

## 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](http://www.library.ubc.ca/patscan) or [patscan.com](http://patscan.com) or [www.patscan.ubc.ca](http://www.patscan.ubc.ca)  
[rsimmer@interchange.ubc.ca](mailto: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](http://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

[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.: **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 Chen 70/209

5,113,673 5/1992 Shen 70/209

5,119,651 6/1992 Yang 70/225, X

5,131,245 7/1992 Chen 70/209

5,142,889 9/1992 Liu 70/209

Primary Examiner—Lloyd A. Gall  
Attorney, Agent, or Firm—Body, Vickers & Daniels

[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.

16 Claims, 4 Drawing Sheets

## New patents citing Winner

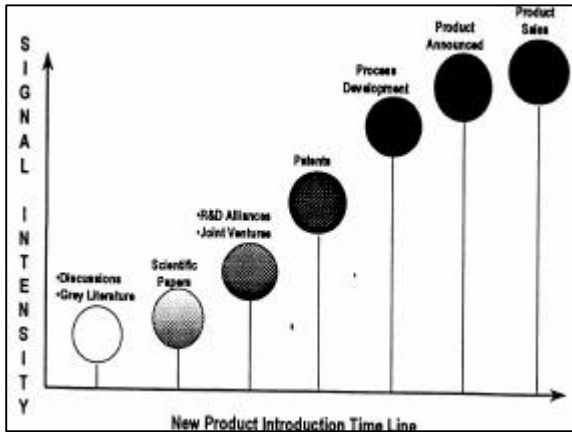
Patent No.	Inventor/Assignee	Date
4,738,127	4,856,309	WINNER INTERNATIONAL ROYALTY CORPORATION
4,935,047		
5,277,042		
5,365,215		
5,412,963		
5,600,979		
5,635,899		
5,673,575		
5,709,113		
5,735,149		
5,755,123		
5,022,246	All Ship Enterprise Co. Ltd	5,005,389 Cheen In Industry Co Ltd
5,040,388		5,031,429
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

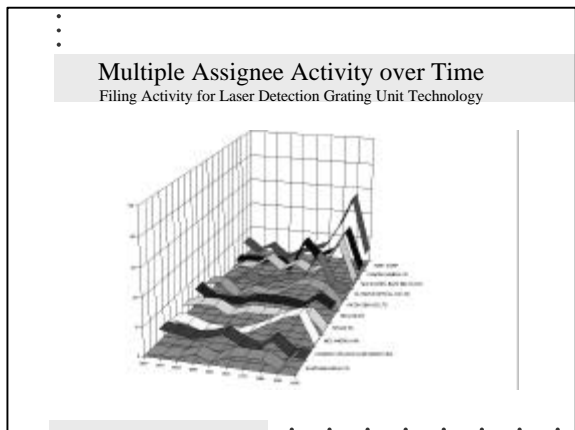
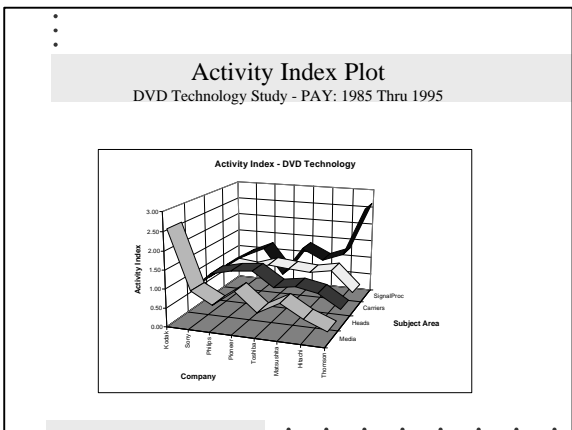
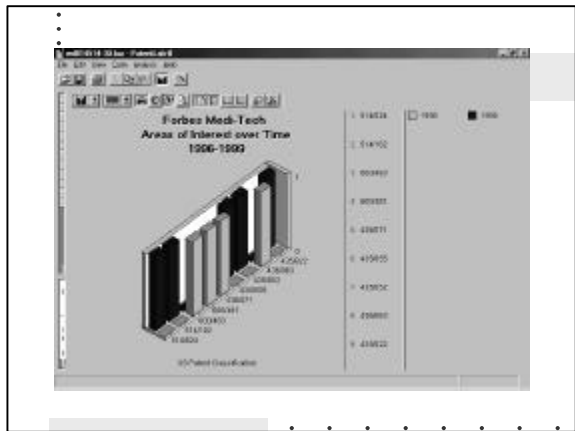
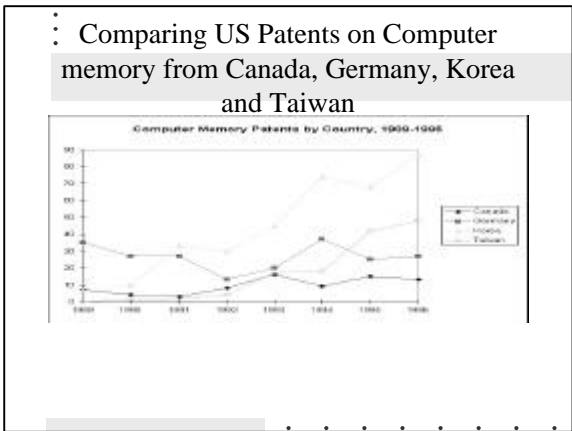
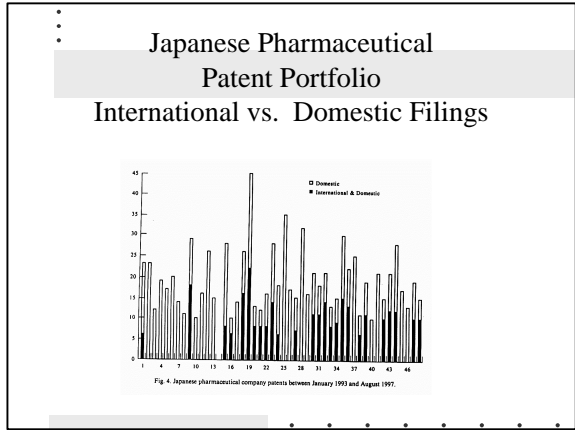
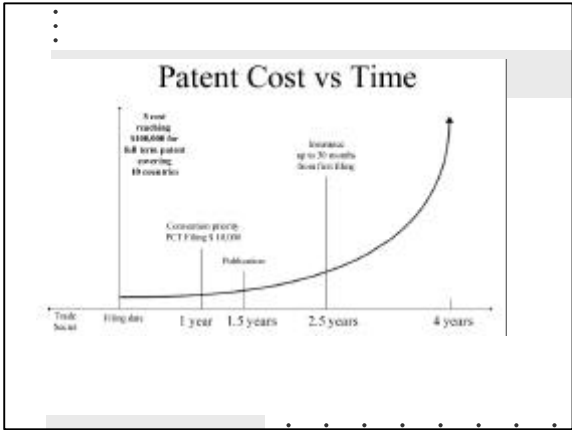
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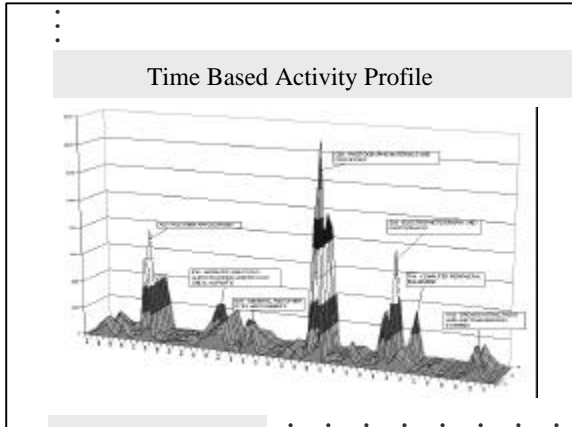
gibb/c and digital@jcsystems

*SEARCHING...
000000 TERM
7838000000
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
06 8.35% MINOLTA CAMERA KK
04 5.70% RICOH KK
01 3.67% SANYO ELECTRIC CO LTD
03 4.32% FUJI PHOTO FILM CO LTD
03 3.64% ASahi OPTICAL CO LTD
03 3.60% BOSTMAN KODAK CO
03 3.55% MITSUBI CORP
04 3.35% ASahi KOGAKU KOGYO KK
02 2.88% CASIO COMPUTER CO LTD
01 2.84% NIKON CORP
01 1.50% SONY CORP
01 1.50% VSD KONTAGON BREITEN HAMMA
01 1.46% KYOCERA CORP
01 1.46% HITACHI LTD
  
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Analysing Technology Trends  
Using Patent Data

1. Hot themes, breakthrough technologies indicated by velocity
2. Niches & opportunities developing
3. Check anomalies in data

Example: Creo revolutionizes printing  
see Brad Ashton re Tech. Intelligence

Analysing Patent Quality at a Glance

1. Reputable corporate or institutional source?
2. Several Inventors?
3. Prosecuted by solid law firm?
4. How much prior art cited?  
Any literature cited?
5. Patent Co-operation Treaty Filing?

Patent Quality  
Deeper Analysis  
Using Patent Databases

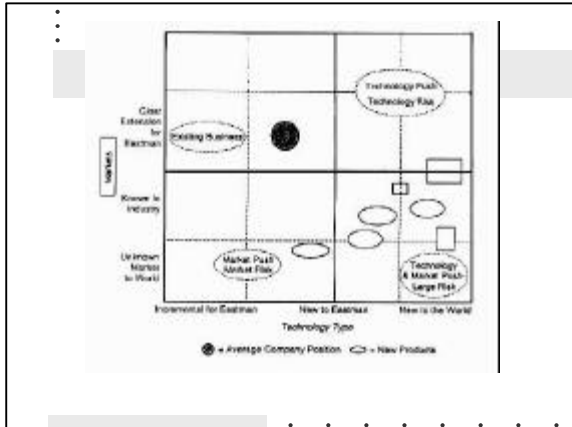
1. How many recent patents cite patents in question?
2. How many foreign equivalents/counterparts?
3. Speedy prosecution?
4. Claims valid, supported and broad?
5. Infringement suits, Re-examinations?

Comparison of patent claims

- “Picture claims” (purely descriptive)
- “vs. well drafted claims covering broad functionality.
- See BUSTPATENTS.COM for
- many examples of invalid patents  
– (Greg Aharonian)

The Powerful Patent Portfolio: A Mature Company

- Example: Eastman Chemical
  - Business and IP strategy integrated
  - IP builds on core technologies
  - Active licensing/acquisition program
  - IP intelligence program maps competing patent activity.
  - Strong R&D IP focus
  - Conservative, low risk attitude



## 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

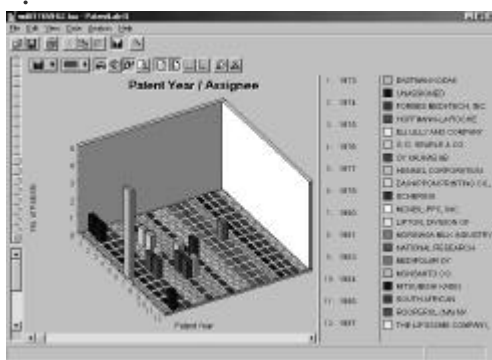
- **Sparse Art**
  - **Slow Change**
    - Old Industry
    - Competition not based on IP
- Example - Machinery manufactured for logging/mining/agriculture

## 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 RITZ
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.