

Smart Cities – Technology Integration for a Sharing World

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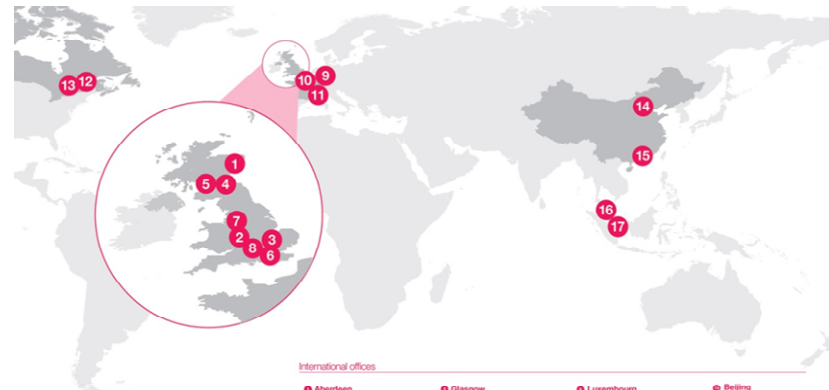
Managing Associate, Marks & Clerk Law LLP

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Overview



- Founded in 1887 - we continue to build on our heritage
- Unique long-standing relationship with **Marks & Clerk Law**
- Largest IP firm in the UK and one of the largest in Europe
- Ranked as the top filer worldwide of applications for patents under the Patent Cooperation Treaty (PCT)
- Expertise in a diverse range of technologies and industry types
- Consistently ranked in top tiers for our patent and trade mark prosecution and litigation capabilities by several of the leading directories - Chambers & Partners, Legal 500 and MIP
- Significant presence in North America, Europe and China/Asia



A world leader
in intellectual
property

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Smart Cities – How to change the World



Esther Ford

Marks & Clerk LLP

- *Protecting Innovation*
- *Clearing the Way*



- Buildings
- Healthcare
- Mobility
- Infrastructure
- Education/Government
- Security
- Energy

Source - *Smart Cities: An Overview of the Technology Trends Driving Smart Cities*, Rodger Lea



Rajesh Sagar

Marks & Clerk Law LLP

- *Advising and co-ordinating multi-jurisdiction disputes, inc. SEPs*
- *FRAND royalty terms, IP Licensing, inc. R&D and collaboration agreements*
- *IP and competition law*
- *Privacy, inc. GDPR*

Smart Cities – Technology Convergence



- Multiple essential and **interdependent** technologies for, eg,:
 - End nodes
 - Connectivity
 - Big data
 - Data collection and storage
 - Data analytics/applications
 - Privacy and security

This interdependence exposes all parties to greater IP risk

.....whereas Smart City development requires:

- **Collaboration**
- **Open data**
- **Interoperability / standards**

‘IP Wars’ ahead?

Smart Cities – Protection and Freedom



Q: What Smart City Technologies can be patented?

A: 'Technical' Inventions:

- Hardware - generally does not encounter patentability issues
- Software - “Computer Programs *as such*” are not patentable in UK or EP
... but software having ‘technical’ character/effect is patentable

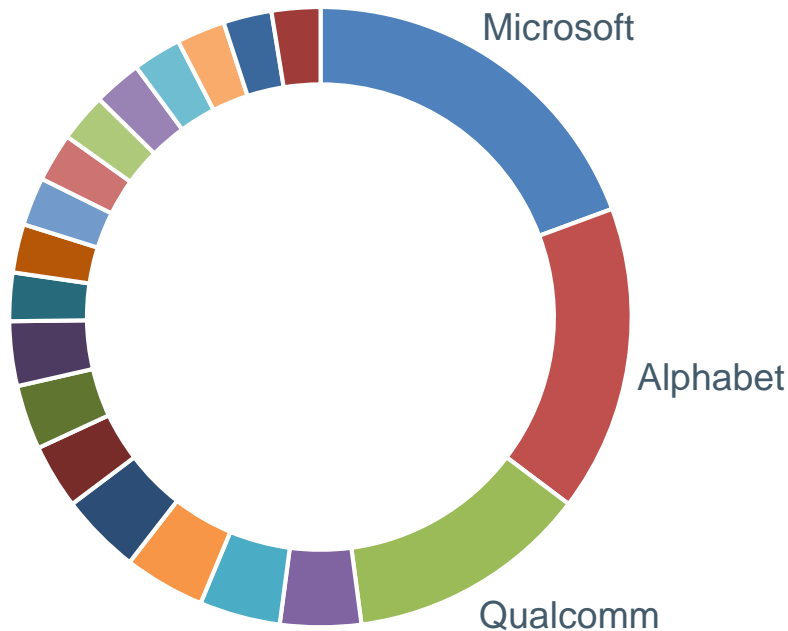
Q: Are you free to operate your Smart City innovation?

A : UK Supreme Court 2017 (‘Actavis v Lilly’) formalised law of ‘equivalents’ in UK

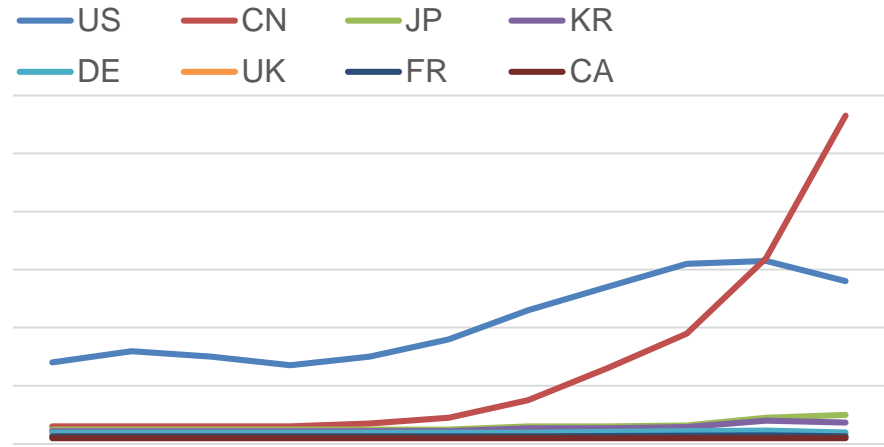
- Variants may now infringe even if lacking all claim features

Smart Cities – Machine Learning, AI

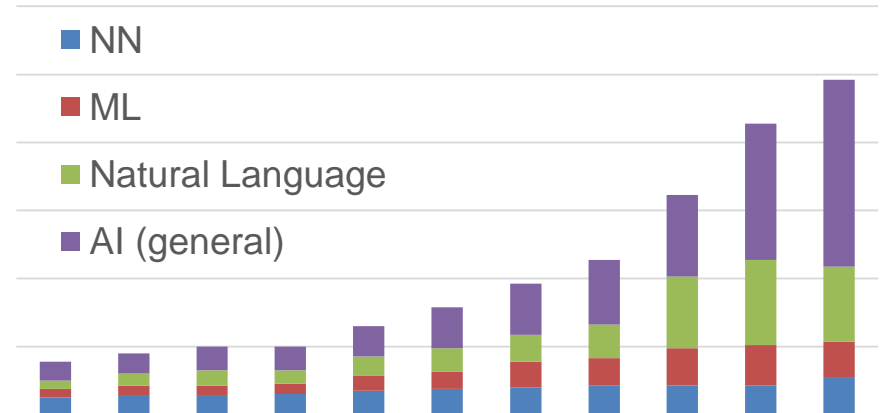
Top Patent Assignees by Volume



Inventor Nationality, 2006 - 2016



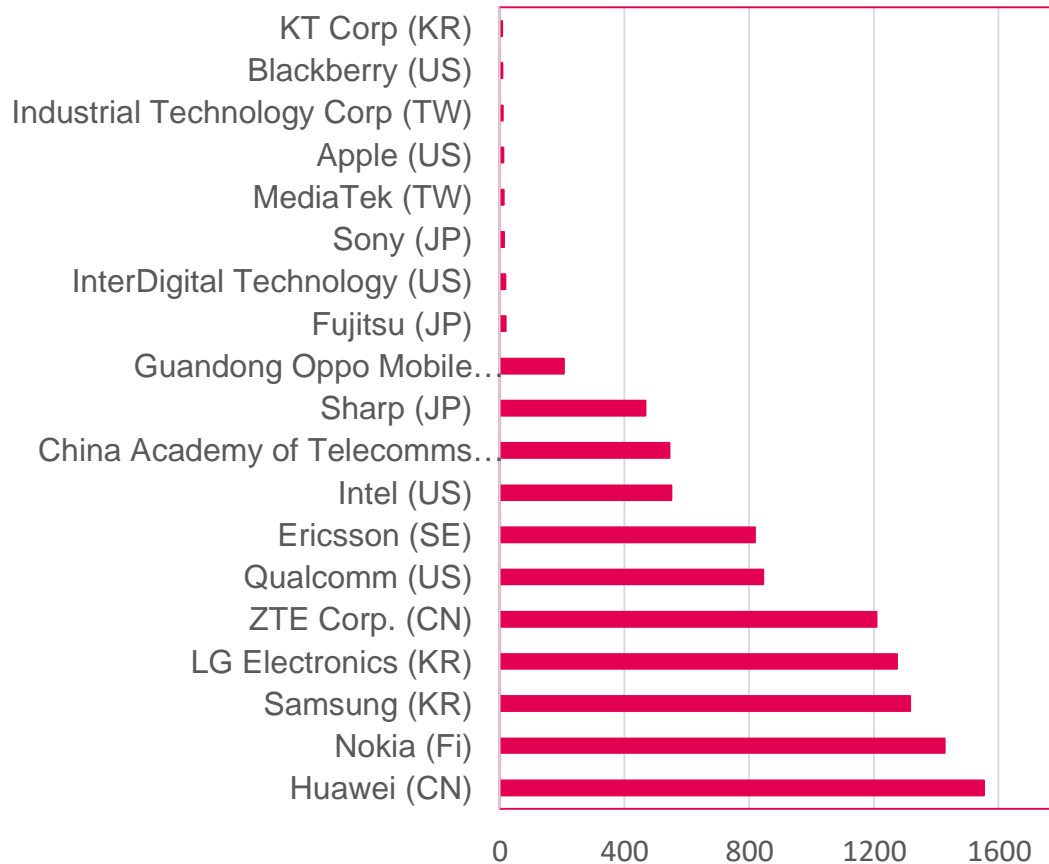
Patent Filings, 2006 - 2016



Source: Cowan et al., *Intellectual Property and Artificial Intelligence: what does the future hold?*

Smart Cities – Standards & Technology

A Case at hand: Top 5G family owners



- Litigations involving SEPs and FRAND determination in the UK
 - *Unwired Planet v Huawei*
 - *Conversant v Huawei*
 - *Conversant v Apple*
 - *Philips v HTC*
 - *Philips v Tinnco*
 - *TQ Delta v Zyxel*

Source: CGTN: China leads global race in key 5G patents, Pan Zhaoyi

Smart Cities: Technology and Standards – Access regimes

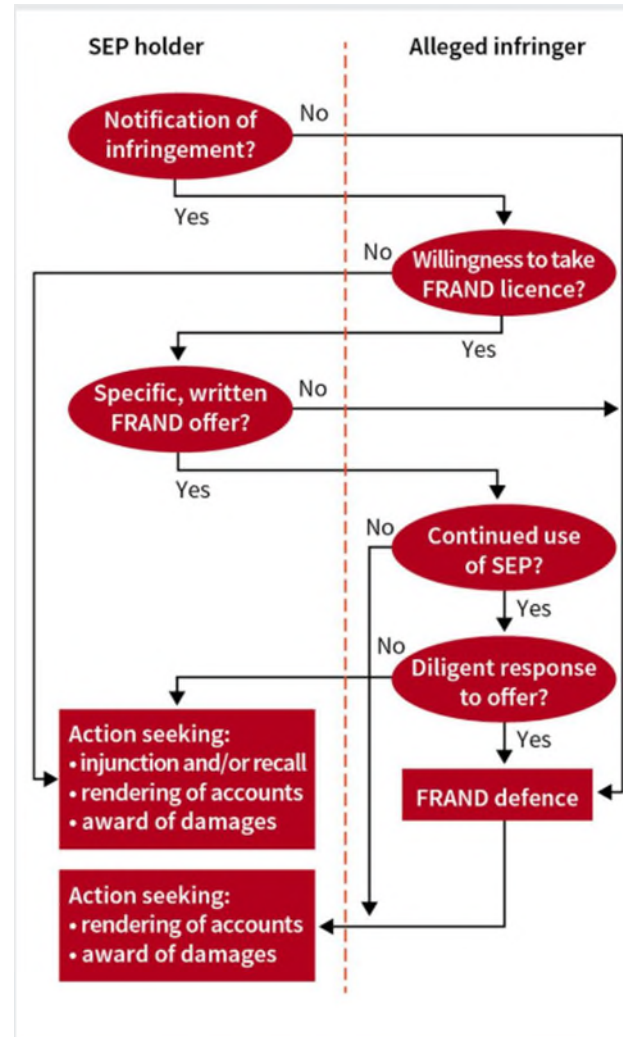


- **Standard Essential Patents (SEPs)**
- **Different Standard Setting Organisations (SSOs) have different policies**
 - European Telecommunications Standards Institute (ETSI)
 - IPR Policy: FRAND undertakings

Technology and Standards – Access regimes

The CJEU decision: *Huawei v ZTE (C-170/13) 2015*

- How the potential licensor (an SEP holder) and potential licensee (a technology implementer) should behave during licence negotiations
- What if the counter offer of the technology implementer is rejected?
- Can the technology implementer undertake any other steps to safeguard its position?



Smart Cities: Technology and Standards: FRAND Determination



Unwired Planet v Huawei – the UK

Other Points of note:

- UK Courts can determine FRAND royalty rate
 - It could be a range; and
 - It could be determined on a global basis.
- Within the FRAND set-up, licensees are not entitled to benefit from “Most Favoured Licensee” term.
- A copy of the FRAND Licence was annexed to the judgment of the first instance court

Smart Cities: Collaboration, Joint development and IP Acquisition & Licensing of technologies



- **Assignments**
- **Confidentiality agreements**
- **Materials evaluation agreements**
- **R&D collaboration agreements**
- **Manufacturing agreements**
- **Licensing out**
- **Licensing in**

Questions?

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