



# Overview

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## ■ Aim

- Describe the current failures of market for patents and the economic opportunities that these failures create for intermediaries.
- Propose a typology of “Intellectual property (IP) Intermediaries”.

## ■ Sources

- Yanagisawa, T. and Guellec, D. (2009). [The Emerging Patent Marketplace](#). STI Working paper 2009/9. OECD, Paris.
- Hagiu, A. and Yoffie, D. (2011). [Intermediaries for the IP Market](#). Harvard Business School Working Paper 12-023.
- Hagiu, A. and Yoffie, D. (2013). The New Patent Intermediaries: Platforms, Defensive Aggregators, and Super-Aggregators. *Journal of Economic Perspectives* 27, 45–66.
- Millien, R. (2013). [Landscape 2013: Who are the Players in the IP Marketplace?](#) IPWatchdog.com (January 23, 2013).

# Patent market failures

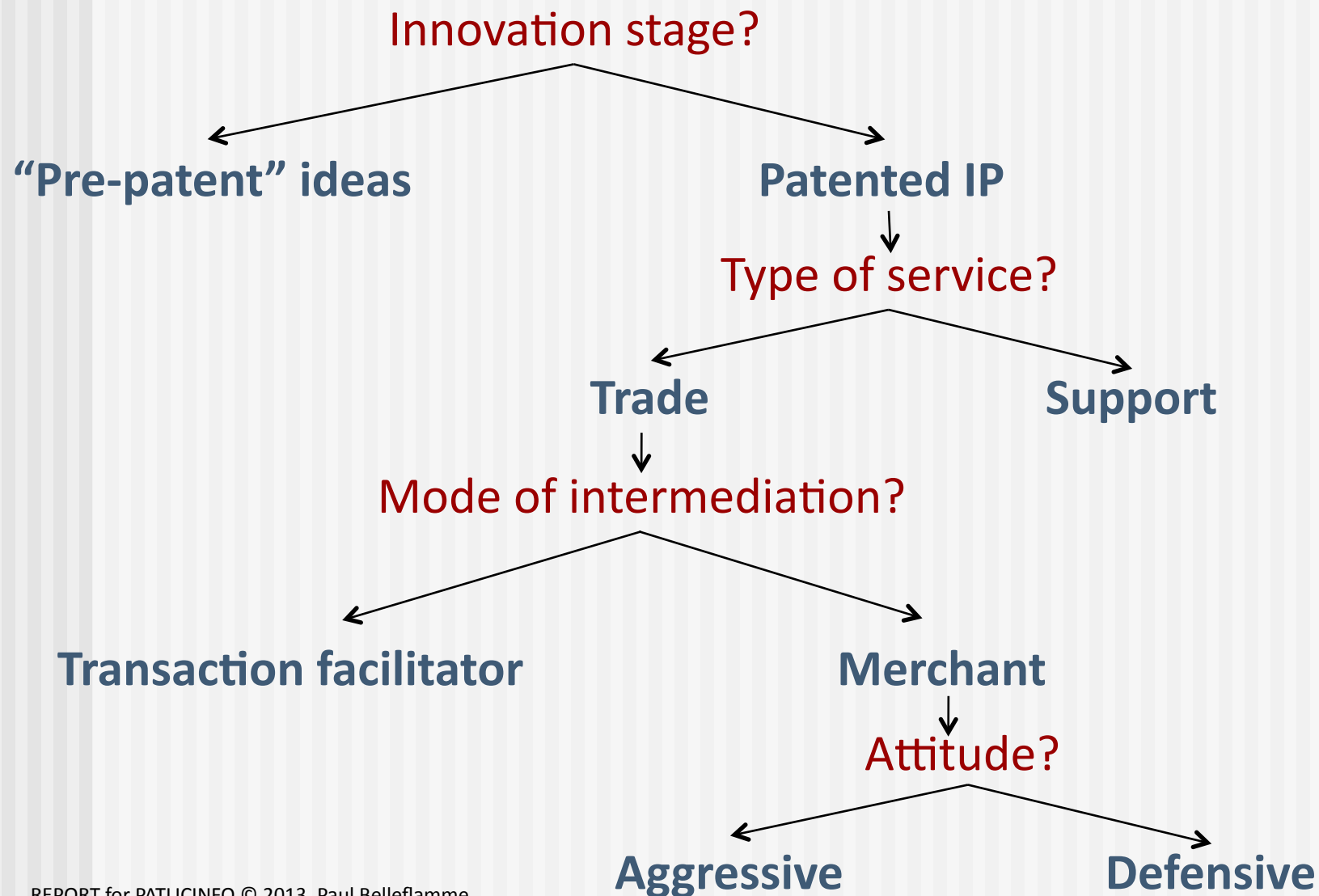
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- Why have patent markets been working badly?
  - **Uncertainties surrounding the value of patents**
    - **Each patent is unique** ⇒ lacks comparables ⇒ value much more difficult to ascertain than most other assets ⇒ high transaction costs & high probabilities of disagreement between parties to potential transactions.
    - **Patent value is subject to strong complementarities and portfolio effects** ⇒ potential buyers are unlikely to place much value on a given patent sold by itself ⇒ greatly reduces the number of potential buyers for any given patent.
      - Self-reinforcing mechanism (patent accumulation, valuation based on quantity)
      - Asymmetries between large operating firms and small inventors
  - **High search costs on both sides**
    - **Patent owners**: prohibitively costly to find all current users (infringers) and potential applications of their patents.
    - **Patent buyers or users**: very costly to find all prior art and patents that “read” on their products (especially for complex products and fast-changing technologies).

# Patent market failures (2)

- Why have patent markets been working badly? (cont'd)
  - **Patent transactions always happen in the shadow of litigation.**
    - “Probabilistic property rights” ( $\pm$  50% of litigated patents are invalidated)
      - Courts and juries generally have a limited understanding of patents
      - Out-of-court settlements based on fear and risk aversion
    - $\Rightarrow$  **Significant uncertainty and biases in patent valuation**
  - $\Rightarrow$  **Economic opportunities for intermediaries**
    - **Create and extract value by solving market failures**
      - Over the last decade, emergence of an increasing number of “IP Intermediaries”
      - Different business models, different success rates
      - Seem to share the view that the market for patents can be made more efficient and liquid.
    - **Caveat:** Intermediaries might not contribute much social value; worse, they might even exacerbate existing market failures.

# Typology of IP Intermediaries



# Typology of IP Intermediaries (2)

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- 1. Intermediaries for “pre-patent” ideas
  - (1) **Innovation portals**
    - “Problem solvers”: Connect companies with science and/or technology problems with individuals or institutions that can create solutions.
    - Offer forums, bounties, challenges and idea exchange platforms that aim to spur innovation and thus create new IP.
- 2. Intermediaries for patented IP
  - Two categories
    - **2.1 Patent intermediaries**
      - *Directly* facilitate the sale or licensing of patents from owners- creators to users.
      - 2 main modes
        - 2.1.1 Transaction facilitators
        - 2.1.2 Merchants
    - **2.2 IP management & support services**
      - Create liquidity *indirectly* by providing useful patent information and services.

# Typology of IP Intermediaries (3)

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## ■ 2.1.1 Patent intermediaries – Transaction facilitators

Their main role is to match buyers and sellers of IP either through direct matchmaking or by providing a marketplace.

### ■ (2) Online IP platforms

- Online portals designed to match potential buyers and sellers of patents.
- Typically, sellers post detailed information about the patents they want to sell along with any special conditions, without revealing their identity; buyers can find information about patents that are in the market for sale, search by keywords and patent classes.

### ■ (3) IP auction houses

- Function like any other live auctions (e.g., art at Sotheby's and Christie's), with an auctioneer taking bids for each lot, which could be a single IP asset (patent, copyright, trademark, or domain name right) or a bundle of such assets.

# Typology of IP Intermediaries (4)

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- **2.1.1 Patent intermediaries – Transaction facilitators (cont'd)**
  - **(4) IP (patent) brokers / Licensing agents**
    - Help patent owners sell or license their technologies in exchange for a fee contingent on successful transfer.
  - **(5) IP Transaction Exchanges & Trading Platforms**
    - Plans have been announced to create traded exchanges (whether physical or online locations) similar to the NYSE and NASDAQ where yet-to-be-created IP-based financial instruments would be listed and traded much like stocks are today.



# Typology of IP Intermediaries (5)

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## ■ 2.1.2 Patent intermediaries – Merchants

These intermediaries acquire and monetize patents. Their attitude is either “aggressive” or “defensive”.

### AGGRESSIVE ATTITUDE

#### ■ (6) Patent Licensing and Enforcement Companies (PLECs)

- Own one or more patent portfolios, attempt to license them through targeted letter-writing campaigns and then file patent infringement suits against those who refuse to enter into non-exclusive licenses.
- Are often called non-practicing entities (NPEs) or “patent trolls.”
- In a sense, they act as dealers or market makers seeking to capitalize on arbitrage opportunities created by patent market inefficiencies.

# Typology of IP Intermediaries (6)

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## ■ 2.1.2 Patent intermediaries – Merchants (cont'd)

### AGGRESSIVE ATTITUDE (cont'd)

#### ■ (7) IP Acquisition Funds

- Operate as general partners of a limited partnership and raise money either from large technology companies or from the capital markets.
- The investors are promised above average ROI from selective, targeted or large-scale patent purchases with the goal of instituting licensing programs and/or employing various arbitrage strategies.

#### ■ (8) Litigation Finance/Investment Firms

- Like IP Acquisition Funds, they operate as general partners of a limited partnership and raise money from large institutional investors and high-net-worth individuals.
- Like PLECs, however, their stated goal is to acquire a financial interest in patent portfolios for assertion.

# Typology of IP Intermediaries (7)

## ■ 2.1.2 Patent intermediaries – Merchants (cont'd)

### DEFENSIVE ATTITUDE

#### ■ (9) Defensive Patent Aggregators

- Propose to lower patent litigation risks and costs by acquiring potentially “toxic” patents on behalf of their clients and providing them with a license.
- Emerged as a consequence of the increasing threat posed to operating companies by PLECs, or by IP Acquisition Funds.

#### ■ (10) Privateers

- Operating companies spin groups of patents to PLECs to generate additional revenue. This is essentially outsourcing an operating company’s patent monetization function to an entity that already has perfected the model.
- This is essentially an “if you can’t beat them, join them” approach.

#### ■ (11) Super-aggregator(s) → Combine the defensive and the aggressive attitudes

- *Intellectual Ventures* has spent (as of mid-2011) approximately \$2 billion building the world’s third largest patent portfolio – roughly 35,000 patents.  
→ Largest IP intermediary nowadays

# Typology of IP Intermediaries (8)

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## ■ 2.2 IP Management & Support Services

Create liquidity *indirectly* by providing useful patent information and services.

### ■ (12) IP-Based M&A Advisory Firms

- Operate in a traditional investment banking model – advising technology companies in their merger and acquisition (M&A) activities and earning fees based on the value of the entire deal (or apportioned according to the value of the IP within the deal).

### ■ (13) IP-Backed Lending Firms

- Provide financing for IP owners, either directly or as intermediaries, usually in the form of loans (i.e., debt financing), where the security for the loan is either wholly or partially IP assets (i.e., IP collateralization).

# Typology of IP Intermediaries (9)

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## ■ 2.2 IP Management & Support Services (cont'd)

### ■ (14) **Royalty Stream Securitization Firms**

- Counsel, assist and/or provide capital to patent owners performing IP securitization financing transactions (which resemble the more common mortgage-backed securities).

### ■ (15) **Analytics Software and Services Firms**

- Provide advanced patent search and analytics software tools that allow patent owners, prospective buyers, attorneys, investors and other players in the IP marketplace to obtain various due diligence intelligence and data points about a single patent or patent portfolio.
- Some of them evolved into **Patent-Based Public Stock Index Publishers**
  - Once they realized that nearly 80% of the value of a U.S. publicly-traded company now comes from intangible assets, and that they possessed tools to measure the “quality” of the largest part of those intangible assets, they created formalized stock indexes based on their existing software tools and platforms.

# Typology of IP Intermediaries (10)

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## ■ 2.2 IP Management & Support Services (cont'd)

### ■ (16) **Technology/IP Spinout Financing**

- Traditional venture capital or private equity firm, but specializing in spinning out promising (non-core) IP which has become “stranded” within larger technology companies, or creating joint ventures between large technology companies to commercialize the technology and monetize the associated IP.

### ■ (17) **IP Insurance Carriers**

- As typical commercial insurance policies carried by businesses do not cover IP claims, some insurance carriers have marketed new types of IP policies (e.g., First-Party IP Coverage, IP Defense Cost, IP Abatement Coverage).

### ■ (18) **University Technology Transfer Intermediaries**

- Focus on the niche of university technology transfer (i.e., licensing) market.
- Mix between 2.1 and 2.2 as they often combine the roles of IP Development Companies, IP Acquisition Funds, Licensing Agents and/or Patent Brokers.