , (2017)712号通信最终稿

Improving the quality and accessibility of SEPs databases; 改善标准必要专利数据库的质量与可及性;
Up-to-date and precise declarations; 及时准确的声明;
Essentiality checks; 必要性审查;
Exploiting and deepening FRAND expertise; 开发与深化FRAND专业技术与知识;
ADR mechanisms..... 替代性纠纷解决机制.....

Contents

目录

- 01 SSOs as Subject of Antitrust Scrutiny
标准制定组织作为反垄断审查的对象
- 02 SSOs' Efforts to Mitigate Monopoly
标准制定组织为减轻垄断付出的努力
- 03 The Changed Surroundings of SEPs License
标准必要专利许可环境发生的变化
- 04 Prospects to Counteract Challenges by Self-regulation of SSOs
通过标准制定组织的自我规制应对挑战的前景
- 05 The Way Forward: Light-Handed Regulation Imposed under Competition Law and WTO law
出路：依据竞争法与世贸组织法实施轻度规制

01

SSOs as Subject of Antitrust Scrutiny 标准制定组织作为反垄断审查的对象

1.1 US 美国

- In *Allied Tube & Conduit Corporation v. Indian Head* (486 U.S. 492 (1988)) , the US Supreme Court confirmed that:
- 在 *Allied Tube & Conduit Corporation v. Indian Head* 案 (486 U.S. 492 (1988)) 中, 美国最高法院确认:
 - “*Agreement on a product standard is, after all, implicitly an agreement not to manufacture, distribute, or purchase certain types of products*”, which have potential for anticompetitive harm, SSOs “*have traditionally been objects of antitrust scrutiny*”.
 - “关于产品标准的协议实际是一种隐性的, 禁止制造、分销或购买特定类型产品的协议”, 有可能带来反竞争危害, 标准制定组织“一直以来都是反垄断审查的对象。”
 - Collaborative standard setting has its pro-competitive value, if it's conducted unbiased expert analysis.
 - 如果建立在无倾向性专家分析的基础上, 则合作性标准制定具有促进竞争的价值。
 - Activities of SSOs can only validate, when SSOs provide “*safeguards sufficient to prevent the standard-setting process from being biased by members with economic interests in restraining competition*”.
 - 只有当标准制定组织提供 “足够的保障, 防止标准制定过程受到可从抑制竞争获取经济利益的成员之倾向性的影响”, 标准制定组织的活动才能站得住脚。
- In 2004, US enacted the *Standards Development Organization Advancement Act of 2004* (“Standards Act”), which create “safe harbor” for standard setting. Activities of SSOs having specified procedures to protect their objectivity and openness are judged under *Rule of Reason*.
- 2004年, 美国制定了《2004年标准制定组织推动法》(“《标准法》”), 为标准制定提供了“避风港”。凡具有明确程序来保证其客观性和开放性的标准制定组织, 其活动依据合理性规则判定。
 - 15 U.S.C. 4302 provides that 《美国法典》第15篇第4302条规定:
“In any action under the antitrust laws, or under any State law similar to the antitrust laws, the conduct of-(1) any person in making or performing a contract to carry out a joint venture, or (2) *a standards development organization while engaged in a standards development activity, shall not be deemed illegal per se; such conduct shall be judged on the basis of its reasonableness*, taking into account all relevant factors affecting competition, including, but not limited to, effects on competition in properly defined, relevant research, development, product, process, and service markets. For the purpose of determining a properly defined, relevant market, worldwide capacity shall be considered to the extent that it may be appropriate in the circumstances.”
“在依据反垄断法或者与反垄断法类似的任何州法律而提出的诉讼中, (1) 达成或履行合营企业合同的任何人士或者 (2) *从事标准制定活动的标准制定组织*的行为本身不应视为非法; 应依据合理性原则对该行为进行判定, 需要考虑影响竞争的所有相关因素, 包括但不限于对适当界定的相关研究、开发、产品、过程和服务市场产生的影响。为确定界定适当的相关市场, 应考虑适应实际情况的全球产能。”

1.2 EU 欧盟

- SSOs can be considered as an undertaking or an association of undertakings, and the standard-setting agreements can infringe TFEU Art. 101.
- 可以将标准制定组织看做企业或者企业联合会，如此，则标准制定协议可能违反《欧盟运行条约》第101条。
- In its *Guidelines on the applicability of Article 101 of the Treaty on the Functioning of the European Union to horizontal co-operation agreements* (2011/C 11/01, Horizontal Guidelines), EC confirms:
- 在欧委会关于《欧盟运行条约》第101条对横向合作协议适用性的指南中（2011/C 11/01，《横向指南》），欧委会确认：
 - Standardisation agreements usually produce significant positive economic effects, but can also be detrimental to competition.
 - 标准化协议通常产生显著的正向经济效应，但是也可能损害竞争。
 - Standardization agreement can constitute a restriction of competition of Art 101(1), but it can be exempted under Art 101(3), if provide significant efficiency gains.,
 - 标准化协议可能构成第 101(1)条所定义的竞争限制，但如果能显著提升效率，则可以依据第101(3)条免责。
 - The indispensable restrictions should cover no more than what is necessary to ensure their aims;
 - 必要的限制不应超过确保其宗旨实现所必须的范围；
 - The efficiency gains attained must be passed on to consumers to an extent that outweighs the restrictive effects on competition.
 - 所获得的效率提升必须传导到消费者，且超过对竞争产生的限制效应。
- “Safe Harbor” in 2011 Horizontal Guidelines: 2011年《横向指南》中的“避风港”
 - “Where participation in standard-setting is **unrestricted** and the procedure for adopting the standard in question is **transparent**, standardisation agreements which contain **no obligation to comply** with the standard and **provide access to the standard on fair, reasonable and non-discriminatory terms** will normally not restrict competition within the meaning of Article 101(1).” (Para. 280)
 - “如果对标准制定的参与**不作限制**且标准采纳程序**透明公开**，则满足下列要求的标准化协议——**包含无义务遵守该标准的条款**，且按照**公平、合理与非歧视的条款提供对该标准的加入权**——通常不会限制第101(1)条所定义的竞争。”（第280段）
- The general assumption is that SSOs and their participants have obligations to ensure effective access to the standard, and FRAND commitment is a clear and balanced policy to achieve this goal.
- 一般假设标准制定组织及其参与者有义务确保对标准的有效加入，而 FRAND 承诺是为实现该目标而制定的清晰、平衡的政策。

02

SSOs' Efforts to Mitigate Monopoly
标准制定组织为减轻垄断付出的努力

2.1 Efforts Taken by SSOs to Mitigate Monopoly

2.1 标准制定组织为减轻垄断付出的努力

US 美国

- ❑ As early as in the 1930s, the standards were mainly for product safety, patents were generally expected to be excluded from standards, in order to prevent “monopolistic tendencies”.
- ❑ 早在上世纪30年代，标准主要是为了产品安全，为了防止“垄断倾向”，普遍认为应将专利从标准中排除。
- ❑ With the development of ICT industry, both compatibility and interoperability are necessary.
- ❑ 随着信通技术的发展，技术兼容性和互操作性都变得必要。
 - In AT&T Case, the consent decree required AT&T to license its patents on fair, reasonable and non-discriminatory terms to competitors;
 - 在美国电话电报公司一案中，合议庭判决要求美国电话电报公司依据公平、合理和非歧视条款将其专利许可给竞争对手；
 - American Standards Association's (ASA) 1959 Policy:
 - 美国标准协会1959年的政策：

*“Standards should not include items whose production is covered by patents unless the patent holder agrees to and does **make available to any interested and qualified party a license on reasonable terms** or unless other unpatented competing items are included within the standards and the patented item would suffer were it left out.”*

*“标准不应包含生产受到专利保护的项目，除非（1）专利权人同意，并且的确以**合理的条款向符合条件的利益相关方提供许可**，或者（2）标准中包含其他不受专利保护的竞争性项目，且若不被纳入标准，则受专利保护的项目会遭受不利影响。”*
 - In 1970, American National Standards Institute (ANSI), the successor of ASA, adopted a more detailed formulation for FRAND licensing. if a patent covers any American National Standards, then ANSI must obtain from the patent holder an assurance either that:
 - 1970年，美国国家标准学会（前身是美国标准协会）更详细地界定了FRAND许可。如果一项专利涵盖任何美国国家标准，则美国国家标准学会必须获得专利权人的如下保证：

*“(a) A license will be made available without compensation to applicants desiring to utilize the license for the purpose of implementing the standard; or (b) A license will be made available to applicants **under reasonable terms and conditions that are demonstrably free of any unfair discrimination.**”*

*“（a）专利许可必须向希望使用许可进行标准实施的申请人免费提供；或者（b）**必须依据合理、可证明不存在不公平歧视的条款向申请人提供许可。**”*
- ❑ The 1970 policy laid the fundamental framework of FRAND policy, and it applies in all its accredited SSOs in US.
- ❑ 1970年的政策奠定了FRAND政策的基础框架，适用于美国境内所有经其认可的标准制定组织。

EU 欧盟

- ❑ In the early stage, telecommunications landscape was a patchwork of national state-owned monopolies. Industry leaders developed new technologies, then became *de facto* industry standards. International organizations ITU, ISO, IEC, and European organizations CEN and CENELEC were mainly involved by large monopolies.
- ❑ 早期的电信行业是国有垄断企业的天下。行业领导者开发新的技术，然后这些技术成为事实上的行业标准。国际电信联盟(ITU), 国际标准化组织(ISO)和国际电工委员会(IEC)等国际组织以及欧洲标准化委员会(CEN)和欧洲电工标准化委员会(CENELEC)等欧洲组织主要由大型垄断企业构成。
- ❑ In 1987, EC issued the “*Green Paper on the Development of the Common Market for Telecommunication Services and Equipment*”(COM(87) 290 final) to liberalize and harmonize the telecommunications market.
- ❑ 1987年，欧委会发布《关于发展电信服务和电信设备共同市场的绿皮书》((87) 290号通信最终稿)，以促进电信市场的自由化和协调。
 - ETSI was established in 1988 to provide a fair representation of all relevant actors into standardization.
 - 1988年成立了欧洲电信标准化协会(ETSI)，担任标准化领域所有相关角色的公平代表。
- ❑ In 1990, EC issued the “*Green Paper on the Development of European Standardization: Action for Faster Technological Integration in Europe*”(COM(90) 456 final), urged to find adequate solutions to resolve IPR issues in standard and set its specific requirement:
- ❑ 1990年，欧委会发布《关于欧洲标准化发展的绿皮书：加快欧洲技术一体化行动》((90) 456号通信最终稿)，敦促制定充分的解决方案，来解决标准领域的知识产权问题，并提出了具体要求：
 - “The problem of industrial and intellectual property rights (IPR) as well as patents has become a serious issue within the context of standardization.”
 - “行业与知识产权和专利的问题已经成为标准化背景下的一个严重问题。”
 - “The inclusion of IPR and patents within standards should be subject to clear rules, **which provide for the right of use of IPR and patents either free or on fair and reasonable terms.**”
 - “要将知识产权和专利纳入标准，需要有清晰的规则，**规定免费或者依据公平合理条款使用知识产权和专利的权利。**”
- ❑ In 1993, the ETSI published its first FRAND policy and later revised in 1994, required:
- ❑ 1993年，欧洲电信标准化协会发布了第一版FRAND政策，随后于1994年修订，该政策要求：
 - “*the owner to give within three months an undertaking in writing that it is prepared to grant irrevocable licences **on fair, reasonable and non-discriminatory terms** and conditions under such IPR*”.
 - “权利人必须在三个月内书面承诺自己愿意依据**公平、合理和非歧视条款**，针对该知识产权授予不可撤销的许可。”

Global “FRAND Harmony” 全球 “FRAND大同”

- Under the influence of ANSI and ETSI, the FRAND policy has been a global standard for standardization, so-called “FRAND Harmony” .
- 在美国国家标准学会和欧洲电信标准化协会的影响下，FRAND政策已成为标准化领域的全球标准，即所谓的 “FRAND大同” 。
- Most SSO’s IPR policies have three core elements 多数标准制定组织的知识产权政策有三个核心要素：
 - (1) regarding **disclosure** of patents that may have essential claims;
 - (1) 关于可能含有必要权利要求的专利之披露；
 - (2) rules regarding licensing commitments, which generally ask for **FRAND commitment** or provide license options between **royalty-free and FRAND** as the least restrictive choice;
 - (2) 关于许可承诺的规则，一般要求作出**FRAND承诺**或者在**免费许可和FRAND许可**两者中选择其一作为最低限制；
 - (3) rules regarding statements of non-commitment with **opt-out options**.
 - (3) 关于带**选择退出权**的不承诺许可声明之规则；
- Some SSOs broke up the harmony to further specify FRAND conditions:
- 部分标准制定组织打破了这一 “大同” ，进一步明确FRAND的条件：
 - VITA mandated all members to declare the maximum royalty rate for their patents with essential claims, IEEE and ETSI followed this approach later in a voluntary way.
 - VITA强制所有成员针对包含必要权利要求的专利，声明许可费率上限；IEEE与ETSI随后以自愿性方式采用了这一方法。
 - In 2015, IEEE adopted a new and dramatically different patent policy, defining “reasonable rate” more clearly and preventing SEPs holders from seeking injunctions.
 - 2015年，IEEE通过了一项极其不同的新专利政策，更清晰地定义了 “合理费率” ，并阻止标准必要专利持有人寻求禁止令。

2.2 After commitments: the effects of FRAND in practice

2.2 承诺之后：FRAND在实践中的影响

- SSOs largely refrain from operationalising the FRAND commitment, leave it to parties negotiation and national public authorities enforcement.
- 标准制定组织力图避免执行FRAND承诺，而将其交予各方协商解决，或交予各国执法部门。
 - ANSI' IPR Policy 美国国家标准学会的知识产权政策：
 - “no position is taken with respect to the validity of any such claim(s) or of any patent rights”.
 - “针对任何该种权利要求或任何专利权的有效性，不采取立场。”
 - “provisions involving business relations between buyer and seller such as guarantees, warranties, and other commercial terms and conditions shall not be included in an American National Standard”.
 - “涉及买卖双方商业关系的条款，比如担保、保证和其他商业条款，不纳入美国国家标准。”
 - ETSI's IPR Policy 欧洲电信标准化协会的知识产权政策：
 - It does not perform any checks on the status and validity of any Essential IPRs which have been notified to ETSI, or to search any essential IPRs which may exist and have not been notified.
 - 对已通报给欧洲电信标准化协会的任何必要知识产权的状态和有效性不做审查，也不检索可能存在但尚未通报的任何必要知识产权。
 - Specific licensing terms and negotiations are commercial issues between the companies and shall not be addressed within ETSI.
 - 具体许可条款与协商属于公司之间的商业问题，不在欧洲电信标准化协会内解决。
- Due to the inherent ambiguities, the interpretations of FRAND vary across different jurisdictions.
- 由于内在模糊性，FRAND条款的解释随司法辖区的不同而存在差异。
 - FRAND-finding process in EU 欧盟的FRAND 寻找过程
 - Based on Art. 102 of TFEU, FRAND is understood as a bilateral negotiation process and both parties' conducts are evaluated in the context of injunctions to promote good faith negotiation.
 - 根据《欧洲运行条约》第102条，FRAND是一种双边谈判过程，依据禁止令原则对双方的行为进行评价，以促进善意谈判。
 - In Huawei v. ZTE, A procedural step-by-step approach is provided to identify the genuine willingness of the parties.
 - 在华为诉中兴案中，为识别双方的真正意愿，采用了一种程序性的逐步谈判方法。
 - Royalty Determination in US 美国的许可费确定
 - Parties are obligated to negotiate, but injunction should be finally determined by Four eBay Factors.
 - 双方有义务进行协商，但是最终必须根据eBay四项要素来确定禁止令。
 - FRAND commitments can be regarded as contract for third party beneficiaries, the courts tend to determine the FRAND royalty.
 - FRAND承诺可能被看作面向第三方受益人的合同，因此法庭倾向于对FRAND许可费进行确认。
 - Depending on sufficiency of evidence, different approaches are adopted: Bottom up & Top-Down.
 - 根据证据的充分性，可能会采用不同的方法：自下而上、自上而下。

03

The Deficiencies of Current FRAND Enforcement Framework

当前FRAND执行框架的缺陷

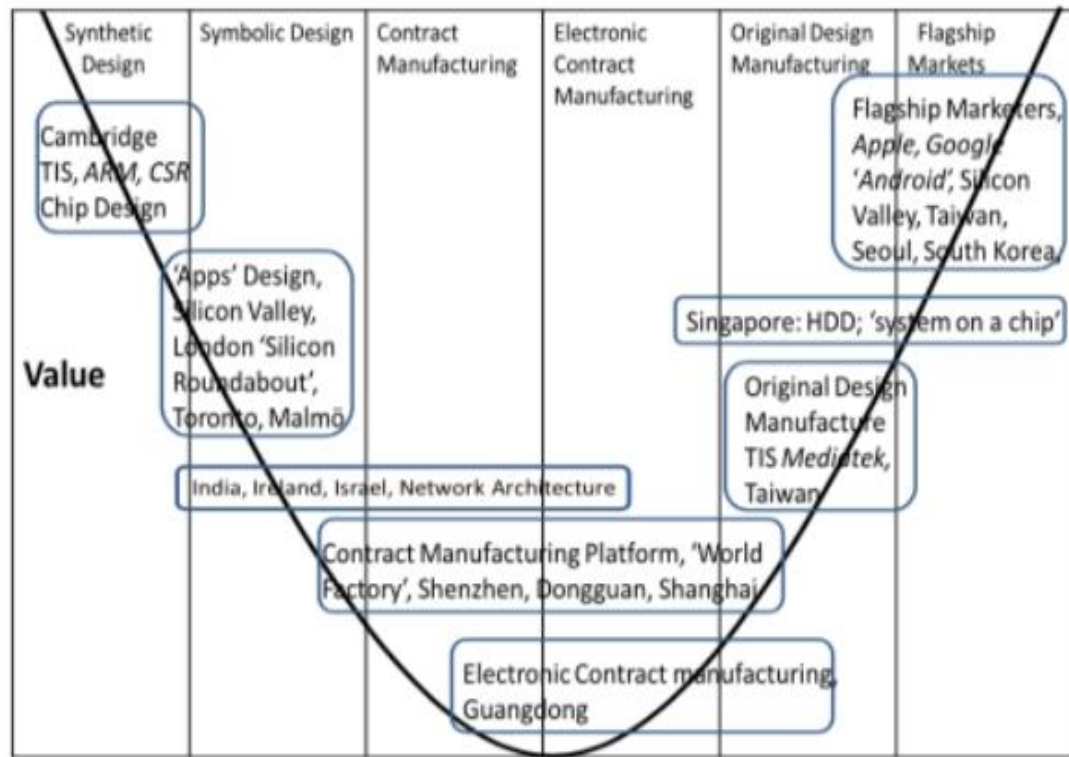
3.1 The Changed Surroundings of SEPs Licenses

3.1 标准必要专利许可环境发生的变化

A. Changed License Structure with Evolution of GVC (Global Value Chain)

A. 随着全球价值链的演变，许可结构发生的变化

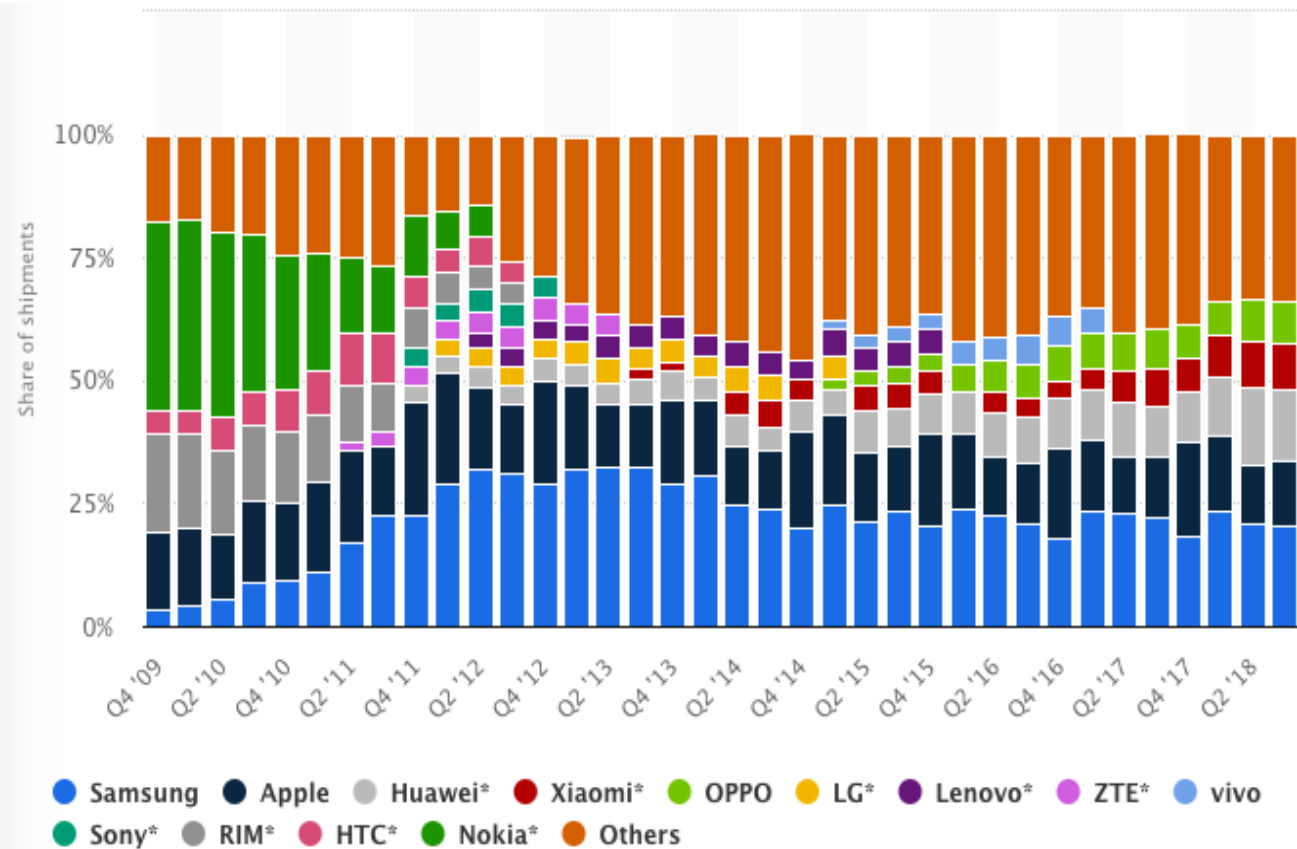
- ICT industry before 1990s 上世纪90年代之前的信通行业
 - Competition dimension: to make a good quality product
 - 竞争维度：制造高品质的产品
 - The forerunners: Nokia, Motorola, Ericsson, Palm, Siemens, Alcatel
 - 先驱者：诺基亚、摩托罗拉、爱立信、Palm、西门子、阿尔卡特
 - both SEPs holders and manufacturers
 - 既是标准必要专利持有人也是制造商
 - Cross-licensing to achieve the operational freedom
 - 为保证实施自由，采用交叉许可
- The era of globalisation : from Global Production Networks (GPN) to Global Innovation Networks(GIN)
- 全球化时代：从全球生产网络(GPN)到全球创新网络(GIN)
 - The Era of GPN: From 1990s to 2000s 全球生产网络时代：上世纪90年代到本世纪初
 - Modularization: vertical disintegration of the chip industry
 - 模块化：芯片业的垂直分解
 - Outsourcing: separation of labor-intensive processes (which moved to low-cost locations) from capital-intensive and knowledge-intensive processes
 - 外包：将劳动密集型工序（转移到低成本地区）与资本密集型、知识密集型工序分离
 - The Era of GIN: After the 2000s 全球创新网络时代：进入21世纪之后
 - MNCs dominate some innovation phases but not all, turn to the “servitization” strategy.
 - 跨国公司主导部分，但非全部创新阶段，转向“服务化”战略
 - Companies in developing countries gradually join the GIN, but occupy the lowest positions.
 - 发展中国家的企业逐步加入全球创新网络，但所处地位最低。



“Smiling Curve” of Value in GIN of ICT 信通技术在全球创新网络中的价值 “微笑曲线”

Source: Cooke, P. J. open innov. (2017) 3: 9.

来源: Cooke, P. J. 开放的创新. (2017) 3: 9.



Global market share held by leading smartphone vendors from 2009 to 2018

2009~2018年领先智能手机供应商的全球市场份额

Source: Counterpoint's Market Monitor service

来源: Counterpoint的市场监测服务

3.1 The Changed Surroundings of SEPs Licenses

3.1 标准必要专利许可环境发生的变化

A. Changed License Structure with Evolution of GVC

A. 随着全球价值链的演变，许可结构发生的变化

- From the overall landscape on declared SEPs, the forerunners still hold the most patents.
- 从已声明的标准必要专利的整体状况来看，先行者依然持有多数专利。
- In licensing, the right holders choose which party to license in the supply chain.
- 权利人选择向供应链中的哪一方许可专利？
 - End-product manufacturers——Asia manufacturing companies
 - 最终产品制造商——亚洲制造企业
- The significantly change of SEPs license structure.
- 标准必要专利许可结构的显著变化
 - overall structure of SEPs license is transformed from biliteral structure into one direction:
 - 标准必要专利许可的整体结构已经从双边转向单向：
 - from patentees to end-product manufacturers 从专利权人到最终产品制造商
 - from the West to Asia 从西方到亚洲
 - SEPs become an important weapon to maintain their high position in GVC
 - 标准必要专利已成为在全球价值链中保持专利许可人较高地位的重要武器
 - More than 12% of all SEPs have been transferred at least once, most bought by NPEs.
 - 超过12%的标准必要专利至少转让过一次，其中大多数由非专利实施主体购买。

Top companies owning declared SEPs filed where the patent was filed in Europe as to site of company headquarters for Europe, US and Asia (CN, JP, KR, TW)

总部设于欧洲、美国和亚洲（中国大陆、日本、韩国、中国台湾）、且拥有在欧洲申请的已声明标准必要专利的主要公司

European SEP Owner 欧洲标准必要专利权人		US SEP Owner 美国标准必要专利权人		Asian SEP Owner 亚洲标准必要专利权人	
Applicant/Assignee申请人/受让人	SEP Fam. 标准必要专利族	Applicant/Assignee申请人/受让人	SEP Fam. 标准必要专利族	Applicant/Assignee申请人/受让人	SEP Fam. 标准必要专利族
Nokia Corporation 诺基亚公司	1,050	QUALCOMM 高通	1,025	Samsung Electronics 三星电子	872
Ericsson 爱立信	891	InterDigital, Inc.	417	Huawei Technologies 华为技术	581
Nokia Siemens 诺基亚-西门子	418	Google 谷歌	313	LG Electronics Inc. 乐金电子	533
Siemens 西门子	258	Rockstar Consortium Rockstar专利联盟	101	NTT DOCOMO, Inc.日本多科莫公司	317
Nokia Solutions&N 诺基亚通信有限公司	251	Apple Inc. 苹果	64	Panasonic Corporation 松下	284
Alcatel-Lucent 阿尔卡特-朗讯	170	Texas Instruments Inc. 德州仪器	40	NEC Corporation日本电气	180
BlackBerry Limited 黑莓	139	Intel Corporation 英特尔	35	ZTE Corp. 中兴	174
Koninklijke Philips 飞利浦	73	Intellectual Ventures高智公司	15	Sony Corporation 索尼	81
Orange法国橘子电信	61	Dolby Laboratories 杜比实验室	8	HTC Corporation	63
Nokia Mobile Ph. 诺基亚手机	36	Hughes Corporation休斯公司	8	RITT以色列瑞特科技	57
Koninklijke Kpn 荷兰KPN	27	AT&T, Inc.美国电话电报公司	7	NTT日本电话电报公司	39
Fraunhofer弗劳恩霍夫	14	Unwired Planet, Inc. 无线星球	7	Mitsubishi Electric 三菱电机	38
British Teleco 英国电信	13	IBM	6	Kyocera Corp. 京瓷	37
Deutsche Telekom 德国电信	13	Microsoft Corp. 微软	5	Sharp Corporation 夏普	32

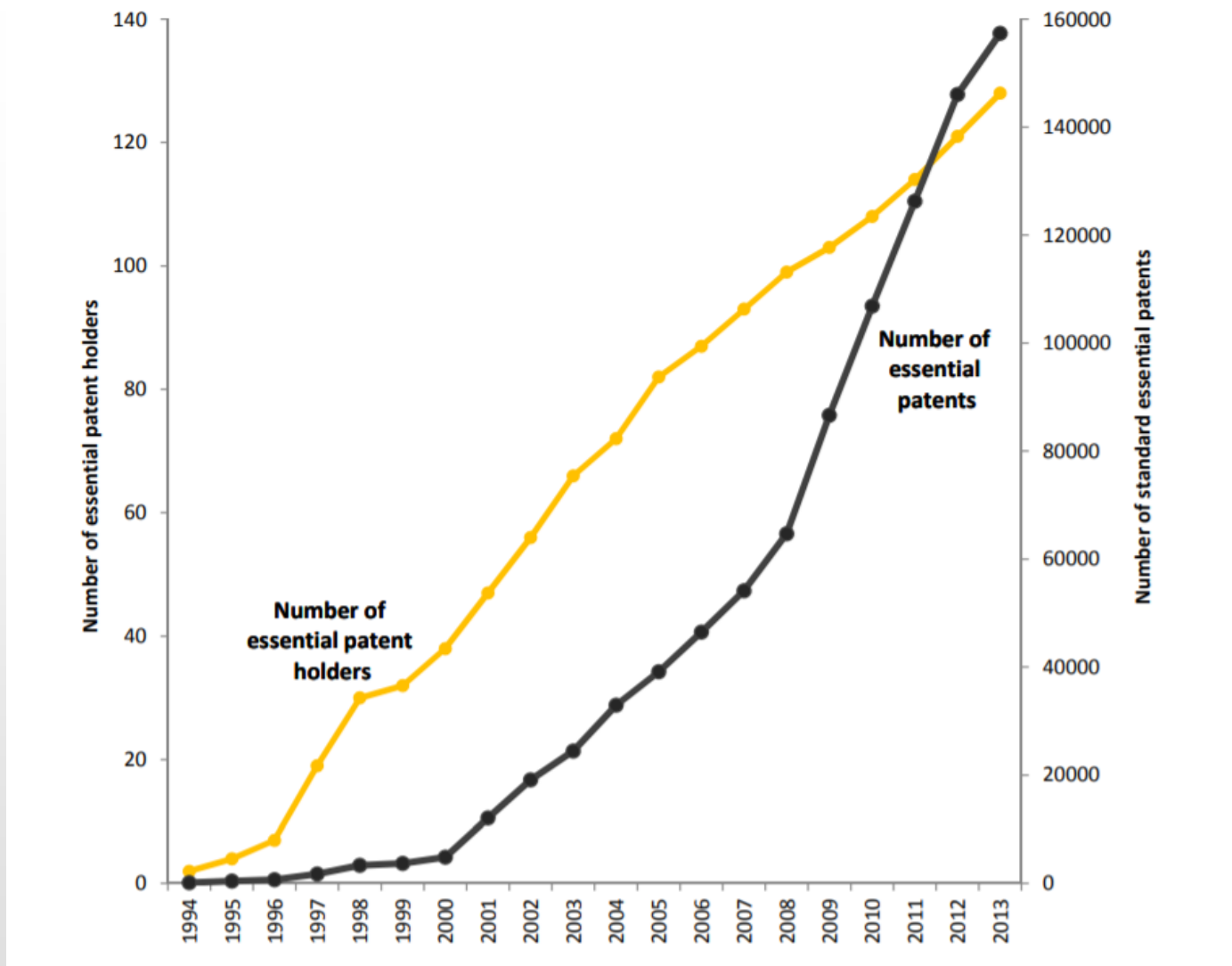
B. Increasing costs and information asymmetry

B. 成本增加、信息不对称加剧

Disclosure booms of SEPs and Overdeclaration

标准必要专利的披露激增与过度声明

- In the last thirty years, the cumulative number of SEP declarations by SEP holders with various SSOs has drastically increased. Only 9% are pooled for license.
- 过去三十年里，标准必要专利持有人对标准必要专利所作声明的总体数量显著增加。这其中，只有9%用于许可。
- SSOs do not perform any check on the essentiality, patent owners have strong incentives for overdeclaration.
- 标准制定组织不对必要性做任何审查，专利权人过度声明的诱因很大。
 - Industry insiders estimate that only around 30% or less of declared SEPs are really needed.
 - 业内人士估计，大约只有不到30%的已声明标准必要专利是真正必要的。
 - In Samsung v. Apple at Tokyo High Court, evidence showed there were only 529 genuine SEPs in the 1,889 declared SEP families within the 3GPP.
 - 在东京最高法院审理的三星诉苹果一案中，证据表明在3GPP中声明的1,899个标准必要专利族中，只有529份是真正的标准必要专利。
 - In Huawei v. Samsung at Shenzhen Intermediate Court, evidence showed there were 7077 declared SEPs families for LTE, only 2535 patents were essential.
 - 在深圳中级法院审理的华为诉三星一案中，证据表明在7077份已声明的LTE技术标准必要专利中，只有2535份是必要专利。



Number of SEPs and SEP Holders (1994-2013) SEPs for 3G&4G Standards at 3GPP
3GPP中有关3G和4G的标准必要专利及其持有人的数量变化情况(1994~2013)

Source: Alexander Galetovic & Kirti Gupta
来源: Alexander Galetovic & Kirti Gupta

B. Increasing costs and information asymmetry

B. 成本增加、信息不对称加剧

Historical license hidden under the NDA 保密协议所隐藏的历史许可费率

- Comparable license is the most important approach to calculate a FRAND rate. but parties usually sign an Non Disclosure Agreements (NDAs) before the commercial and technological negotiation in license.
- 参考可比许可是计算FRAND许可费率的最重要的方法，但是双方通常会在有关许可的商务和技术谈判之前，签署一份保密协议。
- ETSI's guidelines, "It is recognized that Non Disclosure Agreements (NDAs) may be used to protect the commercial interests of both potential licensor and potential licensee during an Essential IPR licensing negotiation, and this general practice is not challenged."
- 欧洲电信标准化协会的指南，“在必要知识产权的许可谈判中，可能会使用保密协议来保护潜在许可方与被许可方的商业利益，这一通用做法不会遭到挑战。”
- In UK, the court held that “publication of the commercial licensing information in issue (subject to a few exceptions ...) ... would substantially weaken the position of various companies mentioned in the judgment, particularly as licensors but also as licensees. That interference with the competitive position of the telecommunications market is unwarranted.” (Unwired Planet v. Huawei, Royal Courts of Justice)
- 在英国，法院认为“公布所涉及商业许可信息（排除少数例外...）会实质性削弱判决书中提到的各种公司的地位，尤其是许可方，但是也包含被许可方。对电信市场竞争地位造成的这种干扰是不合理的。”（无线星球诉华为案，英国皇家法院）
- In Germany, the court held that SEP holder has “justified confidentiality interests, for instance by entering into a NDA”. (Sisvel v. Haier, District Court of Dusseldorf)
- 在德国，法院认为标准必要专利的持有人“通过签订保密协议等方式，已对其保密权益做出了合理解释”（Sisvel 诉海尔案，杜塞尔多夫地区法院）
- In PRC, refusal to sign a NDA is regarded as a sign of unwillingness to obtain license, which could result in injunctive relief. (Iwncomm v. Sony, Beijing High Court)
- 在中国，拒绝签署保密协议被视为不愿获得许可的行为，可能导致禁令救济（西电捷通诉索尼案，北京高级法院）

3.2 Impact assessment on FRAND licensing brought by new surroundings 评估新环境对FRAND许可造成的影响

A. The fitness of FRAND-Finding process

FRAND寻找过程的合适性

- Under Huawei/ZTE framework, theoretically, the parties know their business interests and respective markets best, a FRAND rate can be found by good faith negotiation.
- 根据华为/中兴框架，理论上，双方最了解他们的商业利益和各自的市场，因此可以通过善意谈判确定FRAND费率。
- Challenges 挑战
 - Information shortage for calculating the FRAND rate: 计算FRAND费率所需的信息不足
 - Information on contribution share of SEPs portfolios——SEPs booms and over-declaration
 - 有关标准必要专利组合的贡献率的信息——标准必要专利的激增和过度声明
 - Information about comparable license royalty rates——implementers can hardly know the patentee's historical license information covered by NDA.
 - 有关可比许可费率的信息——受保密协议的限制，实施人几乎无法得知专利权人的历史许可信息
 - Clear interest differentiation between patentees and manufacturers: 专利权人与制造商之间存在清楚的利益差别
 - Less cross-licensing; 交叉许可较少
 - Imbalance negotiation position; 谈判地位不平等
 - optimistic behaviour may occur, especially the ambiguous negotiation framework are strictly interpreted.
 - 有可能发生乐观的行为，尤其当对模糊的谈判框架加以严格解释时
- With shortage and asymmetry of information, lack of homogenous interests, a FRAND agreement can hardly be reached even on good faith.
- 由于信息不足、信息不对称、以及缺乏共同利益，即使在善意基础上，也很难达成FRAND协议。

3.2 Impact assessment on FRAND licensing brought by new surroundings 评估新环境对FRAND许可造成的影响

B. The fitness of royalty determination approach 许可费确定方法的合适性

- The courts also face the problem of insufficient information.法院也面临信息不足的问题
 - In Apple v. Motorola, the court reluctantly admitted that judicially determined royalty is still not an exact science, evidence which is not perfect is nonetheless admissible if imperfections can be allowed for.
 - 在苹果诉摩托罗拉一案中，法院勉强承认，从司法角度确定许可费依然并非一门准确的科学。然而，如果允许存在瑕疵，那么也可以接受有瑕疵的证据。
 - Different approaches are applied on a case-by-case basis depending on the evidence available.
 - 根据具体可用的证据，不同案件采用不同的方法。
- Challenges 挑战
 - How to calculate the contribution share of SEP holders ? 如何计算标准必要专利持有人的贡献率？
 - Defects of counting SEPs numbers——according to Schankermann's research, the Top 10% patents account for 84% of the total value in ICT;
 - 以标准必要专利的数量为计算依据，存在缺陷——根据Schankermann的研究，在信息与通信技术行业，10%的专利贡献了总价值的84%。
 - The court can hardly conduct essentiality checks especially for SEPs portfolios with large patent numbers.
 - 法院几乎无法开展必要性检查，尤其面对包含大量专利的标准必要专利组合。
 - How to find the baseline for the royalty rate? Both Top-Down and Bottom-Up have great drawbacks:
 - 如何找到许可费率的基线？自上而下和自下而上方法均存在巨大缺陷：
 - Bottom-Up: Without sufficient samples, there could be a circularity to justify a prior unreasonable rate as a FRAND rate.
 - 自下而上：缺乏足够的样本，证明之前不合理的费率为FRAND费率可能会陷入循环论证；
 - Top-Down: The royalty caps——the 5% cumulative royalty rate for 3G and 10% for 4G are unilaterally claimed by key right holders to see to a smooth license in future.
 - 自上而下：许可费上限——为保证未来的顺利许可，关键权利人单方面主张3G的累计许可费率上限为5%，4G的累计许可费率上限为10%

3.2 Impact assessment on FRAND licensing brought by new surroundings 评估新环境对FRAND许可造成的影响

C. Trade protectionism and opportunism under fragmented enforcement framework

C. 碎片化执法框架下的贸易保护主义和机会主义

- ❑ With the GVC mutated into GPN and GIN, the risks of conflicting legal standards increased, especially between developed and developing countries.
- ❑ 随着全球价值链进入全球生产网络和全球创新网络时代，法律标准发生冲突的风险增加，尤其在发达国家和发展中国家之间。
- ❑ Based on different legal standards, patentees and implementers would normally choose the preferred jurisdiction to launch the lawsuit separately.
- ❑ 基于不同的法律标准，实施人自然会选择有利于己方的司法辖区来单独提起诉讼。
- ❑ Some jurisdictions begun to shape the global business arrangements through domestic SEPs disputes.
- ❑ 部分司法辖区开始通过境内标准必要专利纠纷，着手建立全球商业安排
 - Anti-suit injunction 禁诉令
 - US: Microsoft v. Motorola, Huawei v. Samsung..... 美国：微软诉摩托罗拉案，华为诉三星案...
 - UK: Conversant v. Huawei and ZTE 英国：Conversant 诉华为与中兴案
 - Setting the global rates 制定全球费率
 - Unwired Planet v. Huawei 无线星球诉华为案
 - Conversant v. Huawei and ZTE Conversant 诉华为与中兴案
- ❑ If the FRAND is transferred into a self-preference trade policy, instead of negotiating on good faith, opportunism would arise among the licensing parties to achieve “first strike” in litigation.
- ❑ 如果FRAND 变为一种自利性贸易政策，那么各方不会选择善意谈判，而是采用机会主义策略，以期在诉讼中先发制人。

04

Prospects to Counteract Challenges by Self-regulation of SSOs

通过标准制定组织的自我规制应对挑战的前景

4.1 SSO: An established open, professional and impartial forum

4.1 标准制定组织：一个开放、专业、公正的成熟论坛

- Light-handed regulation for technology issues 针对技术问题的轻度规制
 - EMC v. Commission, the General Court held that standard-setting agreements would not infringe Article 101(1) if the standard setting was non-discriminatory, open and transparent.
 - 在EMC公司诉欧委会一案中，欧盟普通法院认为如果标准制定是非歧视、公开和透明的，则标准制定协议不违反第101(1)条规定。
 - American Welding Society Case, the US DOJ confirmed that it didn't consider whether one standard is better than another, but only whether the process of standard-setting has been abused.
 - 在美国焊接学会一案中，美国司法部确认，自己不考虑一项标准是否优于另一项标准，而是考虑标准制定过程是否遭到滥用。
 - Reviewing and deciding on the substance of the standard, i.e. what constitutes the best technology, is outside their the ability and scope, the courts and government only regulated the “good governance” of SSOs, which have **better positions and professional advantages to reach the most pro-competitive solution**.
 - 对标准实质的审核与决定（即，什么构成最好的技术）超出法院和政府的能力与职责范围，法院与政府只规范标准制定组织的“良好治理”，**在形成最促进竞争的解决方案上，标准制定组织有更高的地位和专业优势**。
- Precondition for self-regulation: Global harmonisation of standard-setting procedures
- 自我规制的前提条件：标准制定程序的全球协调
 - WTO Technical Barriers to Trade (TBT) Agreement 世贸组织技术性贸易壁垒协议

In 2000, TBT Committee set out six principles for development of international standards in its *Annex 3: Code of Good Practice for the Preparation, Adoption and Application of Standards*. It requires to ensure **transparency, openness, impartiality and consensus, effectiveness and relevance, coherence, development dimension**, when international standards, guides and recommendations are elaborated.

2000年，技术性贸易壁垒委员会在其《附件3：制定、采用和实施标准的良好行为规范》中规定了制定国际标准的六条原则。委员会要求在制定国际标准、指导和推荐时，应确保**透明、开放、公正且具备共识、有效且相关、自治、符合发展需求**。

4.1 SSO: An established open, professional and impartial forum

4.1 标准制定组织：开放、专业、公正的成熟论坛

Empirical Research from Searle Center Database on Technology Standards and Standard Setting Organizations (Baron and Spulber):

塞尔中心数据库针对技术标准和标准制定组织开展的经验研究（Baron 与Spulber）：

□ Openness and full participation 开放与全面参与

- All SSOs investigated in its database are open to new members;
- 其数据库中调查的所有标准制定组织都对新成员开放；
- The benefits involved and openness bring a full participation of stakeholders in standardization activities, including patentees vs. implementers, device manufactures vs. network operators.
- 这种开放性以及所涉及的利益可以让利益相关者，包括专利权人和实施人，设备制造商和网络运营商，全面参与标准化活动。

□ Costs and knowledge sharing 成本与知识共享

- The work of each SSO is generally conducted by technical committees elected from its members who are responsible for individual standards.
- 每个标准制定组织的工作一般由负责不同标准的成员选举的技术委员会开展。
 - E.g., 3GPP has four Technical Specification Groups, which are further subdivided into 17 Working Groups, involving devices, antennae, servers, and various other elements of an overall network. Each Working Groups meets 6–8 times per year, with hundreds of representatives from member firms around the world, and close to 7 million person-hours were spent across 17 Working Groups from 1999–2015 solely in meeting time.
 - 举个例子，3GPP下设四个技术规范组，进一步分为17个工作小组，涉及设备、天线、服务器、以及整体网络的各种其他要素。每个工作小组每年召开6~8次会议，与会人员是来自全球各个成员企业的数百名代表。从1999年到2015年，17个工作小组仅在会议上就花费接近700万工时

□ Majority-based participation and decision making 基于多数原则的参与和决策流程

- The quorum ranges from 30 to 51% of eligible voting members that must be present;
- 会议的法定人数范围：30%~51%有投票权的成员必须出席会议
- The requirement for the approval of a standard ranges from a simple majority (51%) to unanimity (100%) of expressed votes (abstentions not counted);
- 批准一项标准的票数要求：从简单多数（51%）到一致同意（100%）（弃权不算）
- SSOs explicitly allow members to appeal votes and decisions on standards;
- 标准制定组织明确允许成员就标准投票和决定事项提出申诉；
- Both the approval rate of top contributors and the others are around 30%, which means a favourable treatment is not obvious.
- 重点贡献者和其他成员的批准率都在30%左右，说明不存在明显的优厚待遇。

4.2 Improving the transparency and predictability of FRAND license by SSOs

4.2 标准制定组织改善FRAND许可的透明性和可预测性

A. Transparency on contribution shares of SEP holders 标准必要专利持有人贡献率的透明性

- Necessities for essentiality check by a third party 有必要由第三方开展必要性审查
 - It “would *increase the predictability and transparency* with regard to whether the disputed patent is essential to the standard and *would facilitate licensing negotiations* conducted by any other parties”.—— Manual of “Hantei” (Advisory Opinion) for Essentiality Check.
 - “这种做法，一方面，就涉争专利是否对标准有必要而言，能够增加可预测性和透明性；另一方面，可便利其他方开展许可谈判。” ——《必要性审查 “Hantei” 手册（咨询意见）》
 - EC “considers that declared SEPs should be subject to reliable scrutiny of their essentiality for a standard, and will launch a pilot project for SEPs in selected technologies with a view to facilitating the introduction of an appropriate scrutiny mechanism”. —— “Setting out the EU approach to standard-essential Patents”
 - 欧委会 “认为应对已声明的标准必要专利之必要性开展可靠的审查，而且将选择部分技术领域启动一项针对标准必要专利的试点计划，旨在促进引入合适的审查机制” ——《说明欧盟对标准必要专利的方法》
- Challenges: the costs brought by of large amounts of SEPs 挑战：大量标准必要专利带来的成本
 - “Hantei” system operated by Japanese Patent Office, which only starts on request of the specific disputes.
 - 日本专利局运作的 “Hantei” （译注：“Hentai” 是日语中 “判定” 的英语发音转录）系统仅在针对具体争议提出请求时才启动。
- SSOs are organized in a cost-effective and knowledge-sharing way, while the scrutiny work can also be shared by patentees and working group experts:
- 标准制定组织的组织方式具有成本有效性和知识共享性，审查工作也可以由专利权人和工作小组专家分担：
 - Patentees should not only be required to disclose their SEPs, but also submit claim charts to SSOs for their declaration;
 - 不仅应要求专利权人披露他们的标准必要专利，还应要求他们向标准制定组织提供权利要求对照表，以完成声明；
 - Related Working Groups of SSOs conduct the essentiality check based on provided claim chart;
 - 标准制定组织的相关工作小组基于所提交的权利要求对照表，开展必要性审查；
 - As part of SSOs’ SEPs database, the scrutiny results and claim charts should be presented to the public.
 - 作为标准制定组织的标准必要专利数据库，审查结果和权利要求对照表应该公之于众。

4.2 Improving the transparency and predictability of FRAND license by SSOs

4.2 标准制定组织改善FRAND许可的透明性和可预测性

B. Transparency on FRAND royalty FRAND许可费的透明性

Depositing historical license agreements at SSOs 将历史协议存放在标准制定组织

- To ascertain whether the royalties charged are fair and free of discrimination, a comparison with historical license is necessary, which can hardly be trade secrets.
- 为了确定所收取的许可费是否公平、无歧视，有必要与历史许可费进行比对，为此，历史许可费就不能是商业机密。
- It is worth considering to require SEP owners to deposit the FRAND-compliant royalties which they previously charged to others.
- 值得考虑的是，可以要求标准必要专利权利人将他们之前向其他人员收取的、符合FRAND条款的历史许可费数据存放在标准制定组织。
- Even though it could be recognized as trade secrets, the royalty rates can be deposited at SSOs with necessary protection measures, e.g., anonymization, providing access to limited stakeholders.
- 尽管可以将许可费率看做商业机密，但是也可以通过必要的保护措施，比如匿名化，将其存放在标准制定组织，允许有限的利益相关者获取对应许可费率信息。

Collective bargain for royalty caps 针对许可费上限开展集体谈判

- SSOs have better decision-making mechanisms that ensure openness, full participation, transparency, consensus and impartiality. The best way to determine FRAND rates is to combine technology selection and royalty setting issues in ex ante negotiation.
- 标准制定组织有更好的决策机制，可以保证开放、全面参与、透明、共识和公正。确定FRAND费率的最佳方式是在事先谈判中，将技术选择与许可费设置问题结合起来。
 - It was not adopted because of the risks to delay the standardization process.
 - 由于存在延迟标准化过程的风险，这一方式未被采纳。
- Top-Down approach is widely applied approach. But the royalty caps of 5% for WCDMA and 10% for LTE are mainly unilaterally claimed by several key SEP holders, without full negotiation of most stakeholders.
- 自上而下的方法广受应用。但是对WCDMA设定5%的许可费率上限，对LTE设定10%的许可费率上限，主要是几个关键标准必要专利权持有人单方面主张的，缺乏多数利益相关者的充分商讨。
- A mechanism for collective bargains for royalty caps can be established by SSOs, which can greatly improve transparency and predictability, and avoid royalty stacking problems.
- 标准制定组织可以建立许可费率上限集体谈判的机制，这将极大地改善透明性和可预测性，避免许可费叠加问题。

4.3 Eliminating Conflicts of legal standards by SSOs

4.3 标准制定组织消除法律标准的冲突

- As an intermediary, the SSO is organized in an open way and not limited by territory, has potential to tackle the problem in two ways:
- 作为一种中间实体，标准制定组织的组织方式是开放的，不受地域限制，因此有能力从两个方面解决法律标准的冲突问题：
- Concertizing FRAND terms 协调FRAND条款
 - IEEE's 2015 IPR Policy 电气和电子工程师协会2015年的知识产权政策：
 - “FRAND obligations are purposely incomplete contracts”, parties in bilateral negotiations may converge on diverse contractual terms and one size rarely fits all.
 - “FRAND条款是有意如此制定的不完整合同条款，” 谈判双方可以就多种合同条款达成一致，几乎没有放之四海而皆准的条款。
- A globally uniformed and specialized institution adjudicating the FRAND disputes:
- 全球统一的裁决FRAND争议的专门机构：
 - “Valuable insight has been gained and approaches developed from licensing agreements, mediations, arbitrations and court decisions over many years. Significant resources and efforts have been devoted to clarifying, analysing and valuing patents and technology. As there is no common repository for such expertise, work and research may be unnecessarily duplicated at serious cost to the parties involved.”
 - “多年来，我们从许可协议、调解、仲裁和法院判决中获得许多有价值的的洞察和方法。为澄清、分析和评价专利与技术，投入了大量资源与精力。鉴于针对这一专业领域缺乏共同的资料库，所以可能存在不必要的重叠性工作与研究，对相关各方带来严重的成本损失。”
 - SSOs could be such a repository and arbiter. SSOs are organized with full participation of implementers and patentees in different industries, in the hope that a specialized committee to mediate FRAND disputes can be elected in order to strike the interest balance.
 - 标准制定组织可以承担这种资料库和仲裁者的角色。标准制定组织的组织方式，确保来自不同行业的实施人和权利人可充分参与，希望可以选举出一个调解FRAND冲突的专门委员会来平衡各方利益。
 - Know well the contributions of all patentees; 熟知所有权利人的贡献情况；
 - Conduct essentiality checks; 开展必要性审查；
 - Work as the depository for FRAND-compliant royalties. 作为保存符合FRAND条款的许可费信息的资料库。

4.3 Eliminating Conflicts of legal standards by SSOs

4.3 标准制定组织消除法律标准的冲突

- How can this mechanism fit into the current enforcement framework?
- 这一机制如何融入现有的执法框架？
 - A radical option——a compulsory arbitration clause as part of FRAND commitment can be included into SSOs' IPR policy, so that SSOs can adjudicate FRAND disputes based on it.
 - 激进选择——可以向标准制定组织的知识产权政策中纳入一项强制仲裁条款，作为FRAND承诺的一部分，这样标准制定组织就可以基于这一条款裁决FRAND争议。
 - A conservative option——FRAND terms can be determined by SSOs as a form of advisory opinion.
 - 保守选择——标准制定组织以咨询意见的形式确定FRAND条款。
 - In injunction-centred jurisdictions, implementers who accept the opinion of SSOs should be recognized as willing licensees and a FRAND license agreement can be reached on this basis, or an injunction can be issued;
 - 在以禁止令为中心的司法辖区，接受标准制定组织意见的实施人应被视为有意愿的被许可方，可以据此达成FRAND许可协议，否则就可以发出禁止令；
 - For royalty-centered jurisdictions, analogously to judicial comity, the courts should not make a conflicting judgment on the same disputes, unless in an obviously unreasonable situation.
 - 在以许可费为中心的司法辖区，与司法礼让原则类似，法院不应该针对同样的争议做出相互冲突的判决，除非在明显不合理的情况下。

05

The Way Forward: Light-Handed Regulation
Imposed by Competition Law and WTO law
出路：依据竞争法与世贸组织法采取轻度规制

5.1 Regulating Self-regulation of SSOs under competition law

5.1 依据竞争法对标准制定组织的自我规制进行规范

- SSOs have great potential to counteract with new challenges by self-regulation.
- 标准制定组织有极大的潜力通过自我规制应对新挑战。

- Competition among SSOs breeds “forum shopping” of patentees. Under the “FRAND harmony”, SSOs can hardly break the ice and enforce FRAND commitments automatically.
- 标准制定组织之间的竞争导致专利权人对诉讼法院“挑三拣四”（以期获得最有利的裁判）。在“FRAND大同”背景下，标准制定组织很难破冰，只能自动执行FRAND承诺。
- SSOs should be mandated to strengthen its self-regulation mechanism for SEPs licensing, including:
- 应强制要求标准制定组织加强针对标准必要专利许可的自我规制机制，包括：
 - Checking essentiality of declared SEPs; 审查已声明标准必要专利的必要性；
 - Depositing FRAND-compliant royalty rates; 提交符合FRAND条款的许可费率信息；
 - Collective bargaining for royalty caps; 针对许可费上限进行集体谈判；
 - Adjudicating FRAND terms for disputes. 裁决FRAND条款纠纷。
- Because sources of standards mainly concentrate in the US and in Europe, the collaborative antitrust enforcement is needed:
- 因为标准主要来源于美国与欧洲，所以需要在反垄断执法上展开合作：
 - For US, SSOs’ obligation of self-regulation can be gradually imposed by flexibility of Rule of Reason;
 - 就美国而言，可以通过合理性原则的灵活性逐步对标准制定组织施加自我规制义务；
 - For EU, the safe harbor of the 2010 Horizontal Guidelines is too detailed and low, eliminating the incentives of SSOs to match with their new surroundings. It should be revised to further clearly regulate the self-regulation of SSOs.
 - 就欧盟而言，2010年《横向指南》的避风港规定太过详细、门槛太低，导致标准制定组织对适应新环境没有动力。应该对此加以修订，进一步清晰地规范标准制定组织的自我规制。

5.2 Regulating SSOs under the WTO TBT Agreement

5.2 依据世贸组织技术性贸易壁垒协议对标准制定组织进行规范

- With regard to the conflicts of global legal standards and trade protectionism, There's need to coordinate and harmonize SEPs regulatory approaches at the international level.
- 关于全球法律标准的冲突以及贸易保护主义，需要在国际层面协调标准必要专利的监管方法。
- The WTO TBT Agreement set general principles of standard-setting to protect global competition and reduce unnecessary non-tariff barriers to trade, but didn't address the IPR problem. The issue should be reflected in the six principles of TBT agreement or considered to add another important principle.
- 世贸组织的技术性贸易壁垒协议为保护全球竞争，减少不必要的非关税贸易壁垒，规定了标准制定的一般原则，但是没有解决知识产权问题。应该在技术性贸易壁垒协议的六条原则中反映知识产权问题，或者考虑增加一条重要的原则。
 - In 2005, China called on the WTO Members to develop appropriate international policies to address the tension between IPRs and standards in the context of the triennial review of the TBT Committee.
 - 2005年，在技术性贸易壁垒委员会三年度审查的背景下，中国呼吁世贸组织成员制定合适的国际政策来解决知识产权与标准之间的分歧。
 - In 2007, China further proposed a draft proposal for a *TBT Committee decision on guidelines for intellectual property rights issues concerning the preparation, adoption and application of standards*.
 - 2007年，中国进一步提出“技术性贸易壁垒委员会关于涉及标准制定、采用和实施的知识产权问题指南的决定”建议草案。
- The conflicts of legal standards and interests between developing and developing countries are more obvious, the enforcement of SEPs actually restricts the availability of standards. Therefore, we suggest **IPRs issues should be addressed in the TBT agreement, not only the requirements on FRAND commitment, but also self-regulation obligations of SSOs.**
- 发达国家与发展中国家在法律标准和利益方面的冲突愈加明显，标准必要专利的执行实际上限制了标准的可用性。因此，我们建议**应在技术性贸易壁垒协议中解决知识产权问题，不仅要反映FRAND承诺的要求，也要体现标准制定组织的自我规制义务。**

Thanks! 谢谢

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