Innovation, Patenting, Standardisation and Licensing

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Terminology and familiar concepts (pre-requisite)

1. Intellectual Property Rights (IPR) Policy in a SDO
2. Standard Essential Patent (SEP)
3. Claim chart (claimchart) : tool to prove that a patent claim is essential to a standard
4. Fair, Reasonable And Non-Discriminatory (FRAND) licensing terms and conditions
5. Open Standard
The definition process of a standard in a SDO

Technical Specifications → IPR Policy → Implementation

Textual description
Formal language
Data structure
Software reference model
Conformance test suite
+ logo

Patents
Copyrights {marks}

Products
Services

SDO IPR Policy → Licensing → Compliant implementations
IPR, Standards and the Product LifeCycle

Market Needs
Product/Service Planning

Goal → Definition → Development → Qualification → Evolution

Product/Service

Standard

Goal

Pre-Standardisation → Standardisation → Validation → Maintenance

Research/Business Development

Post Standardisation

Technology
IPR

Promotion of market acceptance
- Global
- Regional
- National
R&D: link with Standards/Patents (1/4)

Technology Evolution

Commercial Activity/Investment Level

Credibility threshold
Barrier of acceptance

Time

Time
R&D: link with Standards/Patents (2/4)

Commercial Influence in Standards & Patents (Long term view)

Number of Patents and “Standards Inputs”

% of “essential Patents” or “Standards Inputs”

Strategic ← Tactical

Time

Strategic ← Tactical

Time
CONCLUSIONS

- “Essential Patents” obtained during early part of technology life cycle (can be 5 - 10 years before product launch)

- Early “Standards Inputs” determinant in making/influencing strategic choices and orientations (e.g. choice of technology, principal interface, architecture)
R&D: link with Standards/Patents (4/4)

“MEASURES” OF RESEARCH SUCCESS

- Secure essential patents: 20%
- Influence standardization: 15%
- Sustain technological advantage: 15%
- Achieve technological competitive advantage: 50%
R&D, Patent and Standard setting processes

- Ideas -> Invention declaration/preparation -> Patent filing/preparation
- Patent prosecution: FR 12 months, PCT 18 months, Examination >24 months (EP, US, JP), Grant 6 months, Opposition 9 months
- Contributions to Standards (requirements)
- Solutions to Standards related to Patent claims
- Amendments to Patent claims
- Draft Claimcharts, Claimcharts v1 + v2
- Requirements -> Standard v1 -> Standard v2 -> Standard v3
- New problems to solve by R&D
Possible SEP licensing means

- **Direct licensing** 1:N
  - N licenses required (no reciprocal license needed)

- **Cross-licensing** N:N
  - \( \frac{1}{2} N \cdot (N-1) = \frac{1}{2} (N^2 - N) \) licenses required

- **Collective licensing** M:N
  - Joint License Agreement M:N
    - N licenses required
  - Patent Pool 1:N
    - N licenses required from the Patent Pool comprising M Licensors
Patent Pool: technology transfer to market

**PRODUCTS / SERVICES**

Ready made vehicle(s) for fast technology transfer « shop window of technology »

**IPR Policy**: Fair, Reasonable And Non-Discriminatory (FRAND) licensing commitment

**Technical standards making**:
- Standards bodies (ITU, ETSI, ANSI, ARIB…)
- Industry clubs (IEEE, IETF, OASIS, IPTV Forum)

**Patent Pool**

- Licensing Administration
- Licensing Process
- “Added value”
- Patent Evaluation Mechanism
- Essentiality Evaluation

**Missing Link?**
Innovation, Patenting, Standardisation and Licensing: Return on Investment closes the loop

- Research → IPR Protection → Development → Sales
- Technological Innovation → Patenting → Patenting (?SEP?) → Open Standard → Licensing
- Proprietary Product/Service → Licensing → Sales
- Return on Investment
- Cost
- Profit

Research, Patenting, Development, and Sales form the flow of the innovation process, with IPR Protection ensuring the proprietary nature of the innovation. Licensing and Sales are key components in realizing the return on investment.
Thank you

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Annex

References:

- GSC10/Closing(05)12: [http://www.itu.int/dms_pub/itu-t/oth/21/01/T21010000040011MSWE.doc](http://www.itu.int/dms_pub/itu-t/oth/21/01/T21010000040011MSWE.doc)
- OASIS IPR Policy: [https://www.oasis-open.org/policies-guidelines/ipr](https://www.oasis-open.org/policies-guidelines/ipr)

Further reading

Backup Slides
Orange internal organisation

- Innovation, Marketing and Technology
- Products & Services
  - IP & Licensing
- Networks
  - Research & Development
  - Standardisation & Ecosystems Dev.
- Secretary General
- Legal Direction
  - Legal IP Dir.
- Co-Ordination IP & Standardisation
Standards Defining Organizations (SDO)
Standard Essential Patents (SEP): a definition

No single definition, however

- **ESSENTIAL** as applied to IPR means that it is not possible on **technical** (but not commercial) grounds, taking into account normal technical practice and the state of the art generally available at the time of standardization, to make, sell, lease, otherwise dispose of, repair, use or operate EQUIPMENT or METHODS which **comply** with a STANDARD **without infringing** that IPR. (…)

  [Definition 6 of Clause 15 of the ETSI IPR Policy, Annex 6 of the Rules of Procedure, 22 November 2000]

- The standard contains **mandatory requirements for all implementers ≠** the patent grants **exclusivity** to its owner

  ➔ **SEP must be licensed for compliance with the standard**
Open Standards definition

**Global Standards Collaboration** (GSC) recognise an Open Standard when all the fundamental elements are included:

1. the standard is developed and/or approved, and maintained by a collaborative consensus-based process;
2. such process is transparent;
3. materially affected and interested parties are not excluded from such process;
4. the standard is subject to RAND/FRAND Intellectual Property Right (IPR) policies which do not mandate, but may permit, at the option of the IPR holder, licensing essential intellectual property without compensation; and
5. the standard is published and made available to the general public under reasonable terms (including for reasonable fee or for free). [GSC10/Closing(05)12]
SDO IPR Policy: FRAND vs. RF: *as simple as that?*

**FRAND** = Fair, Reasonable And Non-Discriminatory

**RF** = Royalty-Free (i.e. royalty value = 0)

- **FRAND does not imply** a royalty value >0 (RF is OK too)
- **Royalty-Free does not imply** that other terms and conditions are FRAND (e.g. non-monetary compensation)

- IPR Policies are usually different from one SDO to another
  - Competing element between SDO

- Example: **OASIS IPR Policy** is defined per Technical Committee:
  - **RAND mode**, RF mode with **RF on RAND terms** or **RF on limited terms**; and **Non-Assertion mode**.