

Effective Use of Intellectual Property Data for Competitive Business Intelligence



By Ron Simmer
Patscan
University of British Columbia



Established in 1986 to assist Tech Transfer Process by providing access to patents
Serves all university and research institutions in BC as well as fee based practice for private sector
One Librarian and one researcher (Mechanical Engineer) perform over 1000 searches a year
Host Seminars and courses on Intellectual Property Management
Located in Main Library building adjacent to science division
www.library.ubc.ca/patscan or patscan.com or www.patscan.ubc.ca
rsimmer@interchange.ubc.ca

Commercial Sources of Patent Data

- Big Vendors
- Dialog
- STN
- Questel Orbit
- Lexis Nexis
- New Web Vendors
- Micropatent
- Delphion

Best Free Internet Sites for Patent Searching

- CIPO site on Strategis
- IBM Intellectual Property Network (Delphion)
- USPTO Site - full text and images
- Espacenet thru the UK gateway - Full copies in PDF
- WIPO database of PCT apps. - from 1997
- Japanese sites - JPO has drawings
- IPOS - SurfIP (Singapore)
- IPC and US Class. Sites - you must have the tools

Patent Classification - The Classical Tools

- | | |
|-------------------------------------|---------------------------------|
| International Patent Classification | US Patent Office Classification |
| • Current ed. 1999 | • Updated Continuously |
| • Updated on 5 year cycle | • Function Orientated |
| • Application Oriented | • Finer Detail than IPC |
| • Wide International Use | |
| • ECLA - Better yet | |

Cost/Profit Meltdown

- Policy changes at EPO and USPTO make patent data cheap commodity
- Myriad of consulting/service companies packaging/reselling data.
- Patent copy market torpedoed.
– LATTICE www.imageapps.co.uk

Patent Data Issues

Quality

- USPTO abstracts variable
- Better retrieval with Derwent or Chem. Abs.

Reliability

- Error checking by Vendor?
- Missing data?
- Classification revisions?

Currency

- How Frequent and thorough are updates?

How Much Quality Needed?

- If \$X for 80% then often \$3x for
- for remaining 20% of patents
- Options:
 - Do It Yourself
 - NERAC
 - Search houses
 - DBASE experts

United States Patent [19] Tobias

US005277042A
[11] Patent Number: 5,277,042
[45] Date of Patent: Jan. 11, 1994

[54] **AUTOMOTIVE, STEERING WHEEL ANTI-THEFT DEVICE** *Primary Examiner—Lloyd A. Gall
Attorney, Agent, or Firm—Body, Vickers & Daniels*

[75] Inventor: **Mare W. Tobias**, Sioux Falls, S. Dak.

[73] Assignee: **Winner International Corporation**, Sharon, Pa.

[21] Appl. No.: 996,738

[22] Filed: Dec. 23, 1992

[51] Int. Cl.² **B60R 25/02**

[52] U.S. Cl. **70/209; 70/216;**

[58] Field of Search **70/209, 226, DIV. 9**

[56] **References Cited**

U.S. PATENT DOCUMENTS

| | | | |
|-----------|--------|--------------|-----------|
| 4,738,127 | 4/1988 | Johnson | 70/209 |
| 4,935,047 | 6/1990 | Wu | 70/209 |
| 4,949,561 | 8/1990 | Solow et al. | 70/209 |
| 5,040,388 | 8/1991 | Chan | 70/209 |
| 5,113,673 | 5/1992 | Shan | 70/209 |
| 5,119,651 | 6/1992 | Yang | 70/225, X |
| 5,131,245 | 7/1992 | Chan | 70/209 |
| 5,142,889 | 9/1992 | Liu | 70/209 |

16 Claims, 4 Drawing Sheets

[57] **ABSTRACT**

A mechanical anti-theft device of the type applied to the steering wheel of an automotive vehicle which automatically ratchets to its applied position without necessity of key lock actuation is provided with several security enhancing features which cumulatively prevent or make the device exceedingly difficult to unlock using conventional burglary tools or lock picking techniques. The features include configuring the ratchet teeth of the telescoping rod member in a way which minimizes any attempt to deactivate the lock unless the key is used. In combination with the ratchet teeth configuration, the lock pawl mechanism is configured to include an arcuate, transversely extending apex edge line or surface which cooperates with or is sized to be coincident with the rod members circumference to prevent a wedge, shim or pick from being readily easily inserted between pawl and ratchet tooth to force a retraction of the pawl.

New patents-citing Winner

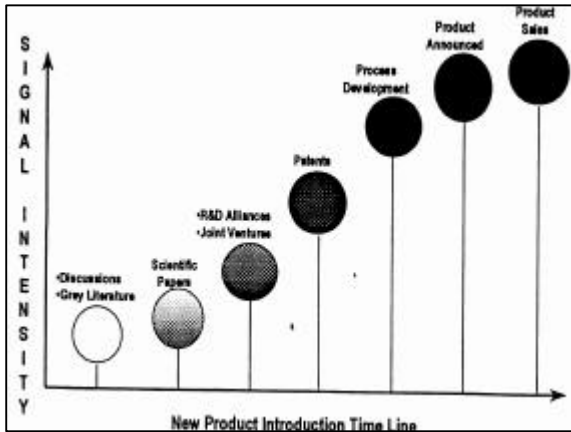
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| 4,935,047 | |
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| 5,635,899 | |
| 5,673,575 | |
| 5,709,113 | |
| 5,735,149 | |
| 5,755,123 | |
| 5,022,246 | 5,005,389 |
| All Ship Enterprise Co. Ltd | Cheem In Industry Co Ltd |
| 5,040,388 | 5,031,429 |
| 5,042,278 | 5,163,310 |
| 5,107,692 | 5,179,849 |
| 5,138,853 | |
| 5,284,037 | |

Business Intelligence

- Key to competitive advantage
- Developed process, discipline, tools
- Information into knowledge
- Decision support for strategic action
- **CONTEXT:**
 - Information technology/explosion

Competitive Intelligence For What?

- Making the best possible business decisions
 - Mergers
 - Acquisitions
 - Bids and Proposals
 - Lawsuits
 - Marketing Plans
 - Entry Strategies



- ### How a Company Competes
- Technology - Indicated by
 - Patents
 - Products
 - Organization
 - Financials
 - Strategic Alliances
 - Manufacturing
 - Marketing
 - Image/Reputation

- ### IP Data is Special
- #### 4 Functions in a Corporation
1. Corporate asset - buy/sell/license
 2. Protects price & market.
 3. Insurance against litigation.
 4. Poker chips in strategic alliance game.

- ### Statistical Analysis/Mapping
- Aurigin
 - BIZINT
 - MAPIT
 - PatGraph (Micropatent)
 - MapOut Pro
 - PatentLab

- ### Statistical Analysis Using Patent Data
- Manipulate any patent data fields to extract trends:
- Rank assignees or inventors to identify trends
 - Compare trends in patent filings over time
 - Map density/activity of filing for competitors
 - Chart a patent portfolio by classification
 - View industry technological trends internationally
 - Examine history of technology by citation analysis

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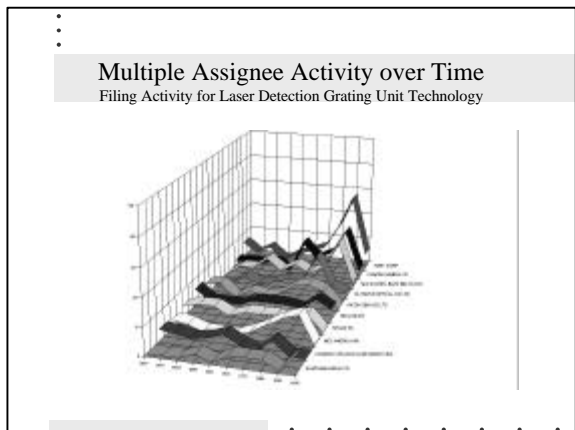
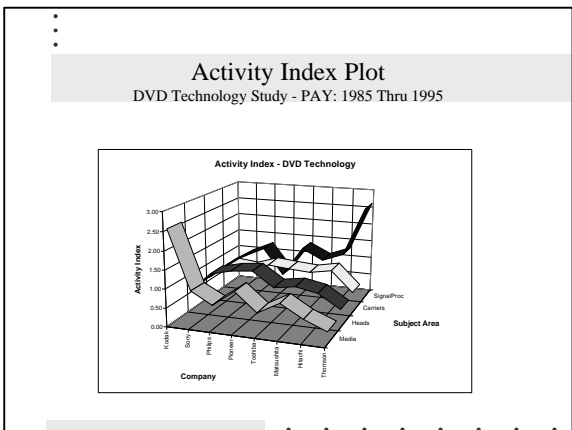
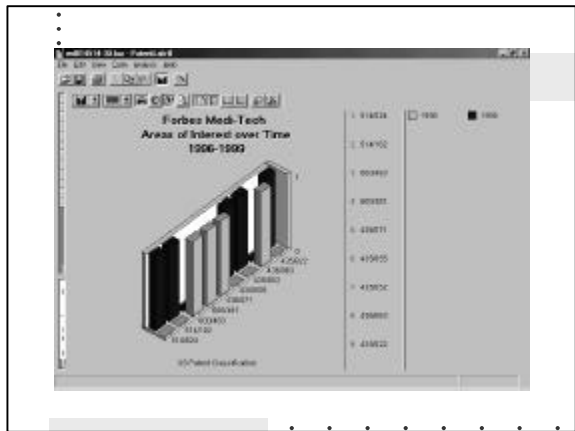
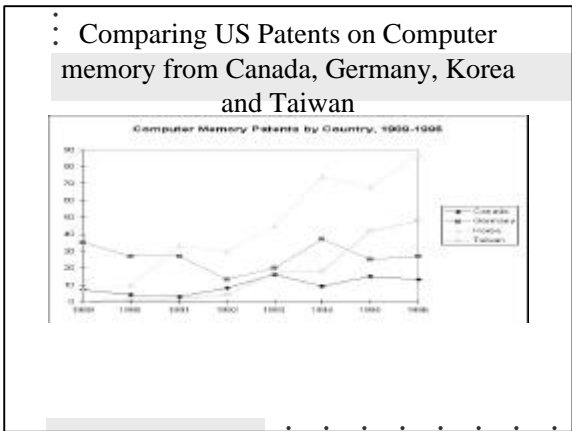
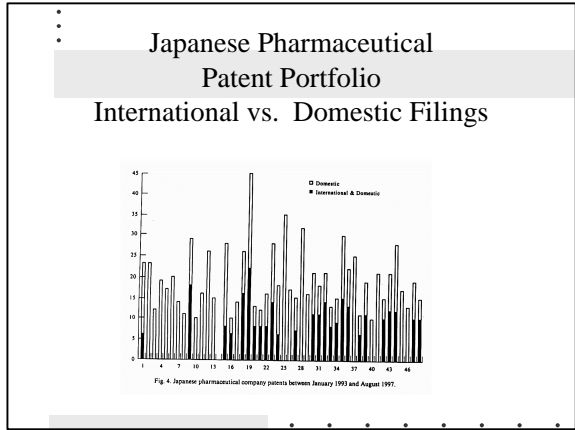
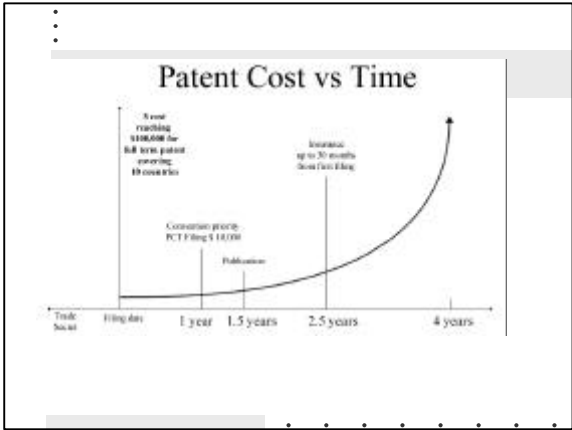
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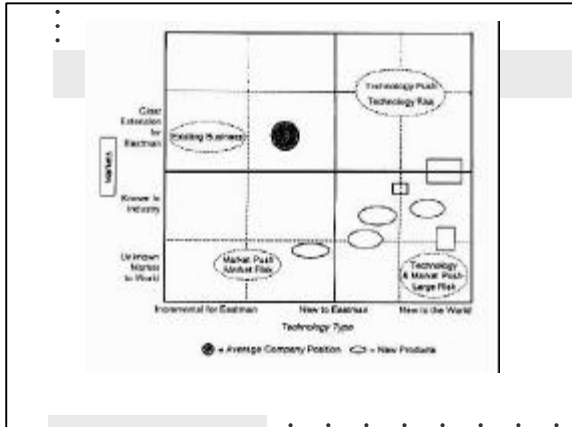
*SEARCHING...
000000 TERM
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205841 DIGITAL
94822 CAMERA
38 2 RESULT (419)

38 27
get rank per top 15

*PROGRESSING...
THERE ARE 100 UNIQUE VALUES.
OCCURRENCE PERCENT TERM
04 15.33% CANON KK
26 8.35% MINOLTA CAMERA KK
24 7.70% RICOH KK
21 7.47% SANYO ELECTRIC CO LTD
19 6.32% FUJI PHOTO FILM CO LTD
19 6.04% ASahi OPTICAL CO LTD
18 5.80% BOSTON KODAK CO
15 5.56% NIKON CORP
14 5.32% ASahi KOGAKU KOGYO KK
12 4.88% CASIO COMPUTER CO LTD
11 4.64% NIKON CORP
8 4.50% SONY CORP
8 4.50% VSD KONTAGON BREITEN HAMMA
7 4.08% KYOCERA CORP
6 3.84% HITACHI LTD

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The Aggressive Patent Portfolio: A Junior Company

- Example: Inex Pharmaceuticals
 - Objective is to build a critical mass of IP as quickly as possible thru licenses, alliances
 - Patenting around (bracketing) competitors.
 - extensive use of provisional filings
 - leveraging portfolio with new spin on old drugs for fast tracking FDA approval
 - prophetic patents on breakthrough genomic technologies

Portfolio Benchmarking

- A given company's portfolio best compared to those in same technology
- Example: CAE Newnes Machinery
 - World Class Competitor in revolutionising “old” tech with 21 inventions patented.

Two Most Important Variables in Patent Scenarios

1. Amount of Prior Art
2. Rate of Change in Field

Industry Scenarios for the IP Environment

- **Crowded Art**
 - **Fast Change**
 - Improvement Valued
 - Niche Inventions
 - Pressure to License
 - Volatile technology
- Example - Computer Applications

Industry Scenarios for the IP Environment

- **Crowded Art**
 - **Slow Change**
 - Little freedom to operate
 - Mature industry
 - Stable Technology
- Example - Pharmaceutical Sector
High Investment Big Payoffs

Industry Scenarios for the IP Environment

- **Sparse Art**
 - **Fast Change**
 - Broad Patents
 - File on all aspects of technology early and often
 - Profitable licensing
- Example - Genomics

Industry Scenarios for the IP Environment

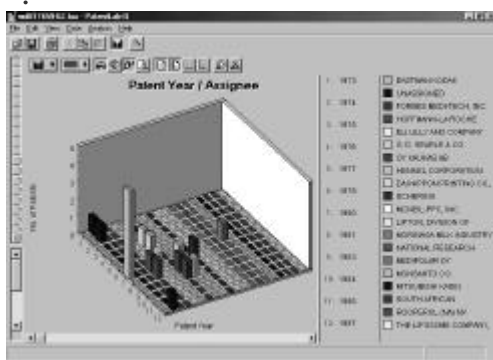
- **Sparse Art**
 - **Slow Change**
 - Old Industry
 - Competition not based on IP
- Example - Machinery manufactured for logging/mining/agriculture

Analyzing the Strength of an IP Portfolio

1. Geographic coverage indicates market strategies
2. Review size & assess trends - age, filing frequency, product life cycles
3. Kinds of Patents and degree of protection for core technologies
4. Technology licensed or assigned in/out
5. Aggressive filing - provisionals

Measuring the Portfolio Against the Competition

- New technologies being substituted?
- Citation searching reveal competitors "Patenting Around"?
- Is IP protection a major factor in the market?
- Does a state of the art search reveal competitors leapfrogging ahead?



Assessing the Human Capital Factor in Corporate IP

1. Stable R & D team with low turnover?
2. Inventors with high industry reputation
3. University/Gov't research links?
4. International literature cited in patents

Inventors on Richardson Vicks Patents

SS 67
#11 in

THERE ARE 12 UNIQUE VALUES.
OCCURRENCES PERCENT TERM

| | | |
|----|--------|---------------|
| 19 | 15.32% | DECKNER GWIN |
| 14 | 11.29% | SHARPEWIN |
| 11 | 8.87% | DHABHAR DJIN |
| 10 | 8.06% | SCHREFFTWIN |
| 7 | 5.64% | LASKA RMWIN |
| 7 | 5.64% | HEGDE CEWIN |
| 7 | 5.64% | SUNSHINE AJIN |
| 6 | 4.83% | KELLEHER WWIN |
| 5 | 4.03% | DECKNER GWIN |

Patent Assignees on G. E. Deckner's Patents

SS 67
Deckner GWIN
SS 67 RESULT (40)

SS 67
#11 in

THERE ARE 7 UNIQUE VALUES.
OCCURRENCES PERCENT TERM

| | | |
|----|--------|----------------------|
| 19 | 47.50% | RICHARDSON VICKS INC |
| 13 | 32.50% | CHARLES OF THE BITZ |
| 9 | 22.50% | PROCTER & GAMBLE CO |
| 3 | 7.50% | DISCKNER G L |
| 1 | 2.50% | CIOTTI S L |
| 1 | 2.50% | TIAMANA L A |
| 1 | 2.50% | WOODIN F W |

- ## Value of a Portfolio Depends Completely on Management
- Example from BC - High Voltage Power Instrumentation.
 - Carmanah Eng. Owned 2 patents.
 - Short term instrument market \$15 Mil.
 - Long term metering market \$600 Mil.
 - Merger of Carmanah and Honeywell sub to form NxtPhase boosts capitalisation 5 times

- ## Value of Portfolio Derived by Sale of Patents or Company
- Marketing and Positioning is Everything
 - Example: UBC force feedback Joystick Patents stagnated until sold to Immersion Co. for equity in company.
 - Now worth \$6 Mil. to UBC.
 - Video game vs Industrial Market

- ## Patent Litigation Value Bonanza
- Example: STAC develops data compression technology.
 - Files patents and buys existing patents to build strong portfolio.
 - Microsoft loses infringement case to the tune of \$120 Mil. In 1994
 - Wake up call for IT industry

- Rambus once allied with Intel
- Now Rambus suing Hitachi for infringement of DRAM patents
- Huge profits from extorting licenses.

SOURCE: IP DATAMORPH

- ## Strategies When Blocked by Competitors Patents
1. Buy the patent or the company (Microsoft vs Stac)
 2. License or swap the IP (cross license)
 3. Create better technology & patent around
 4. Sue for infringement or invalidate patent by legal action
 5. Oppose pending applications

⋮

Better Strategy for Blocking Patents

1. Cross License or swap the IP
2. Form a patent pool
3. Initiate a joint venture with combined IP

Works best with industry giants such as IBM and Intel.