

Patents and Open Innovation Models -

Incompatible?

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EPO SCENARIOS AS APPLIED TO OPEN INNOVATION



IP WORLD IN 2025

Market Rules

Rationalised in the
face of ever-increasing
numbers

Trees of Knowledge

Societal pressures shrink
patent system

Whose Game?

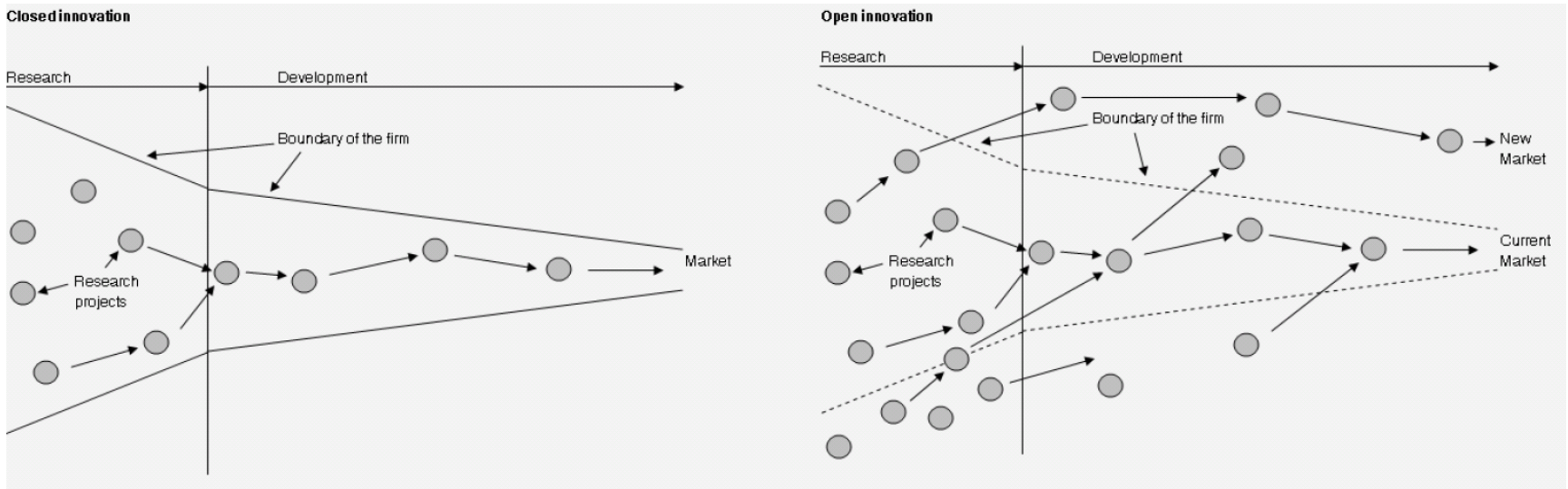
IP becomes a pawn as
geopolitical stresses rise

Blue Skies

Patent system split as
technology requirements
diverge

“**Open innovation** is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. [This paradigm] assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as they look to advance their technology.”

Henry Chesbrough, "Open Innovation: Researching a New Paradigm", 2006



Source: Chesbrough, 2003

APPLYING SCENARIOS TO OPEN INNOVATION

1. WHAT ARE THE MAIN DRIVERS IN THE AREA OF ICT OPEN INNOVATION?
2. WHAT MIGHT OPEN INNOVATION LOOK LIKE IN EACH SCENARIO?

SECTION 1

**WHAT ARE THE MAIN DRIVERS
IN THE AREA OF ICT OPEN
INNOVATION? ...**

INFLUENTIAL DRIVERS FOR ICT OPEN INNOVATION

A. THE STATE OF THE PATENT SYSTEM

- *AN IP BUBBLE*
- *CONFLICTS WITH COMPETITION LAW*

B. SOCIETAL VALUES

- *DIFFERENT MOTIVES*
- *THE INTERNET GENERATION AND PROPERTY*
- *IP AND LEGITIMACY*

C. SCIENTIFIC AND MARKET REALITY

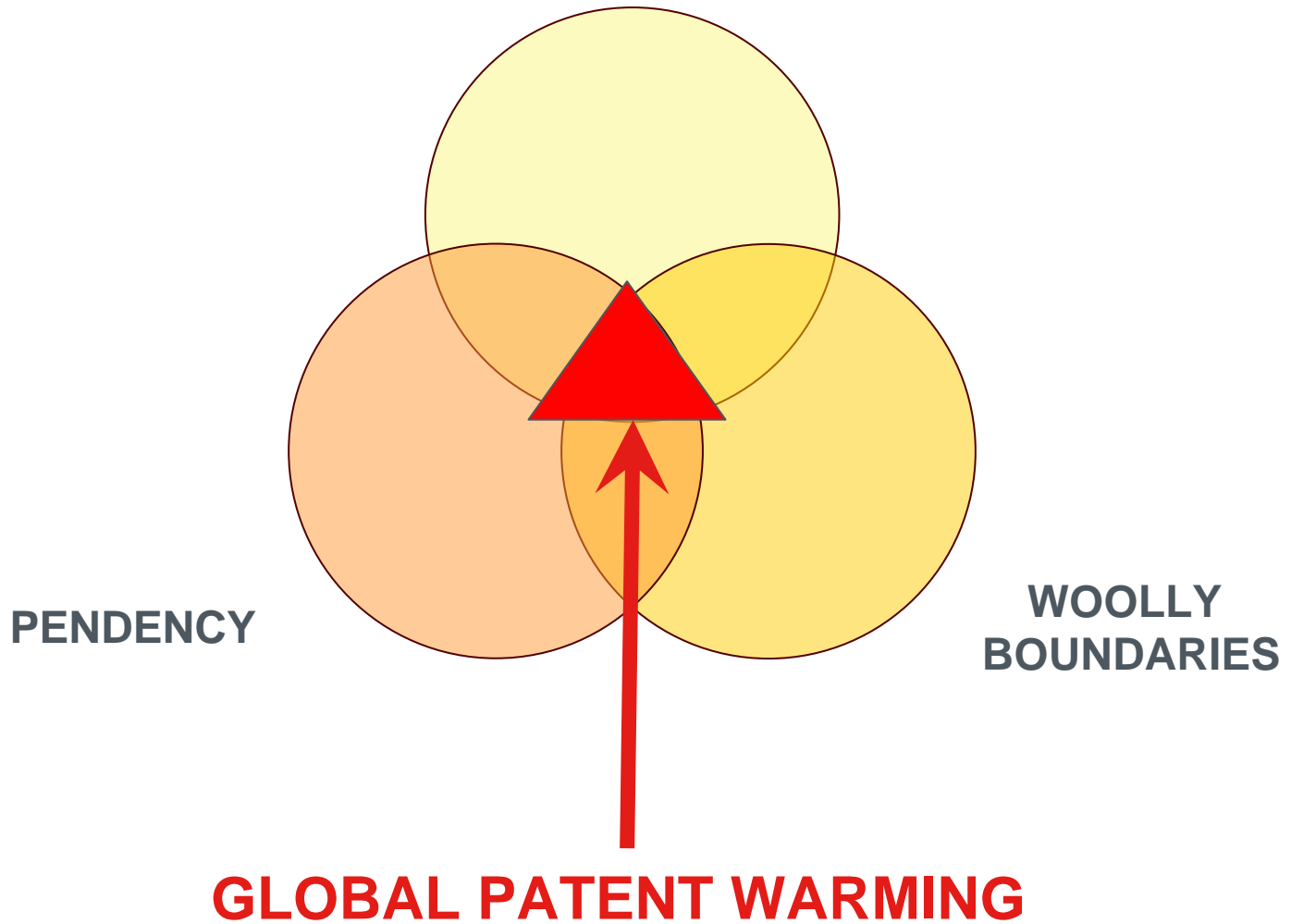
- *TRANSACTION COSTS & SECURITY*
- *MARKET IN IDEAS*
- *ECONOMIC SUSTAINABILITY OF OPEN INNOVATION*

SECTION 1 - A

A 1ST INFLUENTIAL DRIVER

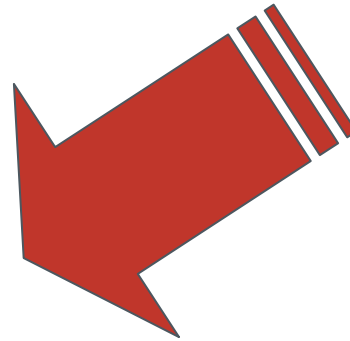
THE STATE OF THE GLOBAL PATENT SYSTEM ...

GLOBALISATION



GLOBAL PATENT WARMING

- DODGY APPLICATIONS
- UNCERTAINTY ABOUT VALUE
- BUNDLING IN LICENSING ETC.
- FAILURE OF VALUATION
- IP BUBBLE
- ?



**key features in
ICT open innovation
models**

LOOK FAMILIAR?

GLOBAL PATENT WARMING


- DODGY APPLICATIONS
- UNCERTAINTY ABOUT VALUE
- BUNDLING IN LICENSING ETC.
- FAILURE OF VALUATION
- IP BUBBLE
- ?

CREDIT CRISIS

- DODGY LOANS
- UNCERTAINTY ABOUT VALUE
- BUNDLING IN SUB-PRIME VEHICLES
- FAILURE OF CREDIT AGENCIES
- CREDIT BUBBLE
- BOOM....

COMPETITION LAW, POSSIBLE CONFLICTS

key feature in
ICT open innovation
models

- 
- EVER-GREENING IN PHARMACEUTICALS
 - STANDARDS - PATENT AMBUSH TYPE BEHAVIOURS
 - PATENT POOLS - PAYING FOR SOMETHING YOU DO NOT WANT. (*ABUSE OF A DOMINANT POSITION*)
 - LICENSING POOLS - HIGH ENTRY BARRIERS TO THE CLUB . (*OLIGOPOLY/MONOLOGY TYPE BEHAVIOUR*)

For a fuller understanding, please refer to the OECD Round Table on Competition, Patents and Innovation - Paris, 11 June 2009

COMPETITION LAW AND ICT LICENSING POOLS

LICENSING POOLS

➤ PROBLEM DEFINITION

A licensing pool can create a disproportionate barrier to new entrants. Determination of fair price and oligopoly type behaviour are issues. Payment for pending rights is usually included in the fee.

➤ IMMEDIATE CONCERNS

Comprehensive overview of the functioning of licensing pools is required. Applying FRAND in such circumstances? The role of artificial application volumes is especially critical.

COMPETITION LAW AND ICT STANDARDS

STANDARDS



PROBLEM DEFINITION

A standards body sets a standard involving patents. Pending rights are 'adjusted' to fit the outcome creating boundary problems. Furthermore, existence of trolls, patent sharks and use of patent ambush tactics. (NB there is also a beneficial effect of standards using patents).



IMMEDIATE CONCERNS

Evidence exists. Real cases show up the interaction between standards, the functioning of the patent system and competition. Solution could be in a transparent exchange of 'track changes' information. Information flow?

THE STATE OF THE GLOBAL PATENT SYSTEM

- The volume of pending patent applications is greater in most systems than the volume of granted and still valid patents.
- ICT patents are inherently 'woolly'.
- The interaction between standards and patents is well understood by players but not by policy makers.
- In certain parts of the ICT area, it is possible that patenting has become a net sum loss i.e. the cost of patenting by the actors exceeds the gains (*Bessum, Patent Failure*).
- This has major influence on open innovation models - their choice and operation.

SECTION 1 - B

A 2ND INFLUENTIAL DRIVER

SOCIETAL VALUES ...

SOCIETAL VALUES. AN EXAMPLE, OPEN SOURCE

The IP system appeals to the human spirit of:

- Curiosity
- Fascination with technology
- Ambition
- Recognition
- Success over peers

The current design of the IP system encourages:

- Exploitation of market prospects

The IP system rewards:

- Self or groups of self

Open Source was (initially) driven by the human spirit of:

- A desire to share
- Fascination with technology
- Idealism
- Recognition
- Joint success with peers

The movement for Open Source, at least initially, encouraged:

- Sharing before profit

Open source rewards:

- The commons

SOCIETAL VALUES. AN EXAMPLE, CLIMATE CHANGE

The IP system appeals to the human spirit of:

- Curiosity
- Fascination with technology
- Ambition
- Recognition
- Success over peers

The current design of the IP system encourages:

- Exploitation of market prospects

The IP system rewards:

- Self or groups of self

Saving the planet is driven by the human spirit of:

- Moral imperative
- Fear of survival – legacy
- Idealism
- Love of nature
- Conscience and guilt

The mission to save the planet encourages:

- Idealism before profit

Saving the planet rewards:

- The commons

THE INTERNET GENERATION AND PROPERTY

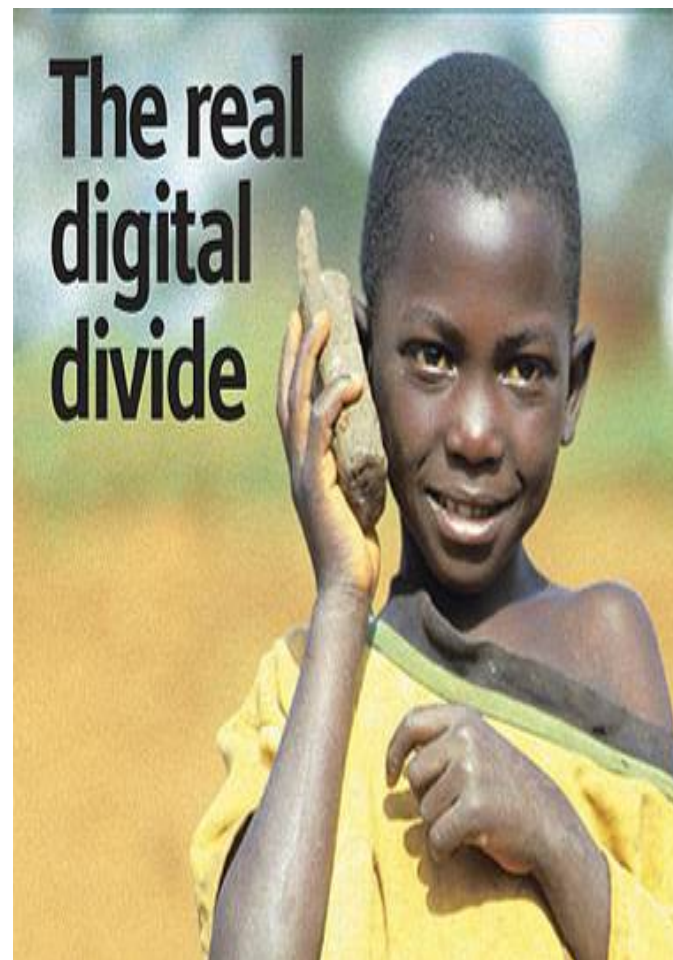
The current internet generation considers intellectual property as something to be downloaded, free of charge. Open source software is considered to be a public good shared by all. This different set of values can lead to the politicisation of IP, especially in the ICT sector. The recent election in Sweden of a member of the Swedish Pirate Party to the European Parliament is a good example.



Christian Engström, Member of the European Parliament for the Swedish Pirate Party

IP AND LEGITIMACY

The legitimacy of IP as being 'something that needs to be done' is being challenged. The incentive model is seen, in some areas of technology, as leading to disproportionate rewards. IP rights holders often undermine their own position by enforcing their rights in ways that, whilst being strictly legally correct, society finds unacceptable. IP rights can be seen as an engine for innovation, but also as an unfair reward to a privileged few.



SOCIETAL VALUES

- Especially in the ICT sector, the societal view of concepts such as 'sharing' and 'property' is fundamentally different from the past. This is a generational issue, but it is also has geopolitical aspects.
- Politicisation of ICT 'rights' is a reality.
- Society does not distinguish clearly between sectors - The ICT sector will be influenced by societal debates elsewhere. For example, environmental IP rights or the way in which some rights holders (e.g. music..) have sought to defend their rights is seen as disproportional.
- This has major influence on open innovation models - their choice and operation.

SECTION 1 - C

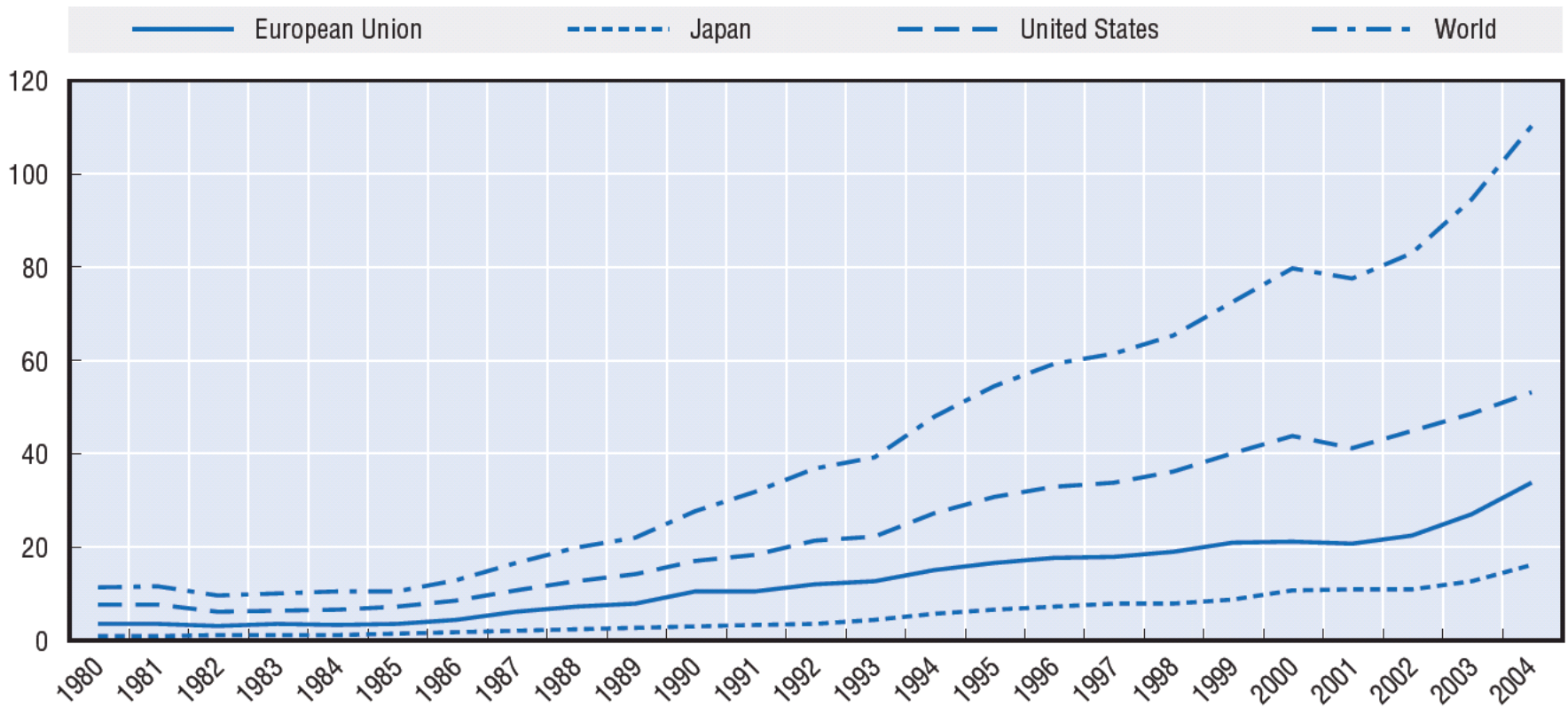
A 3RD INFLUENTIAL DRIVER

SCIENTIFIC AND MARKET REALITY ...

THE EXCHANGE OF IP RIGHTS IS INCREASING ...

Receipts from international licensing in major OECD regions

Billions of USD

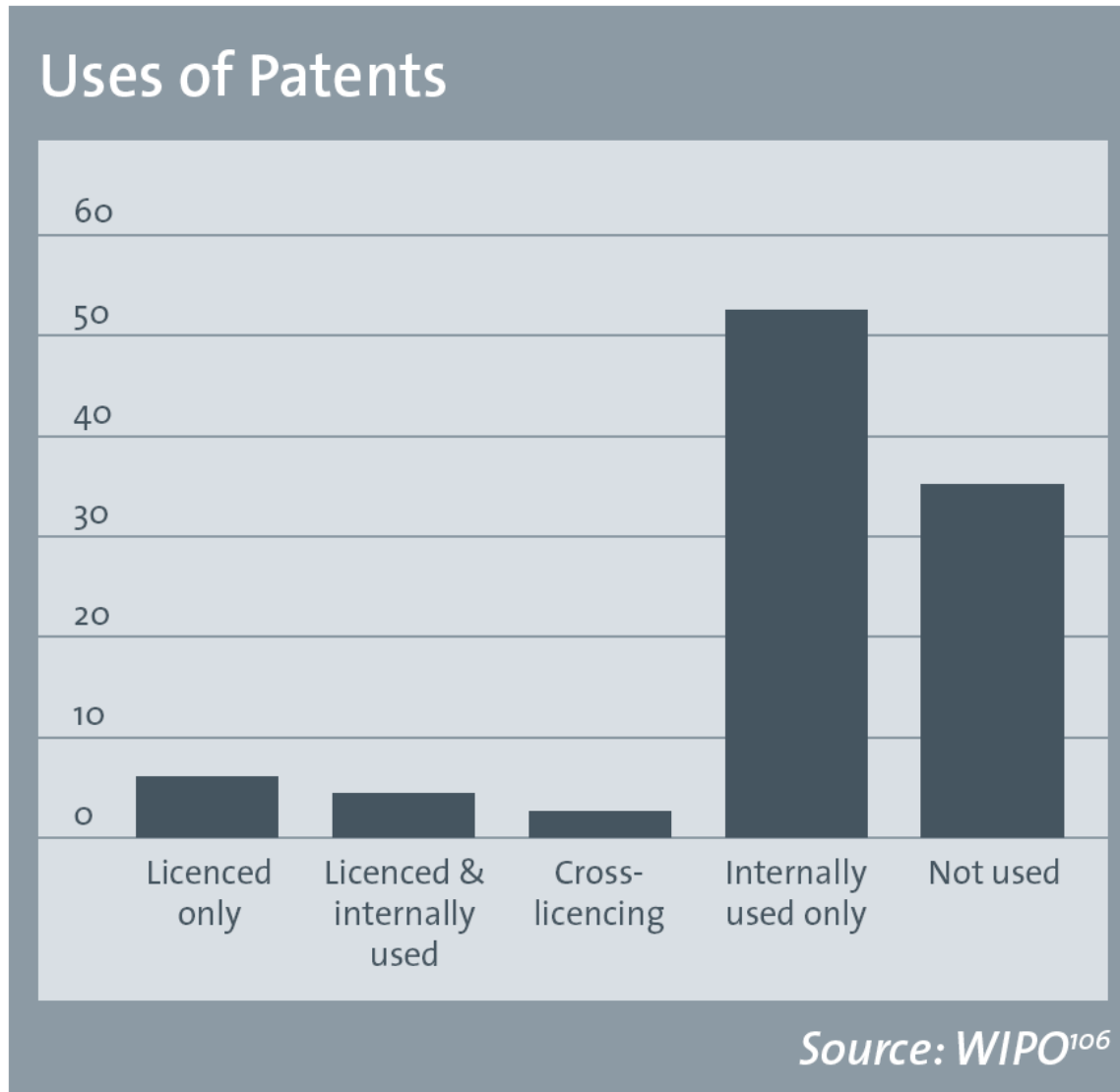


Source: OECD based on World Bank, World Development Indicators Database, June 2006.

StatLink: <http://dx.doi.org/10.1787/324047030044>

AND THIS IS ONLY THE TIP OF...

... THE ICEBERG



EPO Scenarios for the Future

PATENT SHARKS - OR A FACET OF OPEN INNOVATION?

" We conceive and patent our own inventions in-house... through a renowned staff of internal and external scientists and engineers.

By funding invention, we provide a new outlet and opportunity for the inventive geniuses of our generation.

We also acquire and license patented inventions from other inventors around the world."

– Intellectual Ventures



THE MODERN INTERDEPENDENT REALITY OF SCIENCE...!

"The Nobel Prize in an Age of Collaboration

Controversies over the Nobel prize and credit are nothing new, but they are bound to get much, much worse. Nobel-calibre discoveries being made today **frequently involve a lot more than three principal scientists**, which means that in the future, a **Nobel Prize** limited to three people will seriously distort how credit is allocated and **possibly sink into irrelevance.**"

Scientific blogging, October 2008



Physical Sciences



Culture



Earth Sciences



Biology



Medicine



Neurosciences

SPEED TO MARKET. THE ACCELERATION OF INNOVATION

"For one thing, **patents are becoming much less important nowadays than brands and the speed at which products can be got to market.** It is true that some of the rising stars in developing economies are beginning to take out more patents, but many of their innovations are still kept quiet as trade secrets. So fluid are their markets, and so weak the historical patent-protection in them, that bosses often prefer to keep things in the dark - and come up with the next innovation as necessary to stay ahead of the competition. Even in developed markets, the **acceleration of innovation is making patents less relevant.**"

The Economist, October 13th-19th 2007

A SUSTAINABLE FREE LUNCH...?

The current internet generation considers intellectual property as something to be downloaded, free of charge. Open source software is considered to be a public good shared by all. But who pays for this? Is it sustainable to imagine that society will continue to subsidize this behaviour in the long term? Is there a free lunch or will new business models be developed to sustain economic rents?



SCIENTIFIC AND MARKET REALITY

- The patent system can lower transaction costs by introducing some degree of trust and enforceability.
- As a consequence, patent licensing revenue has exploded over the past 30 years - beware however, a very substantial proportion of this is inter-group (*Guillec, OECD*). Nevertheless, most patents are still not (yet) licensed. This is creating opportunities for some.
- Scientific interdependency, speed to market and the underlying acceleration of innovation is the dominant trend.
- Economic sustainability is being addressed in new ways.
- This has major influence on open innovation models - their choice and operation.

SECTION 2

AND THE EMERGING MODELS ARE ...

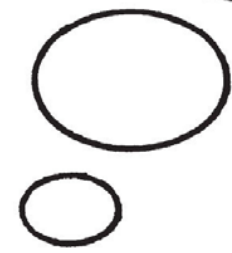


iCommons
share the past, create the future.



Adelphi Charter
on creativity,
innovation and
intellectual property

openinventionnetwork



DIFFERENT IP MODELS FOR "OPEN INNOVATION"

- **InnoCentive** (Innovation-broker, connect solvers and seekers): IPR negotiated between solvers and seekers, secrecy to external parties
- **Eclipse** foundation (software development platform): open source based on copyright
- **Open Invention Network** (Linux development): patents as defence for Linux
- **LEGO** Mindstorms (software/robotics): open source based on copyright, strong reliance on trademark
- **BIOS** initiative (Biotechnology Open Source): open source based on patents and/or MTAs
- **P&G** Open Innovation Challenge (idea/design generation): IP remains with innovator (e.g. design rights), secrecy/independent reviewer in early steps
- **BMW** Customer Innovation Lab (service idea generation): all rights transferred to BMW



SCENARIOS FOR THE FUTURE

How might IP regimes evolve by 2025?
What global legitimacy might such regimes have?

IP WORLD IN 2025

Market Rules

Rationalised in the
face of ever-increasing
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Trees of Knowledge

Societal pressures shrink
patent system

Whose Game?

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geopolitical stresses rise

Blue Skies

Patent system split as
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diverge

KEY DRIVERS INFLUENCING OPEN INNOVATION

Market Rules

- Boundary difficulties - security
- Market interdependence
- Transaction costs
- Market in IP works
- Economic sustainability

Trees of Knowledge

- Loss of IP legitimacy
- Free lunch society
- Global patent warming
- Transparency + fairness

Whose Game?

- Geopolitics of resources
- Disproportionate rewards
- Crisis in health, climate...

Blue Skies

- Climate change
- Global patent warming
- Boundary difficulties
- Transparency
- Technical interdependency
- Economic sustainability

SHADES OF OPEN INNOVATION ACROSS THE SCENARIOS

Market Rules

Strong IP

- "opt-in/opt-out" collaboration
- "open access" if you sign the deal

Trees of Knowledge

No IP

- collaboration becomes "rule of the game"
- open for all

Whose Game?

Fragmented IP

- "ad hoc" collaboration per industry or region
- "open innovation" defined by government in strategic fields

Blue Skies

Open IP

- interdisciplinary, task orientated collaboration
- "open innovation" if you pay the license fee (FRAND)

STILL NO FREE LUNCH.....

Market Rules

- patent blockage/thickets limit collaboration
- danger of patent trolls/sharks
- little flexibility/slow adaptation
- numbers game and lock-in block newcomer entrance

Trees of Knowledge

- secrecy in some areas limits collaboration
- lack of incentives results in innovation gap in some sensitive fields (e.g. pharma)

Whose Game?

- trade barriers and state control limit collaboration
- innovation gap
- duplication/redundancy due to secrecy

Blue Skies

- boundary problems and complex legal framework
- battles over fair license conditions
- technology focus tends to ignore users/consumers

POSSIBLE LESSONS FOR POLICY MAKERS

- The state of the patent system, societal, scientific and market realities are major influences over the choice and operations of open innovation models.
- Each system (copyright, patents, competition, innovation policy etc.) may be internally consistent, but still allow undesirable effects in the way in which they interact with one another.
- Different institutions can, and must, play different roles in stimulating open innovation. Who, for example, in a national context owns the 'use' of IP policy hat? Who supports this?
- Local institutions are often better placed to support the 'use' of IP, or to support open innovation models. There are some good examples in France, the Netherlands, and the UK.

