A way to optimize IP management in het Printer Business

A Case Study, based on publicly available - non confidential - materials

IPEG Consultancy B.V
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• Internal R&D reorganization \((\text{MarketWatch, March 4})\)

• Around 30 projects to be set \((\text{idem})\)

• Develop market-driven IP roadmaps \((\text{idem})\)

• Emphasis on the printing market
  - One of the three business groups
  - #1 globally in the inkjet, all-in-one and single-function printers (lasers or inkjets), mono and color laser printers, large-format printing, scanners, print servers and ink and laser supplies (Toner & Paper)
  - Vision: **Ubiquitous** printing and imaging
The inkjet segment: IP perspective

One of the Major Players: Printer Co.

- Main patented area in last 5 years
- Focus
  - Ink jet produced with heat
  - Nozzles (production, clogging)
  - Ink supply systems
  - Esp. for multi-colour printing
  - Inks

Competition in 2007

- IP dominated by Seiko and Canon: above 50% of the top-15 total share

Mainly based on IPC B41J 2/00 (inkjet)
Publication year: 2007

- Brother Industries: +37% growth
How IPEG sees IP management

- Using a new measurement framework
- Three components
  1. Direct measures
     - Number of families per year (PD#)
     - Licensing income per year (LicInc)
  2. Key performance indicators
     - Patent Building Strength (PBS)
     - Patent Valorization Strength (PVS)
     - Patent Power (PP)
  3. Two dashboards
     - To compare the firm’s effort in patents to R&D investments: PP vs. R&D€
     - To compare patent returns with patenting effort: PVS vs. PBS
What to learn (1):
Check Printer Company Patent/R&D balance - Dynamics

- All R&D budgets increase over time!
- Europe is in the race (e.g. Fraunhofer) ...
- ... and gains momentum in patent leadership

--- = average behaviour (AUTM)
What to learn (2):
Patenting - Licensing balance

Here Johns Hopkins benchmarked against Stanford

- Similar R&D budget
- Both at average patent speed
- But Stanford gets higher returns
- Potential gain of Johns Hopkins:
  € 80 million per year

+€80 million
What to learn (3):
Patenting/licensing balance - Dynamics

- Invisible learning curve
- With four different phases
  1. Defensive
  2. Portfolio size growth
  3. Licensing increase
  4. Size control
- Here main US RTOs ahead
  - Columbia, UCLA and MIT
- Fraunhofer reduces the gap
Printed Company (total portfolio): which of the 4 phases today?

Patenting pace (number of families filed per year) over the last 30 years

- **Phase I: expansion**
  - Critical size
  - Normalized RTO avg.

- **Phase II: optimization** (size control)
  - High growth

IP awareness in US media → Pro-patent era → Recession
Printer Company (total portfolio): 2007 performance indicators

<table>
<thead>
<tr>
<th>Measures &amp; indicators</th>
<th>Printer Co</th>
<th>RTO average**</th>
<th>Seiko</th>
<th>Canon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yr. R&amp;D expenditures</td>
<td>US$ 3.5 billion</td>
<td>€ 140 million</td>
<td></td>
<td></td>
</tr>
<tr>
<td># families yr. Patented</td>
<td>1,500</td>
<td>54</td>
<td></td>
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<tr>
<td>Yr. Licensing income</td>
<td>€ 158 million *</td>
<td>€ 5.7 million</td>
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<tr>
<td>Patenting strength</td>
<td>3.2 E-3</td>
<td>1.9 E-3</td>
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</tr>
<tr>
<td>Licensing strength</td>
<td>6.8 E-2</td>
<td>4.1 E-2</td>
<td></td>
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<tr>
<td>Patent power</td>
<td>2.2 E-4</td>
<td>0.8 E-4</td>
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</tr>
</tbody>
</table>

* Estimated with maximum RTO returns at Printer Co. R&D exp.
** Based on AUTM annual surveys

Observations
- Printer Company has a high (above RTO average) potential in terms of IP building and valorization.
- With the same potential, the competition earns **US$ 160 million per year.**
IPEG can bring alternative thinking

- Benchmark Printer Company Patent Management Performance
  - esp. w.r.t Seiko Epson, Canon and Brother Industries

- Explore and segment current Printer Co. portfolio to increase internal collaboration

- Reconsider strategy toward competition e.g. in the inkjet segment
  - Only defensive? Cross-license? Divesting?
  - E.g. as to Seiko and Silverbrook Research, which regain interest in Printer Co. technology

Citation frequency of Printer Company portfolio in inkjet segment

Citing filing years
IPEG’s IP management services

- Data-driven approaches
- Also qualitative methods with top expert reviews
- IP strategic management tools
  - Benchmark & positioning
  - Planning & projection
- On today’s and/or future Printer Patent portfolio
Two IPEG products

• “IntrosPection” over today’s Printer Co. portfolio
  - Mapping large IP portfolio incl. unpublished
  - Extracting key technologies for directing new R&D
  - Fostering internal collaboration to build new IP
  - Pruning ripe IPs with leads qualified by top experts

• “HolistIP” over future Printer IP position
  - Business vision
  - Benchmark current performance and projections
    • Normalized indicators for comparing IP management
    • Positioning in technology fields. Find new partnerships
  - Scenario making and feasibility assessment (SWOT)
    • Explore alternative IP strategies toward competition
  - Draw and implement IP market-driven roadmap
Think out-of-the-box with game-based IP solutions

- For alternative portfolio scenario-making
  - Game as collaborative and risk-free laboratory setting (Arnaud Gasnier - Thesis)
- For raising awareness and internal collaboration
  - Via an online global IP contest esp. among new staff