PHILIPS

Interoperability and Standards

The Economic and Legal Framework

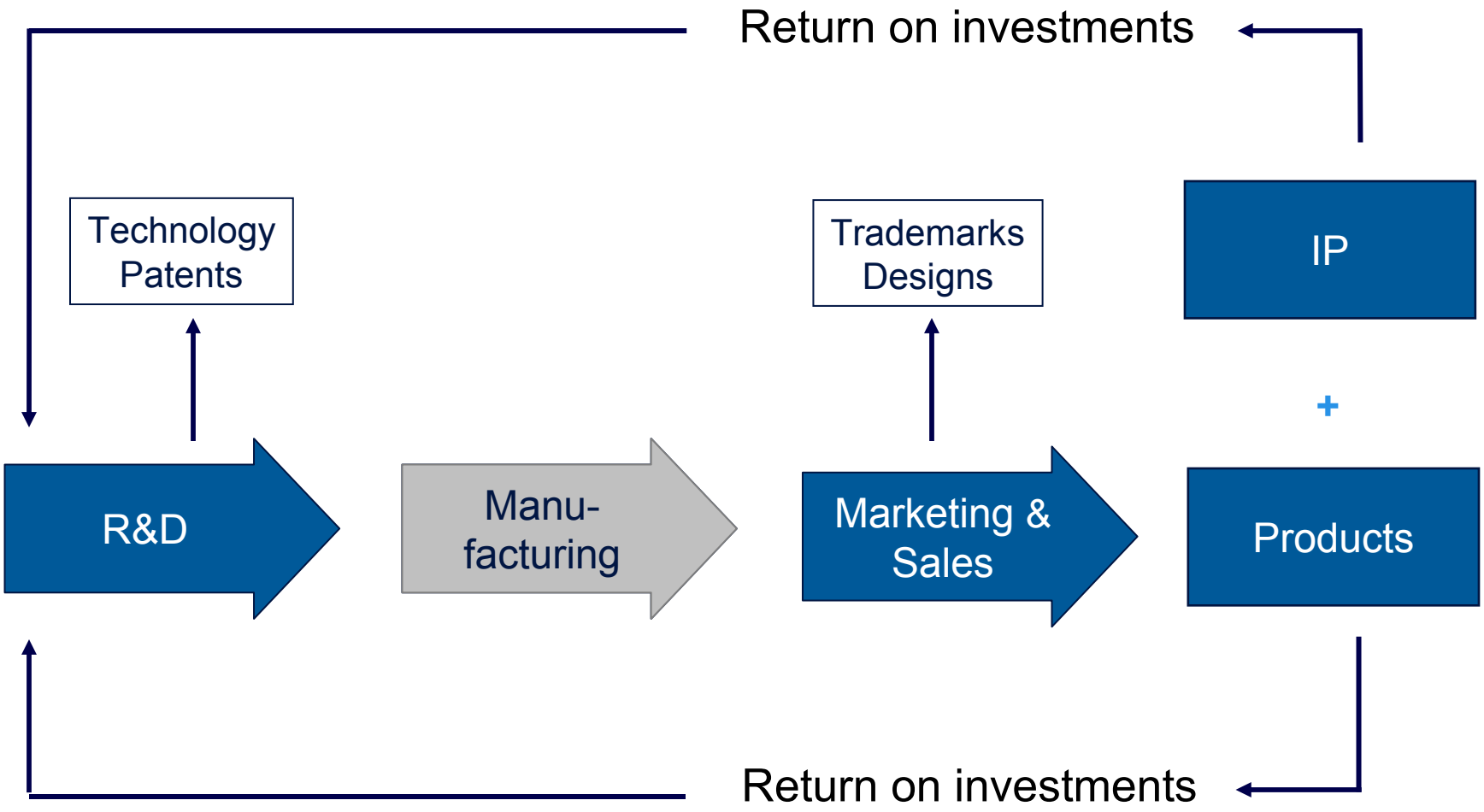
Philips Intellectual Property & Standards October 2007 f

Global changes in the last 20 years

- Globalization in marketing and manufacturing:
  - More companies
    ⇒ More competition = lower margins
  - More essential (blocking) patents
  - Shorter product life cycles
  - Production and supply chains span borders
  - Internet-based value chains are more complex.
  - Competitive edge of companies shifts from production-based to knowledge-based
  - Cost of R&D increases

- Return on R&D investment becomes more difficult.
  ⇒ Less incentive to innovate

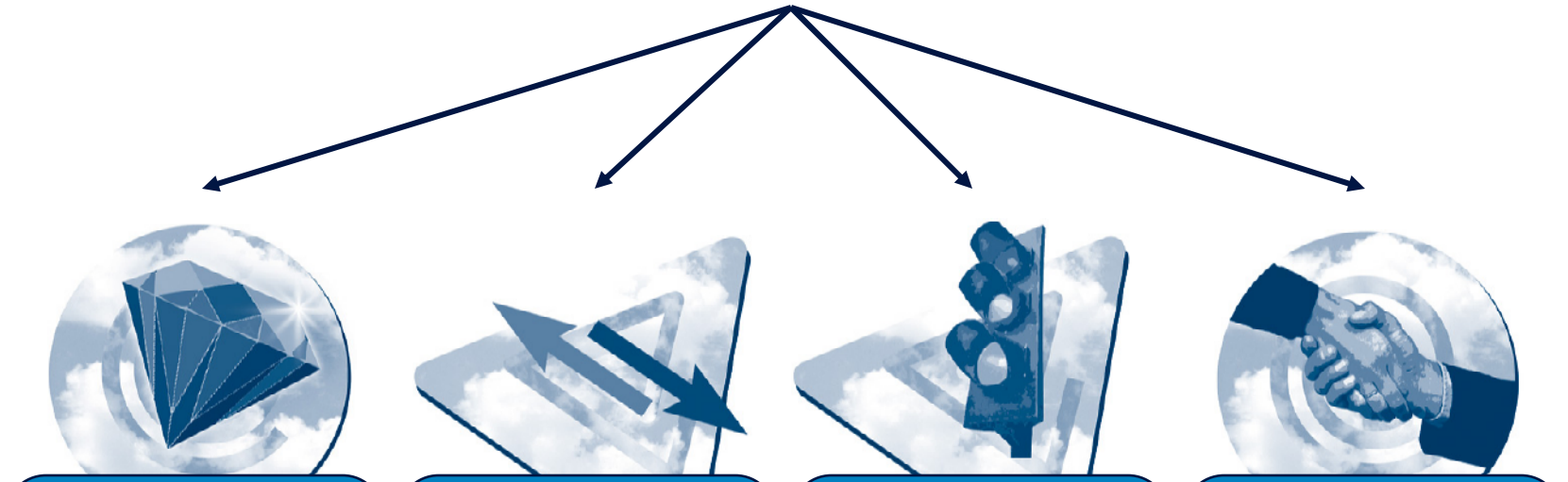
Business Redefined



IP and the Antitrust Laws

- There is an inherent tension between Intellectual Property laws and the Antimonopoly laws which is driven by a popular view that all monopolies are bad and that the IP laws necessarily grant monopolies to IP owners.
- But lawful creation and exercise of intellectual property rights should never violate the antitrust laws

Value Extraction from Patents



Total cash + non cash benefits

IP Misuse

- **The principle fear is that Intellectual Property owners will try to extend the limited "monopoly" rights that are granted to him by the patent or other IP laws.**
  - Extension of the scope of the monopoly
    - Tying and related schemes
  - Extension of the term of the monopoly
    - Post expiration royalties
  - Conspiracies and combinations of IP rights
    - Standardization abuse, Illegal pools, group boycotts, etc

Standardization Issues

- Standards can be an attractive area for patent licensing because infringement can be simply proven if the defendant asserts that his products comply with the standard.

Interoperability Standards

- Standards make systems and networks more valuable by allowing products from different manufacturers to interoperate.
  - Economies of scale in consumption
  - Industry standards can avoid the costs of a "standards war" that impact both manufacturers and consumers.

- But collaboratively set standards can reduce competition and prescribe the directions in which a market can develop.

Problems of the Standardization Process

- The Role of Standard Setting Organizations (SSO's)-

- There is a history of abuses and even some antitrust violations in standardization:
  - Undisclosed *quid-pro-quo* agreements and financial relationships and other conspiracies between SSO members;
  - Pressure and threats of retaliation against suppliers and customers;
  - Packing of SSO committees and leadership positions;
  - Patent Hold-ups (some perceived and some real).

- Sadly many SSO's lack the resources, expertise and motivation to police these practices.

Patent Pools and Standards

- Patent pools are often created so that licensees can go to a single agent to get all the licenses that are necessary to practice the standard.

- Standards and patent pools help consumers, but sometimes companies will illegally manipulate the standardization process to assure that they all have [pool-able] IP rights that cover the standardized products.

Hold-up

- **(Economic) Hold-up** is a potential problem in any collaboration when parties have sunk investments that can not be redeployed outside of the collaboration.
- **Patent Hold-up** can occur if opportunists waits until a standard incorporates their patented technology and then demand excessive compensation for licenses.
  - Patent Hold-up will only work when the cost of switching to the next best alternative technologies is greater than the cost of the licenses.

Patent Hold-Up Abuses

- Sometimes patent Hold-up is the result of abusive or deceitful practices by participants in the standard setting process:
  - They may conceal the scope of their patent coverage from the group;
  - They may conspire or otherwise manipulate the standardization process toward their patented technology;
  - They might unfairly modify pending patent claims in pending applications to cover proposed standards
    - (Is this wrong ??)

Patent Hold-Up

- But patent hold-up can also be a result innocent conduct and/or of legitimate exploitation of rights that is permitted under the IP laws:
  - The patent holder may not even be aware of the standard setting;
  - The patent holder may have appropriate business reasons to choose to maintain his legal exclusive rights to some or all of the patented technology;
  - The patent holder (or his representatives in the SSO) may be unaware of the scope of his patent claims;
  - The standard specification or the patent claim scope may change after patents are disclosed to the SSO.
  - Etc.

Disclosure Rules

- Most SSO's now require that participants disclose their relevant patents to the group:

- **Rules vary:**

  - Patents relevant to the holder's own proposals;
  - Duty to search for relevant patents?
  - Pending patent applications?
    - Claims in foreign counterparts?
    - Changes in claim scope after initial disclosure?
    - Technically essential vs Commercially essential?

  - Known third party rights?
  - Etc, etc.

Licensing Commitments

- **Royalty Free**
- **F&R, RAND, FRAND** etc.
  - U.S. law defines criteria for determining **reasonable royalties**, but may change under current reform proposals.
  - **Fair royalties** depend on the subjective viewpoints of the parties.
  - **Non-discriminatory** royalties remain undefined;
    - There is little justification for a definition of non-discrimination based upon public utility or scarce resource models.
      - There is usually no limit on the number of competing standards that can be adopted in a free technology marketplace.

Licensing Commitments

- Most SSO's presently require "all-or-nothing" commitments for essential patents and all uses under the standard.
  - Unrealistic for companies who seek to differentiate their products?

Compulsory license

- The TRIPS agreement comprises a number of obligations with respect to compulsory licences

Art 30: Exceptions to Rights conferred:

Members may provide **limited exceptions** to the exclusive rights conferred by a patent, provided that such exceptions **do not unreasonably conflict with a normal exploitation of a patent** and do not unreasonably prejudice the legitimate interest of the patent owner……

Ex-Ante Disclosure of Licensing Terms

- *Ex-ante* disclosure requirements can potentially eliminate patent hold-up by SSO participants.
  - But *ex-ante* is no remedy for hold-ups by outsiders;
    - Tilting the balance at the SSO away from patent holders can result in more patent assertions by outsiders

  The potential costs of *ex-ante* are high:
  - Slow-down of the standardization process
    - Introduction of lawyers into the meetings and processes.
  - Potential for manipulation and abuse.
    - Sham licensing negotiations as a cover for price fixing etc.
    - Group boycotts by customers and users.

Is Standardization IP Transparency worth the Costs ?

- There is scarce reliable data about the frequency and costs of patent hold-up.
- The principal advocates of transparency appear to be the net-licensees.
- Current economic models for patent licensing in standardization are oversimplified.
  - These models assume that patent holders will always compete to have their patented technology incorporated into standards.

A more realistic view of patents and standardization

- In Philips' business lines, manufacturing and engineering are commonly outsourced and product life cycles are short.
- Price-based competition for the **bare standardized product** is brutal and profit margins are too thin to support development.
- We and other innovative companies depend on non-standardized technical and aesthetic features to differentiate our products from those of low cost copyists and to thus generate margins which are hopefully adequate to support further development.
  - We depend on IP to protect the exclusivity of these features.
  - Our competitors often respond by trying to incorporate as many of product features as they can into the standard.

A more realistic view of patents and standardization

- An innovative firm will always weigh the costs and benefits of various economic models for exploiting its IP (exclusivity, licensing for royalties, technological freedom via cross-licensing, investment capital, etc).

- This situation does not materially change just because the market requires product compatibility standardization or because a firm sees a competitive lead-time advantage if some of its current technology is standardized.

A more realistic view of patents and standardization

- For each IP right an innovative standardization participant will typically need to weigh:
  - **the benefit** to be gained via lead time, royalty offsets and (low-rate, regulated, but nonetheless guaranteed) cash royalty income that they can get if the patented technology is mandated by the standard;

  against

  - **The alternative benefit** they can gain via product feature exclusivity and/or higher-rate royalties from licensing complementary patented technology features that are not covered by the standard, but supply a competitive advantage.

A more realistic view of patents and standardization

- The decision whether to offer-up or reserve a particular patent right is already complex;
  - It depends i.a. on market share and technology predictions,
  - But the order of the complexity increases when and if the cash royalty available for use of essential patents is over- limited by SSO policies for fairness and nondiscrimination.

- Sophisticated companies will fight just as hard to keep these "features" patents (as well as technologies that are essential for unregulated "de facto" standards) out of official (SSO regulated) standards as they do to have other patented technology adopted by an SSO.

A more realistic view of patents and standardization

- In this context, the whole idea of SSO 's or government setting RAND caps on royalty rates to prevent patent hold-up is questionable.

- Under today's RAND policies, patent licensing often becomes an **all-or-nothing decision**.

  – If we elect to participate in setting a standard, we can be forced to license any set or sub-set of our rights (as chosen by our competitors and customers) at a rate which could be much less than the economic benefit that we could gain by holding back the technology as a non-essential feature of our own product