



Max Planck Institute
for Innovation and Competition

IoT Connectivity Standards: How Adaptive is the Current SEP Regulatory Framework?

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Introduction

- Internet of Things (IoT) as new technological paradigm with large economic and societal implications
- Network connectivity provides the basis
- Past and current conflicts surrounding licensing and enforcement of SEPs cast a shadow over IoT development

Does the current SEP regulatory framework adequately respond to the challenges that the IoT raises?

- 1) IoT-specific technological factors impacting the SEP regulatory framework
- 2) Market dominance in the market for IoT connectivity technologies
- 3) Huawei's principles and licensing negotiation framework in the IoT context



Connectivity in the IoT

Distinct features of the IoT

Ubiquitous connectivity

Variety of uses for connectivity

IoT connectivity technologies



Competitive market dynamics

- Fragmented technological landscape
- Consolidation expected, but alternative technologies will continue to exist
 - IoT is far too diverse for a single technology to serve all use cases and markets
 - Technical feasibility to support different connectivity options
 - Connectivity agnostic platforms
 - 5G is neither an imperative for IoT, nor will it be as revolutionary as predicted



Market Dominance in the IoT

- SEP ownership and market dominance
- Standard essentiality of a patent v. market essentiality of a standard
- For a big part of IoT applications, IoT connectivity markets will be relatively competitive \Rightarrow Ability of SEP holders to leverage on standard essentiality of patents will be to a large extent constrained
- Lock-in of single implementers



Enforcement of SEPs

The Huawei judgment in the IoT context

Theory of harm

- Huawei's leverage-based theory of exclusion \Rightarrow obvious shortcomings in IoT scenarios
- Need for an alternative theory of harm \Rightarrow negative effects on innovation

Procedural framework for licensing negotiations

- Many IoT implementers are alien to the ICT sector
- Informational gaps of technology owners
- IoT diversity and FRAND non-discrimination element?





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Thank you!

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