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Solution in Search of a Problem: Licensing Negotiation Groups in the Internet of Things

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- Prof. Jonathan M. Barnett
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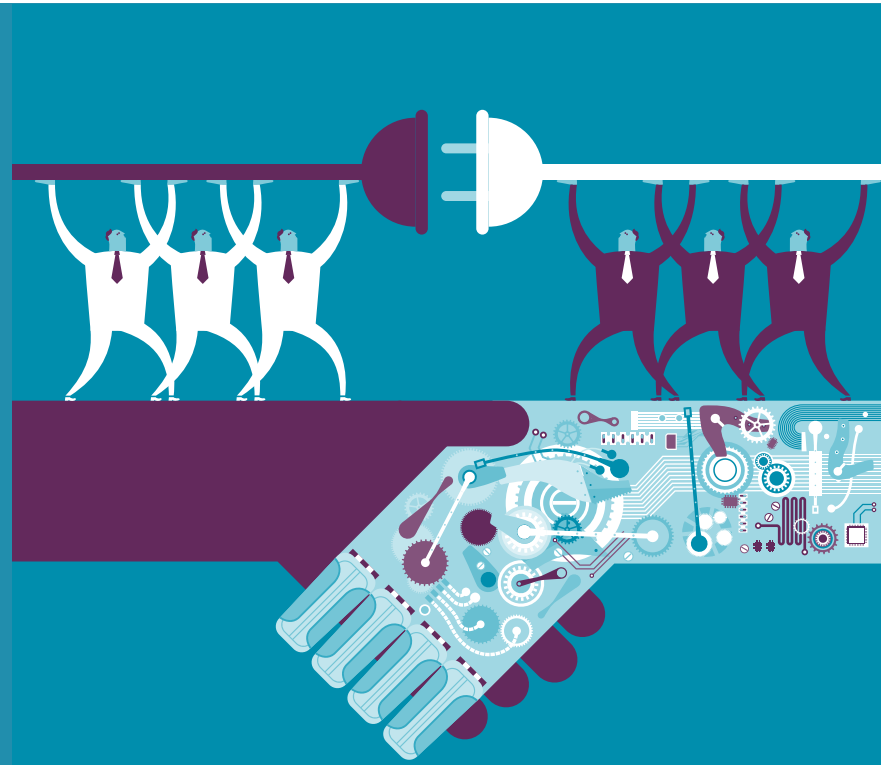

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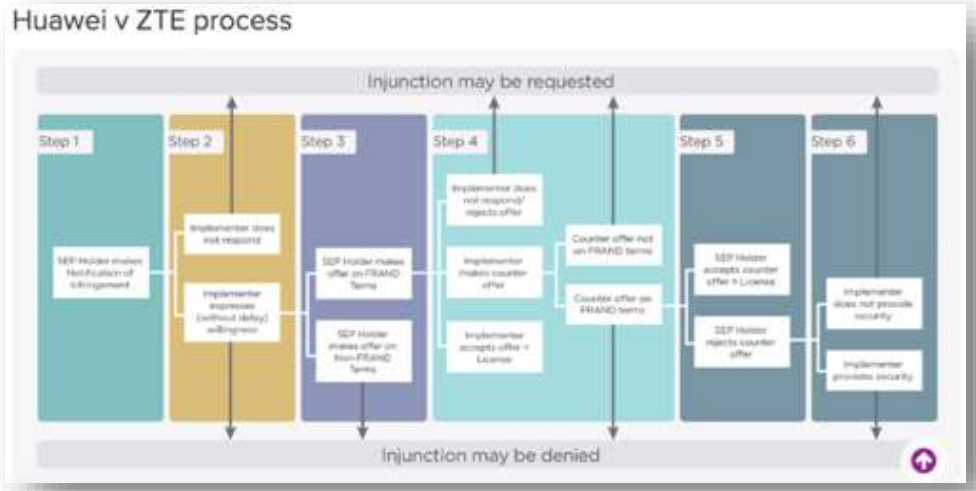

Webinar 'Licensing Negotiation Groups: what, why, how? with Igor Nikolic and Haris Tsilikas

Paper by Igor Nikolic: Licensing Negotiation Groups For SEPs


Collusive Technology Buyers Arrangements

Licensing Negotiation Groups For SEPs: Collusive Technology Buyers Arrangements? Their Pitfalls And Reasonable Alternatives

By Igor Nikolic

Abstract

1. Introduction—SEP Licensing Challenges in the IoT

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Solution in Search of a Problem: Licensing Negotiation Groups in the Internet of Things

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Agenda

Proposed “Problem” and “Solution”

Assessing the “Problem”: Theory v. Evidence Concerning Alleged Market Failures in SEP Licensing

Assessing the “Solution”: Competitive Harms v. Gains from Licensing Negotiation Groups in SEP-Enabled Markets

The “Problem(s)”

- Assumption: SEP licensors are monopolists with unrestrained rate-setting power.

- Problem 1: SEP licensing markets are therefore prone to “patent holdup” since implementers are locked into the standard and SEP owners can set royalty rates at will.

- Problem 2: Assuming each SEP owner has pricing power, a “royalty stack” will develop, resulting in aggregate royalties that limit adoption, stunt market growth, and discourage entry.

The “Solution”

- Assuming SEP licensing markets are prone to holdup and stacking, these problems will worsen in the Internet of Things b/c the number of licensees and licensing relationships will multiply: C2C, B2C, B2B, C2M, B2M, M2M.

- Transaction costs > transaction gains → the IoT stalls.

- Solution: Allow licensees to act collectively and form negotiation groups when interacting with SEP licensors. This will enable “one-stop-shopping”, reducing transaction costs and lowering royalty rates.

Assessing the "Problem"

- If the holdup and stacking theories are correct, then cellular and smartphone markets (2G/GSM through 4G/LTE) should have experienced slow growth, limited adoption, delayed innovation, and increasing prices.

- Actual cellular and smartphone markets have exhibited rapid adoption rates, exceptional growth, continuous innovation, and declining quality-adjusted prices (Gupta and Galetovic 2020, Galetovic et al. 2015).

- All empirical studies of aggregate royalty rates in SEP-intensive markets reach estimates of 3.5% to 5.5% of the average device price. Additionally, these rates are constant over time (Galetovic et al. 2018, Dedrick & Kraemer 2017, Sidak 2016, Mallinson 2016).

Interpreting the Evidence

- All available evidence disfavors the market failure hypothesis. Why?

- **Error 1**: Holdup and stacking theories rely on a "single-period" payoff maximization model. But SEP licensors are repeat players that seek to maximize expected returns on R&D investment over iterative technology generations (3G, 4G/LTE, 5G . . .).

- **Error 2**: SEP licensors bargain under asymmetric conditions that favor licensees. Licensors incur all R&D costs prior to potential standard adoption while branded licensees control market access and enjoy technology access. Even after standard adoption, licensors must accrue goodwill to elicit adoption of future standards.

Assessing the "Solution"

- Competition policy presumptively disfavors collective purchasing groups because they can enable coordination on price or price-related inputs. This can give rise to pricing distortions relative to competitive market conditions.

- Illustration: Suppose retailers form a buyer group to negotiate with suppliers.
  - Distortion 1: Prices paid to suppliers are pushed below competitive levels, causing suppliers to reduce output. Output encompasses R&D expenditures.
  - Distortion 2: If retailers have market power, they pocket the cost-savings from reduced input costs and may also coordinate on prices offered to consumers.

- The presumption against buying groups can be overturned under certain conditions.

Arguments for Licensing Negotiation Groups

- **Argument 1**: LNGs would protect SEP licensing markets from market failure due to holdup and stacking effects.

- **Argument 2**: LNGs would protect SEP licensing markets from market failure due to transaction costs in "large-number" environments.

- Based on three decades of SEP licensing in wireless device markets, neither form of market failure is likely. **Are 5G/IoT markets different?**

Preliminary Evidence: 5G/IoT SEP Licensing Markets

Wireless communications devices

Automotive/mobility

SMEs (small and medium-sized enterprises)

Wireless device and automotive markets

- Wireless device markets exhibit no apparent difference in licensing practices for 5G as compared to 3G and 4G/LTE. This is a small-numbers environment with repeat-play licensors and licensees.

- At the OEM level, the automotive market exhibits similar characteristics. Therefore the risk of market failure is similarly low.

- Preliminarily the automotive market is converging on the OEM-level licensing practices developed in the wireless device market. Upstream suppliers are protected by "have made" rights and SEP owners' implicit waiver of patent rights at any point on the supply chain above the OEM.

SEP Licensing in the Automotive Market (bilateral only)

Announcement Date	Licensor	Licensee	Licensing level
October 2020	Sharp	Daimler	OEM
July 2020	Sharp	Huawei	Component-level
June 2021	Nokia	Daimler	OEM
July 2021	Huawei	Tier 1 supplier to Volkswagen	Tier 1 supplier (restricted to specified OEM)
January 2022	Qualcomm	Volvo	OEM
January 2022	Qualcomm	Honda	OEM
January 2022	Qualcomm	Renault	OEM

Are LNGs necessary to mitigate transaction costs in SME licensing markets?

- Currently “stand-alone” SME licensing markets are mostly hypothetical. If meaningfully developed, this would be a large-number environment potentially exposed to “patent thickets” that obstruct efficient licensing.

- But “patent thicket” claims have generally not been validated under empirical scrutiny: radio communications (Barnett 2015, Howells & Katznelson 2014), aircraft (Katznelson and Howells 2015, Barnett 2015), automotive (Barnett 2015), information technology (Barnett 2014), and biotechnology (Adelman and DeAngelis 2007).

- Consistent finding: markets anticipate, mitigate, or resolve thickets through cross-licensing, pooling and other transactional innovations.

Do LNGs Pass a “Least-Cost” Test?

- Assume SMEs do suffer from significant transaction costs due to large numbers of SEP licensors and licensees.

- LNGs must still pass a “least-cost” test: **Is there another means to achieve transaction-cost savings at a lower risk of competitive harm?**

- Yes. ITC markets already use patent pools to achieve “one stop shopping”, matching tens of licensors with hundreds of licensees. Compared to LNGs, patent pools avoid transaction costs at a lower risk of competitive harm.

Selected Patent Pools in ICT Markets

Standard	Pooling Entity	Technology/product category
MPEG-2	MPEG-LA	Video codec
H.264	MPEG-LA	Video codec
HEVC	MPEG-LA	Video codec
DVB-T	SISVEL	Digital television
AAC	Via Licensing	Audio codec
MPEG Audio	Via Licensing	Audio codec
Wi-Fi (802.11)	Via Licensing	Wireless local area networks (LAN)
Blu-ray	One-Blue	Blu-ray discs and players
Blu-ray	Premier BD	Same

Modern Patent Pools: Standard Characteristics

- Independent administrator.
- Administrator has no economic stake in any downstream product market.
- Administrator secures licensor and licensee adoption by setting “reasonable” rates. This grows the market and promotes the administrator’s fee revenue.
- Administrator is a repeat player that has an incentive to accrue reputational capital among licensors and licensees.
- Licensors are sometimes “net licensees” and have an interest in lowering rates.

Avanci Licensing Platform

Adopts modern patent pool template for 3G and 4G/LTE licensing in the automotive market. Uses more complex royalty allocation formula to reflect value differences among licensors.

Since 2016, secured adoption by most high-value SEP licensors and significant number of automotive OEMs.

2020: After issuance of DOJ business review letter, Avanci launched licensing platform for 5G/IoT.

Main Points

Three decades of SEP licensing in wireless devices do not support predicted market failures. There is no reason to believe that 5G SEP licensing in wireless device and automotive markets would perform differently.

Buyer coordination always poses an inherent risk of competitive harm and can only be justified if it can achieve transaction-cost efficiencies without significant risk of upstream or downstream pricing distortions.

Even if LNGs can achieve transaction-cost efficiencies in SME licensing markets, independently administered pools can achieve the same objective at a lower risk of competitive harm.

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Q&A

Forthcoming Webinar:

Date	Title	Summary
17-02-2022	Anti-Suit and Anti-Anti-Suit Injunctions in SEP litigation, with Dr. Igor Nikolic	The jurisdictional battles with ASIs and AASIs has negative consequences on SEP licensing. The situation calls for a framework that would focus the parties on resolving the key issue behind every SEP dispute.

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