

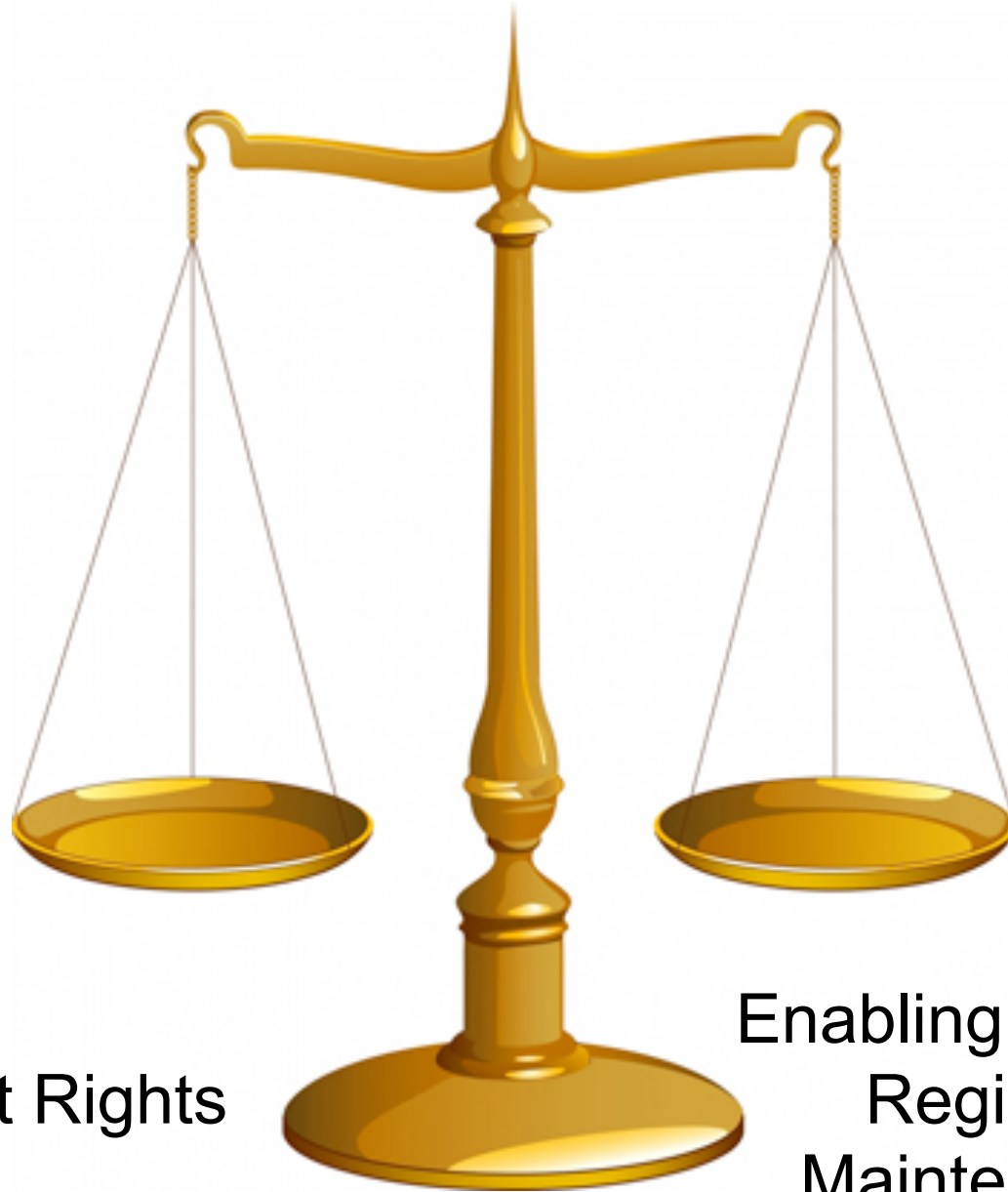


# The Use of Patent Information

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Note: The information contained in these slides was current as of AD 2008, where they were presented at the WIPO Summer School in Bangkok, Thailand. These slides have NOT been updated since then. Use the information at your own risk. Please report errors or omissions to [lerson@lerson.org](mailto:lerson@lerson.org).

# DISCLOSURE IS MANDATORY



Patent Rights

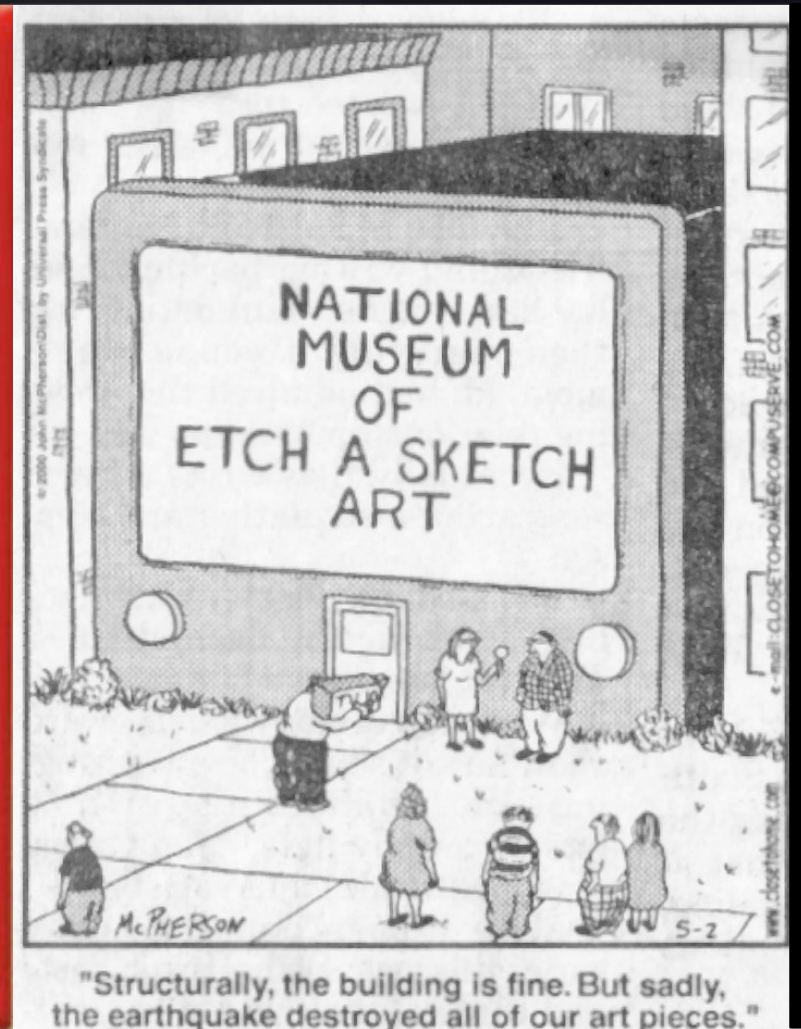
Enabling Disclosure  
Registration Info  
Maintenance Fees

# USE OF PATENT INFORMATION

Smart people and businesses can make use of patent information in many ways, e.g.

1. general patent documents as an information (technology) source
2. patent registration information as business intelligence
3. pre-grant publication as a crystal ball to look into the future
4. patent document analysis as a strategic planning tool

# 1. HOW DOES IT WORK?

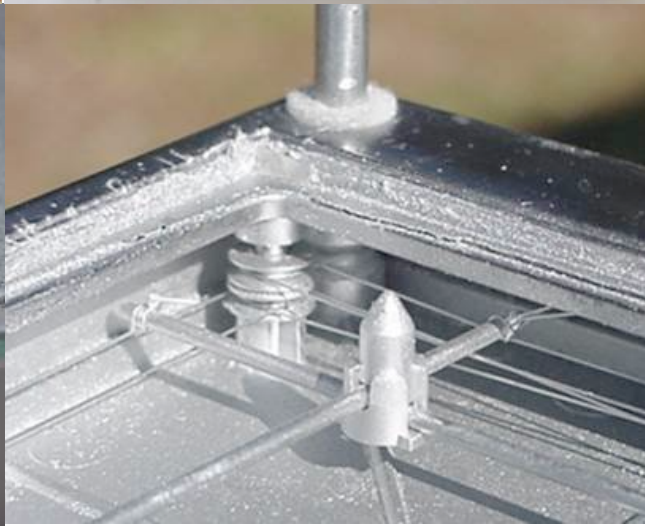


"Structurally, the building is fine. But sadly, the earthquake destroyed all of our art pieces."

Most people are familiar with the Etch-A-Sketch tracing toy.  
What do you do to arrive at the mechanism?



# REVERSE ENGINEERING

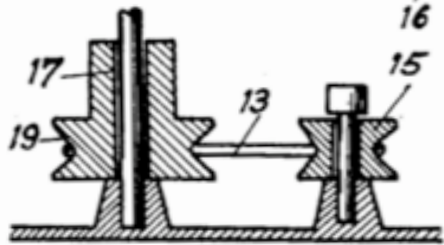
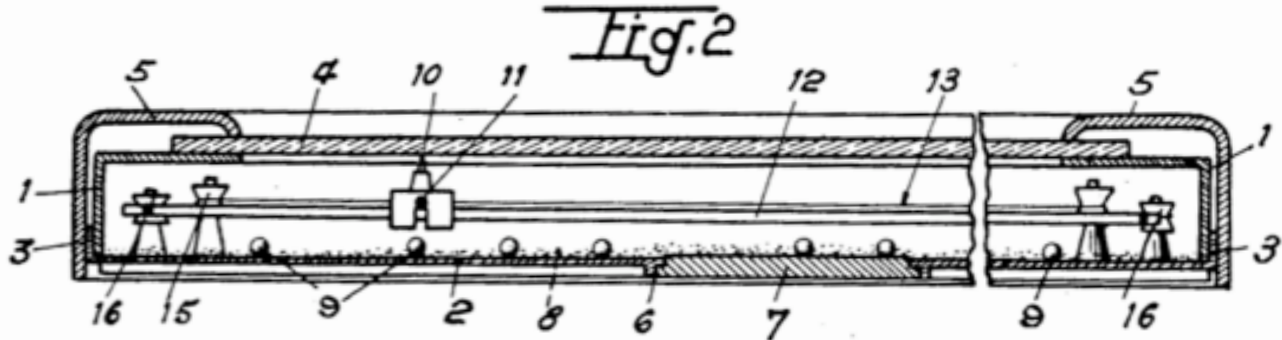
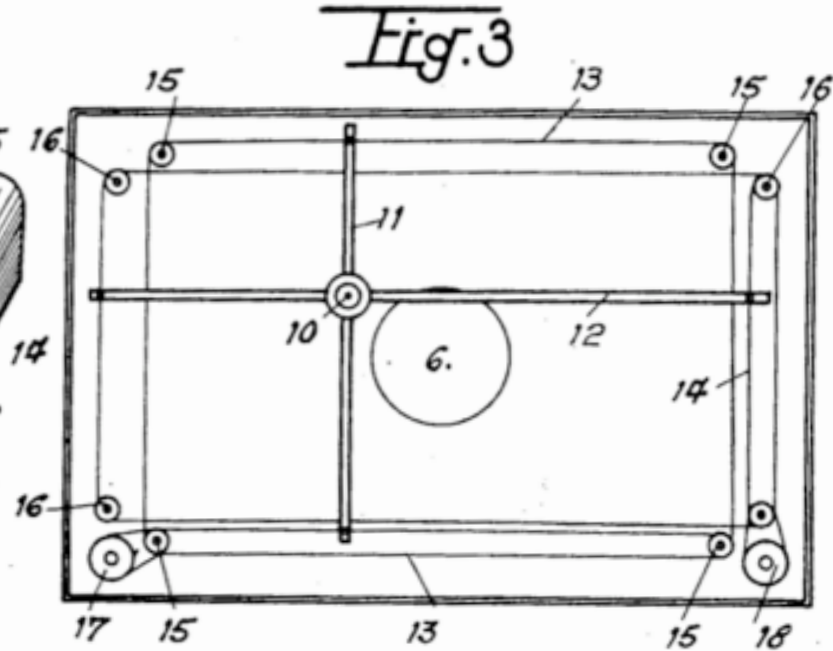
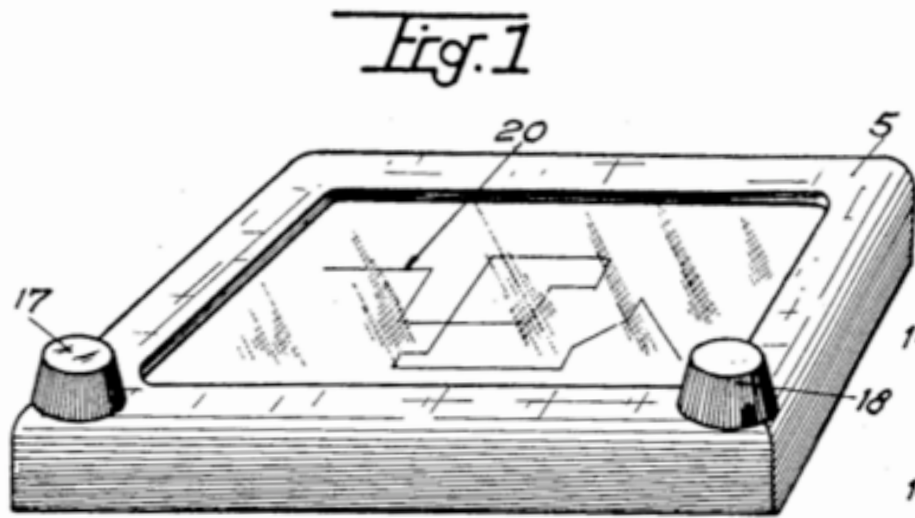


<http://www.howstuffworks.com/question317.htm>

1. Etch-A-Sketch
2. with the glass plate removed
3. the Al powder granules
4. Al powder sticking to glass surface
5. mechanism

One way is to reverse engineer the product by obtaining a product legally and open up the unit in order to study the mechanism.

# ORIGINAL GRANDJEAN PATENT



Sept. 25, 1962

A. GRANDJEAN  
TRACING DEVICE

3,055,113

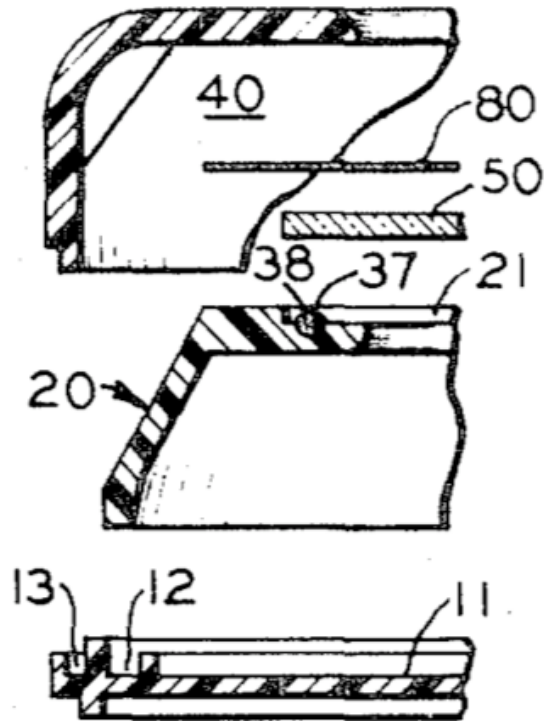
Filed July 23, 1959

# INFO GATHERED FROM PAT DOC

- When Earl Clark reverse engineered the Grandjean tracing device, the Grandjean patent would help him, for example:
  - the metallic dust is “pulverized metallic or other material adapted to adhere” to a glass surface
  - the larger particles are beads like “balls of glass” to obtain a uniform adherence between the pulverulent material and the translucent surface



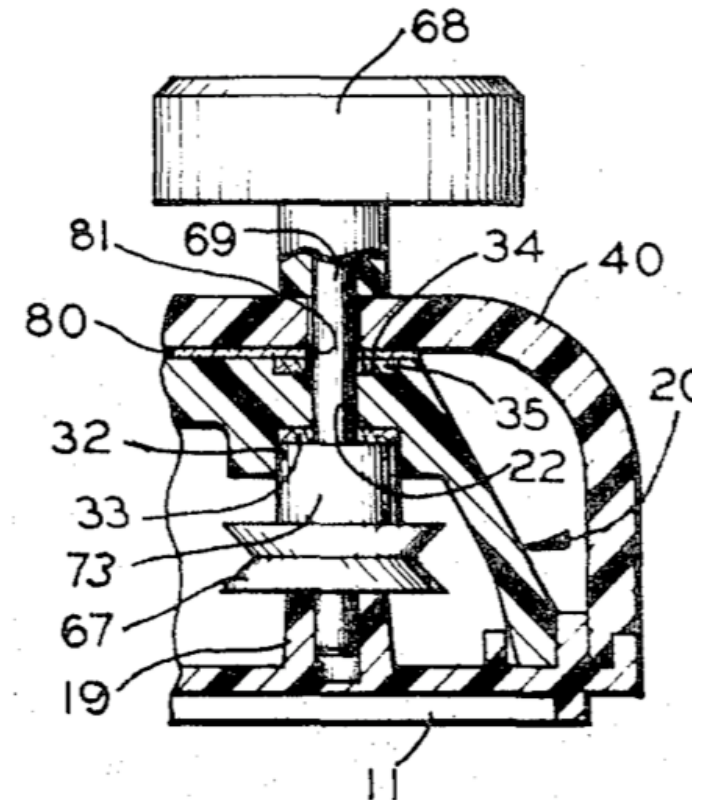
# IMPROVEMENT BY CLARK



- Better sealing the top and bottom shells of the case

- Covering the glass window with plastic

- Better sealing of the knob shaft





# ETCH A SKETCH PATENTED BY CLARK

PATENTED SEP 25 1973

3,760,505

SHEET 1 OF 2

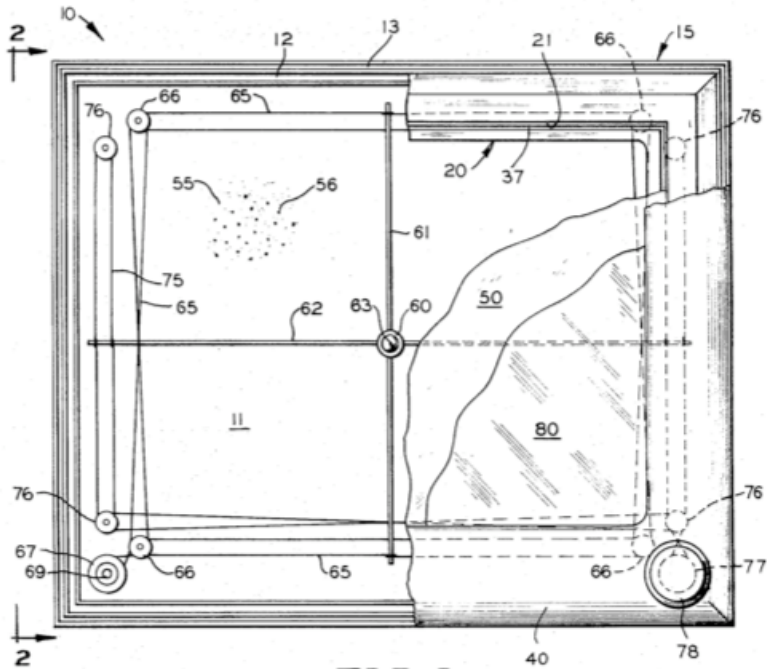


FIG. 1

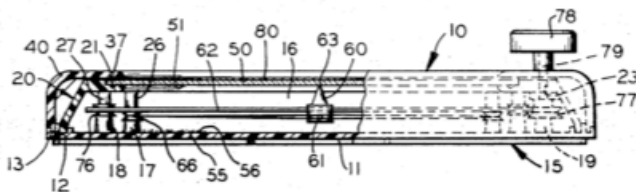


FIG. 2

INVENTOR.  
EARL D. CLARK  
BY *Hugh H. Kirk*  
ATTORNEY

PATENTED SEP 25 1973

3,760,505

SHEET 2 OF 2

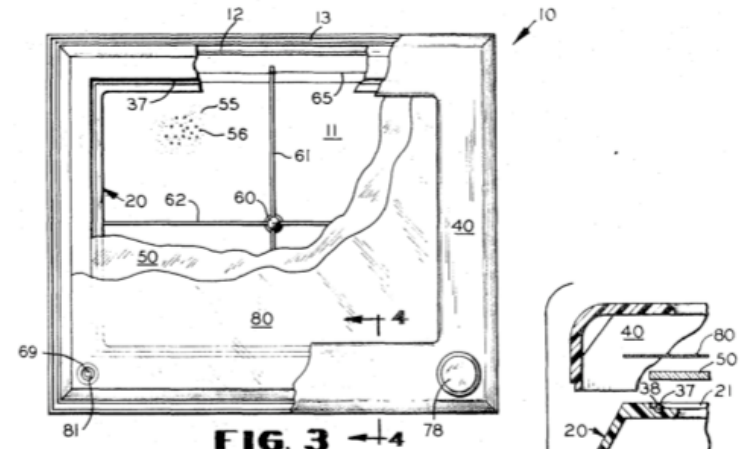


FIG. 3

FIG. 4

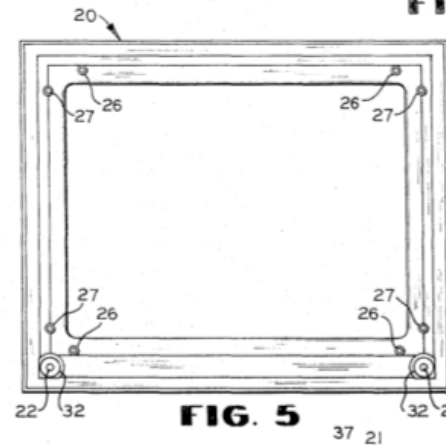
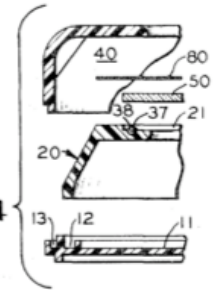


FIG. 5

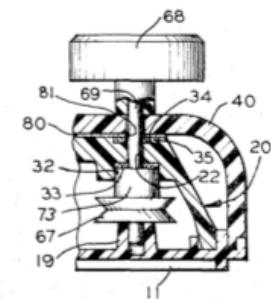
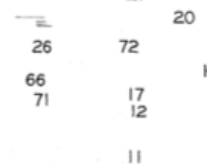


FIG. 6

FIG. 7



INVENTOR.  
EARL D. CLARK  
BY *Hugh H. Kirk*  
ATTORNEY

# THIS EXAMPLE = TECH CONTENT

- An obvious use of patent information is therefore aimed at the technology contents.
- Useful when you start thinking about a problem to see if others have already found a solution.
- Added benefit: preparation for patenting your invention in the future

# PATENT SEARCH SITES

- Free Databases  
(actually carry hidden cost of processing)
  - USPTO
  - GOOGLE
  - INPADOC
  - ESPACENET
  - JPO, etc.
- Commercial Databases  
(value-added services)
  - Now dominated by Thomson Group, e.g.

# USPTO MAIN SEARCH PAGE



United States Patent and Trademark Office

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Patent Electronic Business Center | Patent Full-Text and Full-Page Image Databases

Patent Applications

## Issued Patents (full-text since 1976; pre-1790)

- Quick Search
- Advanced Search
- Patent Number Search
- View Patent Full-Page Images  
How to View Patent Images
- Status & Event History
- Database Contents
- Help Files

Advanced Search

Status

## Published Applications (AppFT) (published since 15 March 2001)

- Quick Search
- Advanced Search
- Publication Number Search
- View Publication Full-Page Images  
How to View Published Application Images
- Status & Event History
- Help Files

US Classes

### Information Applicable to Both Databases

- Important Notices and Policies -- **Please read!**
- How to Access and View Full-Page Images
- Problems Using the Databases?
- Report Errors in Data Content

### Related USPTO Services

- Tools to Help in Searching by Patent Classification
- Patent Application Information Retrieval (PAIR)
- Patent Assignment Database
- Patent Attorney/Agent Roster
- Downloadable Published Sequence Listings



# USPTO ADVANCED SEARCH

## USPTO PATENT FULL-TEXT AND IMAGE DATABASE

[Home](#)[Quick](#)[Advanced](#)[Pat Num](#)[Help](#)[View Cart](#)

Data current through May 6, 2008.

Query [\[Help\]](#)

Examples:

ttl/(tennis and (racquet or racket))

isd/1/8/2002 and motorcycle

in/newmar-julie

Select Years [\[Help\]](#)

1976 to present [full-text]



Search

Reset

Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Current US Classification. When searching for specific numbers in the Patent Number field, patent numbers must be seven characters in length, excluding commas, which are optional.

Field Code	Field Name	Field Code	Field Name
PN	<a href="#">Patent Number</a>	IN	<a href="#">Inventor Name</a>
ISD	<a href="#">Issue Date</a>	IC	<a href="#">Inventor City</a>

# US CLASS SCHEDULE



United States Patent and Trademark Office

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## **Class DATA PROCESSING: SPEECH SIGNAL PROCESSING, LINGUISTICS, LANGUAGE TRANSLATION, AND AUDIO COMPRESSION/DECOMPRESSION**

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- **P 2**      ·    Translation machine
- P 3**      ..    Having particular Input/Output device
- P 4**      ..    Based on phrase, clause, or idiom
- P 5**      ..    For partial translation
- P 6**      ..    Punctuation
- P 7**      ..    Storage or retrieval of data
- P 8**      ·    Multilingual or national language support

# GOOGLE PATENTS

Google carries OCR'd Text and Drawings of ALL US Patents in their web site.

Google Patent Search

[About this patent](#) [Read this patent](#) **IMPROVEMENT IN PAPER-CLIPS** Wheeler

[Abstract](#) | [Drawing](#) | [Description](#) | [Claims](#)

**Patent number:** 139285  
**Filing date:** 5 Mar 1873  
**Issue date:** May 1873  
**Inventor:** Wheeler

**Drawings**

[Page 1](#)

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**Search within this patent**

# INPADOC

- International Patent Documentation Center
- Paris Convention created “patent families,” corresponding patents in different countries which normally disclose the same invention and claim the same priority date.
- Founded by WIPO and the government of Austria under an agreement in 1972 as a worldwide patent database to handle the patent family issue better. The INPADOC GmbH was dissolved in 1991 when EPO took over.
- On-line access possible in the early 1980s  
Web access now
- The Trilateral (USPTO-EPO-JPO) set up a patent office information use policy in 2001 to keep value-added commercial databases alive
  - limit downloads
  - no or minimal improvement in data processing



# ESPACENET

- developed by EPO
  - EP - European patents published during the past 24 months
  - WIPO (PCT) - PCT publication during the past 24 months
- worldwide search - over 60 million patents
  - EP and PCT older than 24 months after publication
  - other countries/region (>80)

# JAPAN PATENT SEARCH

- JPO-National Center for Industrial Property Information and Training

Advanced Industrial Property Network  
(AIPN)

<http://aipn.ipdl.inpit.go.jp/AI2/html/top.html>

- Number search only

- PAJ

<http://www19.ipdl.inpit.go.jp/PA1/cgi-bin/PA1INIT?>

- Date, IPC, Applicant, Title, Abstract

- Patent & Utility Model Gazette

# WORLD PATENT INDEX (WPI)

- Value-added commercial service (i.e. not cheap by developing country standard)
- patent application & grants from 41 patent issuing authorities
- editorial staff re-write the abstracts using controlled keywords so that index searches would usually get you what you want
- sophistication in handling patent families reduces missing search results (useful for both patentability and infringement)

# 2. REGISTRATION INFORMATION

**United States Patent** [19]

[11] **3,760,505**

**Clark**

[45] **Sept. 25, 1973**

[54] **TRACING DEVICE**

[75] **Inventor: Earl D. Clark, Bryan, Ohio**

[73] **Assignee: The Ohio Art Company, Bryan, Ohio**

[22] **Filed: Nov. 17, 1971**

[21] **Appl. No.: 19**

[52] **U.S. Cl. .... 33/18 R, 33/1 M**

[51] **Int. Cl. .... B43I 13/00**

[58] **Field of Search .... 346/21; 161/192; 220/82; 33/18 R, 1 M, 23 C**

[56] **References Cited**  
**UNITED STATES PATENTS**

3,055,113	9/1962	Grandjean.....	33/18 R
2,543,561	2/1951	Tracy.....	33/18 R
3,170,383	2/1965	Hunt.....	220/82 R
2,828,625	4/1958	Morphis et al.....	220/82 R
3,307,400	3/1967	Leroy.....	73/331
2,279,145	4/1942	Ryan.....	161/192

single inventor

assignee

issue date

filing date

classification

cited prior art references

**ABSTRACT**  
the tracing device shown in No. 3,055,113 issued Sept. 25, 1962, comprising a protective plastic sheet covering its glass tracing surface, a non-hardening adhesive between the glass surface and the inner liner or side wall surface, and a groove for said adhesive to extend from inside the device, intended for operating the tracer at various locations, and annular pulleys around the apertures in said inner liner through which the knobs extend for operating the pulleys to further seal the escape of powder from inside the device.

**1 Claim, 7 Drawing Figures**



# WHAT CAN WE SEE?

- Mr. Clark is a single inventor. If he co-invents, we can perhaps establish a working relationship between Mr. Clark and another inventor.
- There exists some connection between Mr. Clark and the Ohio Art Company. One possibility is that Mr. Clark works for the Ohio Art Company. Other possibilities exist.
- The Classifications (US and IPC) can help us find other patents in the same or

# PATENT INTELLIGENCE

- An exercise similar to what we have done but executed on a much larger scale is associated with the so-called “patent intelligence.”
- It is not difficult to assemble the R&D team of a company by a few patent searches
- A patent portfolio of a company reflects

# 3. LOOKING INTO THE FUTURE

1-2 yrs

2-3 yrs

Filing

Publication

Issue

98  
(19) กรมทรัพย์สินทางปัญญา (11) เลขที่ประกาศโฆษณา 40418  
กระทรวงพาณิชย์ (43) วันประกาศโฆษณา 26 ก.ย. 2543

(12) ประกาศโฆษณาคำขอรับสิทธิบัตรการประดิษฐ์

(21) เลขที่คำขอ 046253 (22) วันที่ยื่นคำขอ 23 กันยายน 2541

(51) สัญลักษณ์จำแนกการประดิษฐ์ระหว่างประเทศ Int.Cl. 4 H02 K7/065

(71) ผู้ขอรับสิทธิบัตร (31) เลขที่คำขอที่ยื่นครั้งแรก

บริษัท ไททูลเอ็นจิเนียริง จำกัด

(72) ผู้ประดิษฐ์ (32) วันยื่นคำขอครั้งแรก

นายอดิษฐ์ มรรจงนากุล

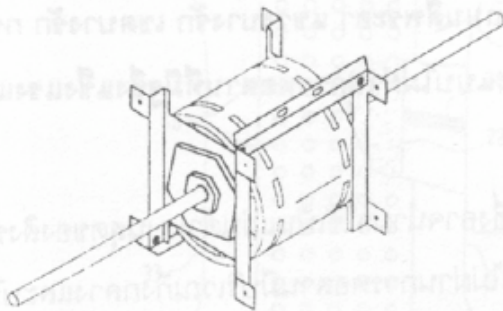
(74) ตัวแทน (33) ประเทศที่ยื่นคำขอครั้งแรก

ตัวแทน

(54) ชื่อที่แสดงถึงการประดิษฐ์ การประดิษฐ์ชิ้นส่วนจับยึดตัวมอเตอร์

(57) บทสรุปการประดิษฐ์

การประดิษฐ์ชิ้นส่วนจับยึดมอเตอร์ที่จะลดปัญหาในการประกอบชุดระบบ ไม่ทำให้เกิดการเสีย (Fail Balance) และแนวศูนย์กลาง (Center Line) ระหว่างตัวมอเตอร์กับตัวหอยโข่ง เมื่อเกิดการกระทบ เหตุสำคัญที่ทำให้ชิ้นส่วนเกิดการ บิดเบี้ยวและแนวศูนย์กลางเปลี่ยนแปลงไป ผลที่ตามมาคือ เกิดเสียง เครื่องปรับอากาศทำงาน



- In countries with pre-grant publication, e.g. Thailand,
- Reading patent publications is like looking into a crystal ball into the future (3-5 years)
- Example: Thailand's Eastern Seaboard construction coincided with a wave in patent filing in petrochemical technologies.

# A CASE STUDY ON AGRI BACTERIA

- 3 Thai universities
  - + 1 government agency
  - + 1 state funding agency
  - + 1 private company
- Worked for ~ 4 years until reaching the pre-commercializing stage
- got a notice from a law firm representing a Korean company which filed a patent application on this particular technology a few years back and had received a Thai utility patent on the technology

# HOW TO AVOID THIS PROBLEM

- Read patent documents
  - granted patents
  - patent publications (especially in countries with pre-grant publication)
- Is that a lot of reading?
  - Yes, if you try to read everything.
  - No, if you read only in the technical area related to your interest.
- Has that actually been done?
  - Yes, in many companies around the world
  - Take companies in Japan for example, ...



# SYSTEMATIC ANALYSIS IN JP COM

- Monitored documents are circulated in the company for comments and actions to be taken (Check Box)

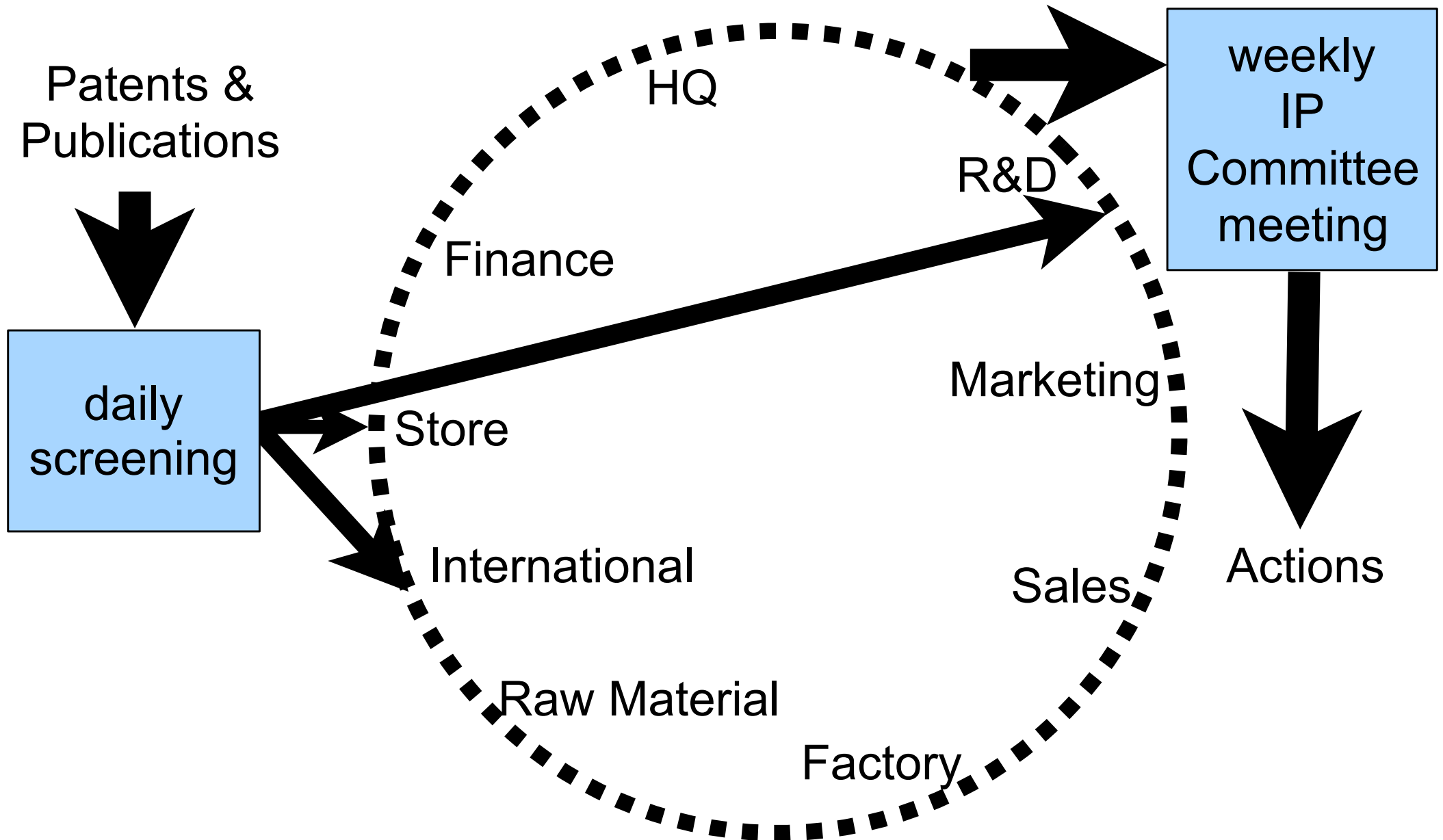
Ignore

File an opposition

Inform R&D Department for possible improvements

Others \_\_\_\_\_

# PAPER TRAIL



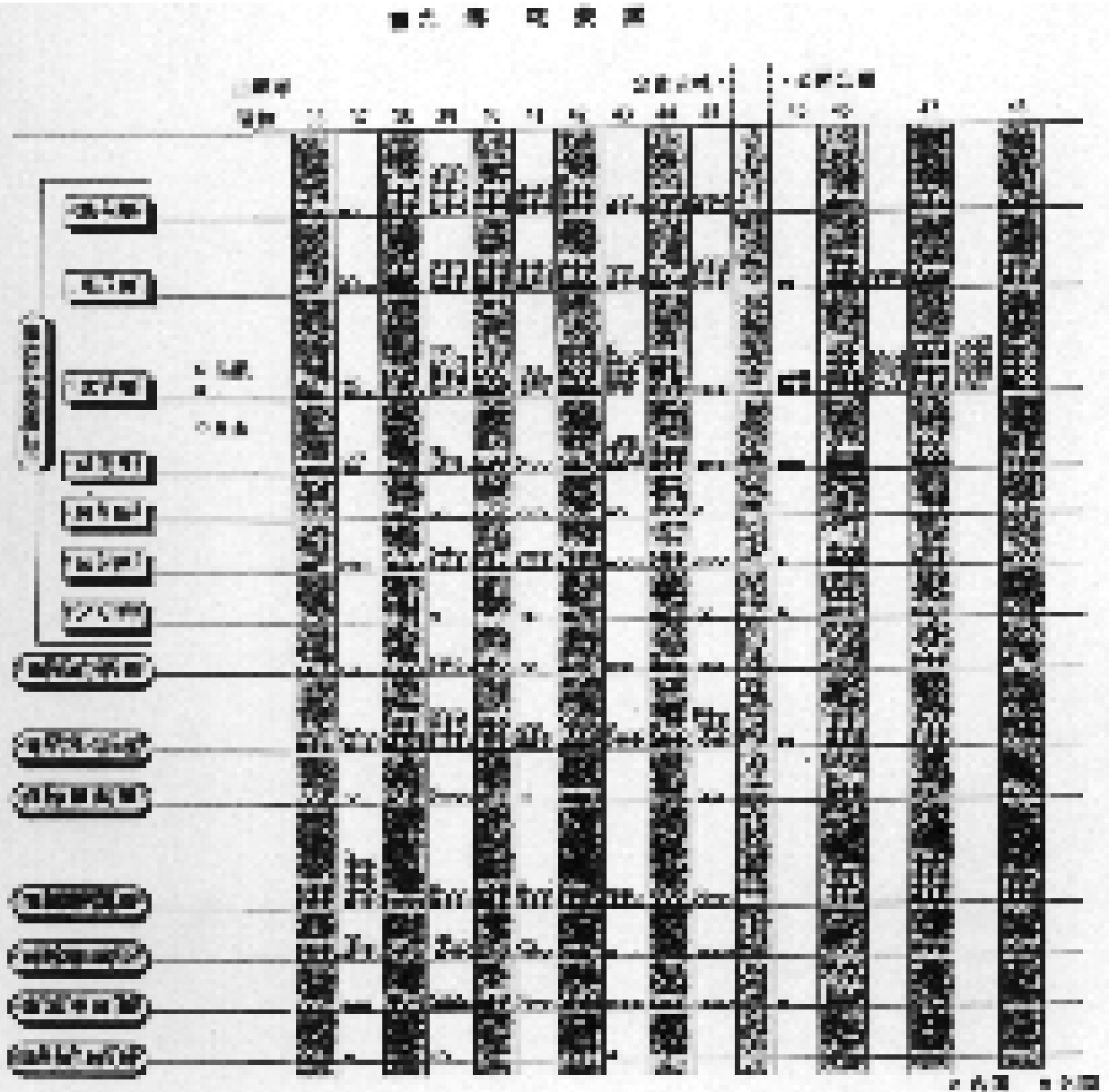
# 4. STRATEGIC PLANNING

- e.g. how to focus the limited R&D budget
- need to analyze data from many patent documents
- tow modes of operation
  - entry into business

# CONCEPT OF PATENT ANALYSIS

- Find wave and trough of patent application (or publication or grant) for a particular technology.
- Guess why the crests and troughs are there
  - New, old technology
  - Problems and problems without solutions (yet)
  - Will it help us if we know the answer?

# TEMPORAL CLUSTER ANALYSIS

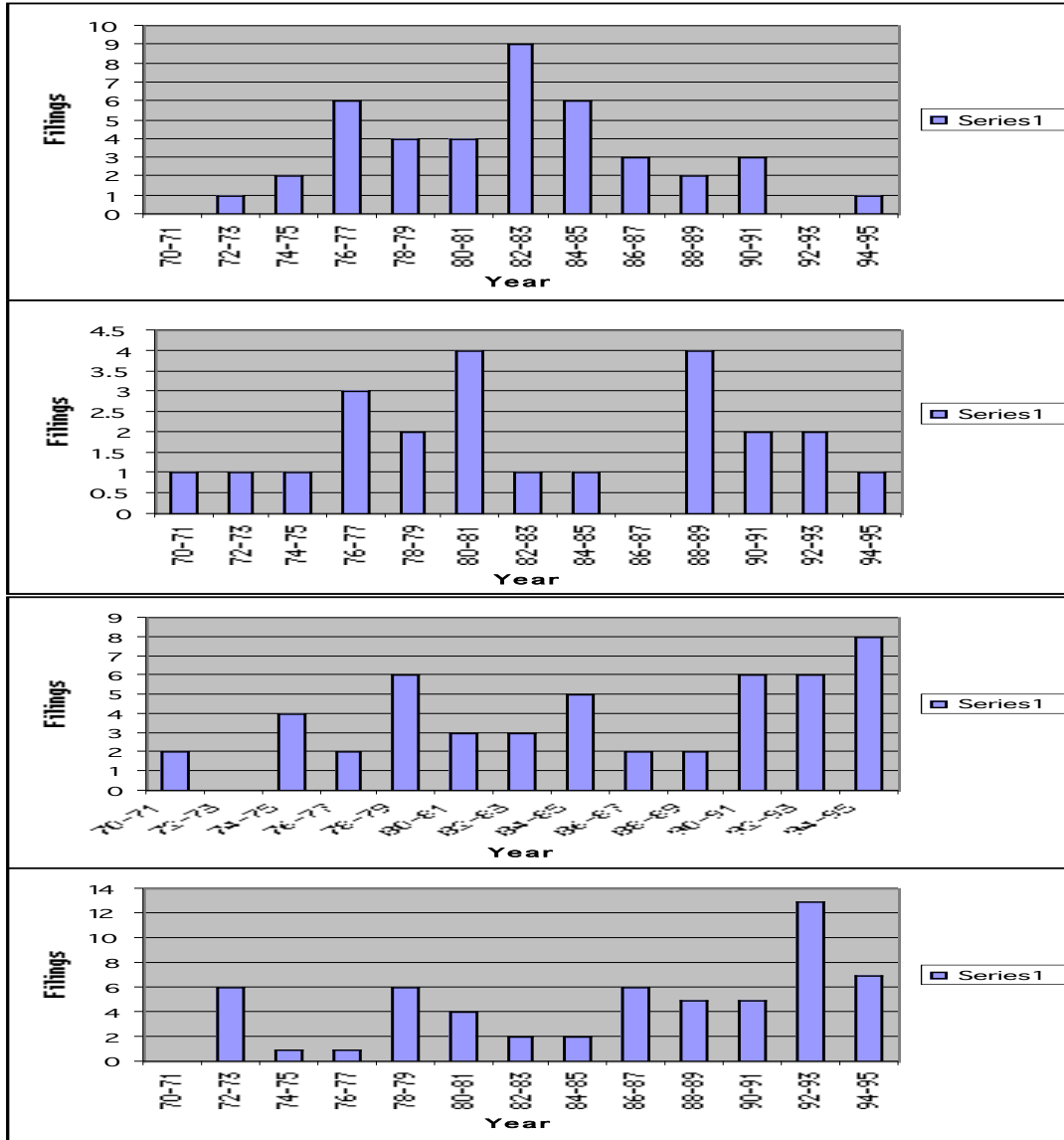


AIII/JPO Training Course

- Each row = technology
- Each column = year
- White dots and black dots = presence of domestic or foreign patent in a



# STORAGE BATTERIES

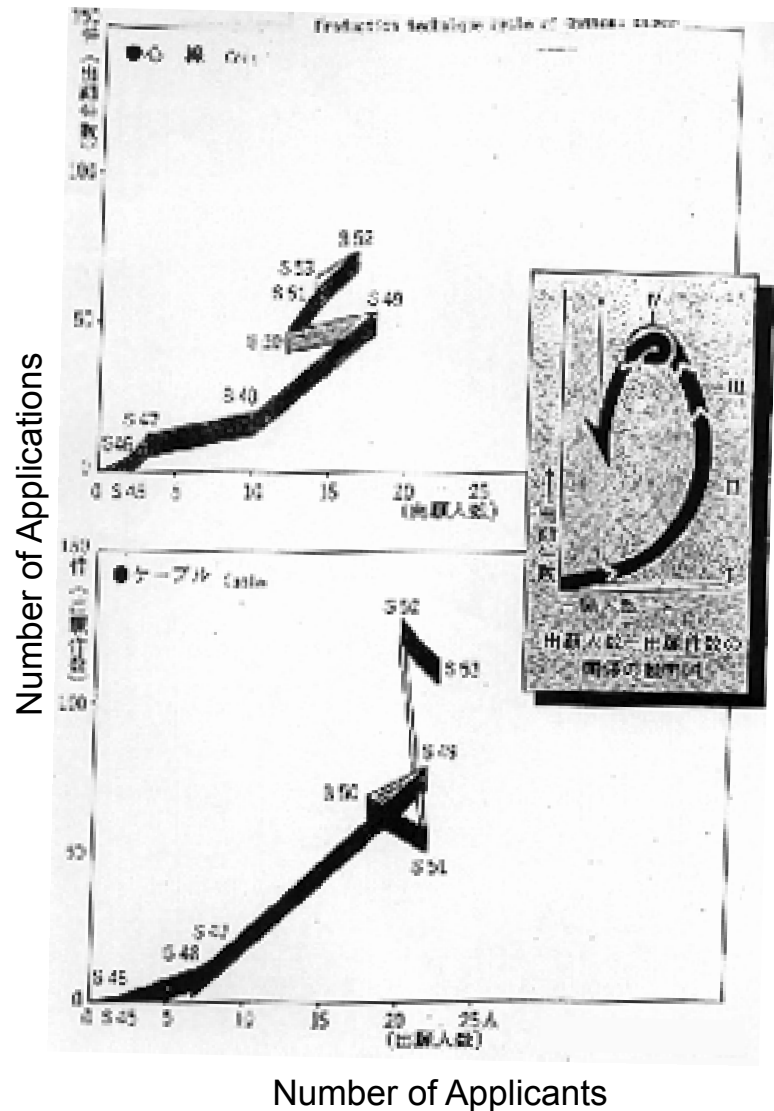


- Storage
- Housing & Sealing
- Charging
- Regulation

AIII/JPO Training Course

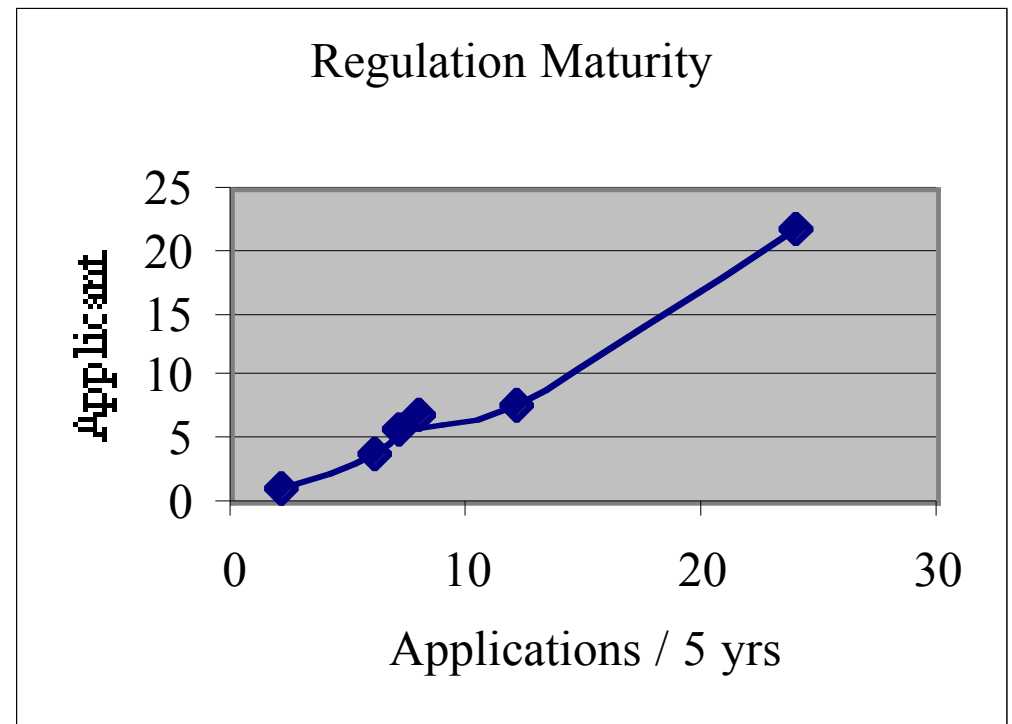
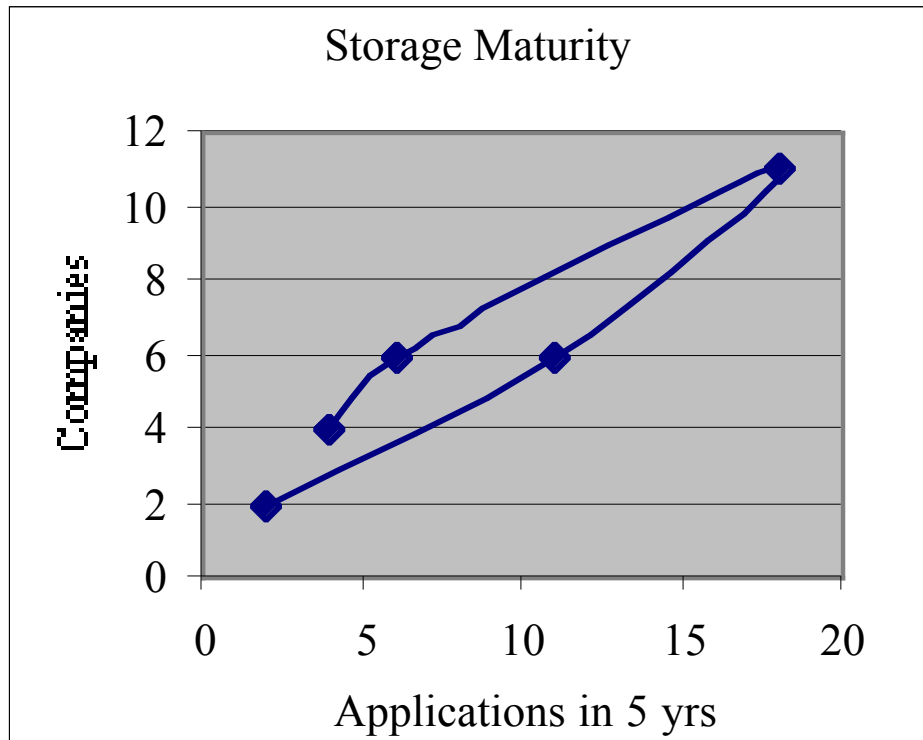
# TECHNOLOGY MATURITY ANALYSIS

AIII/JPO Training Course



- Fixed time period
- Graph follows a spiral pattern
- Interpretation where maturity is reached and decline

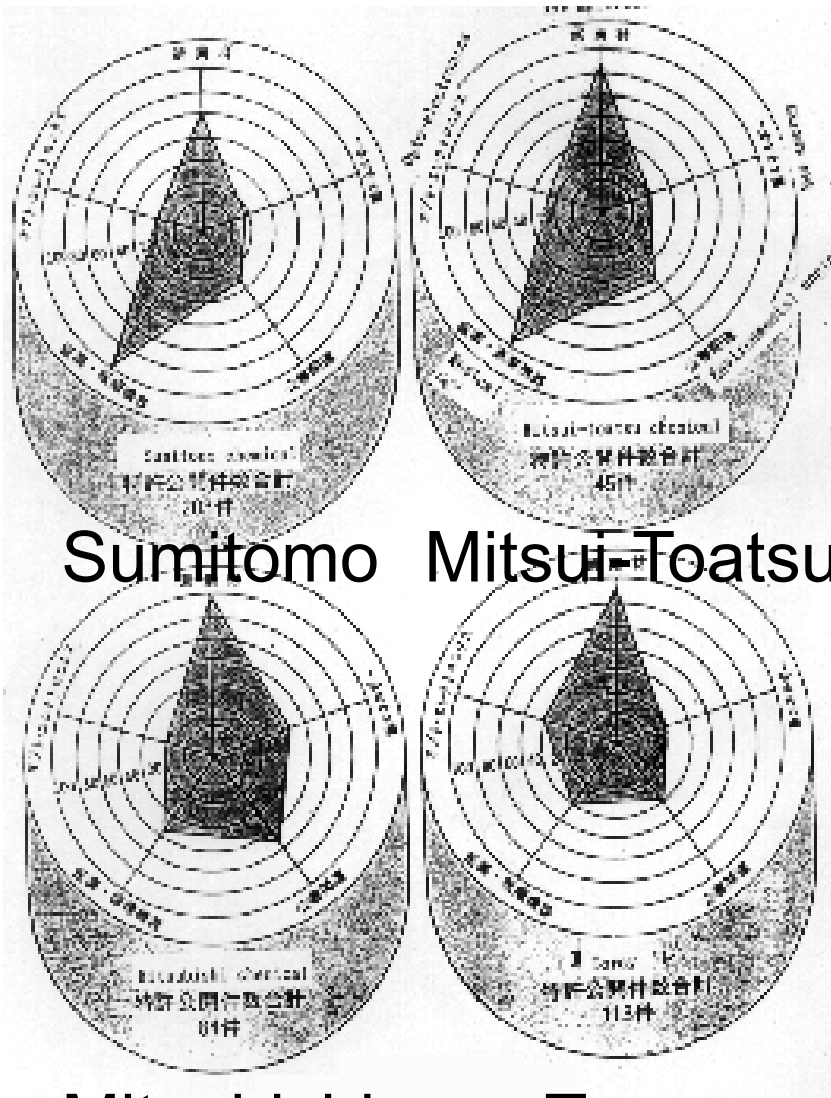
# STORAGE BATTERY TECHNOLOGY



- Sensitive to time period and data size
- Other examples also exist.

# BUSINESS DIRECTIONS

- Same graph axes for different competitors
- These graphs were produced by Teijin of its competitors
- Distance of radials = number of patent applications or grants
  - raw materials
  - new energy
  - environmental engineering
  - medical

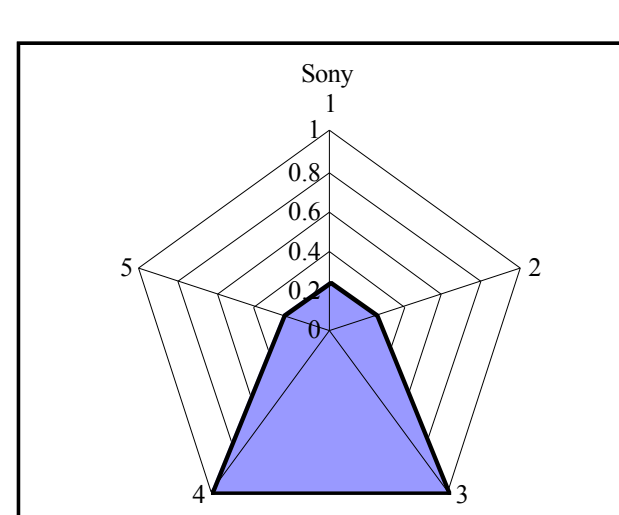
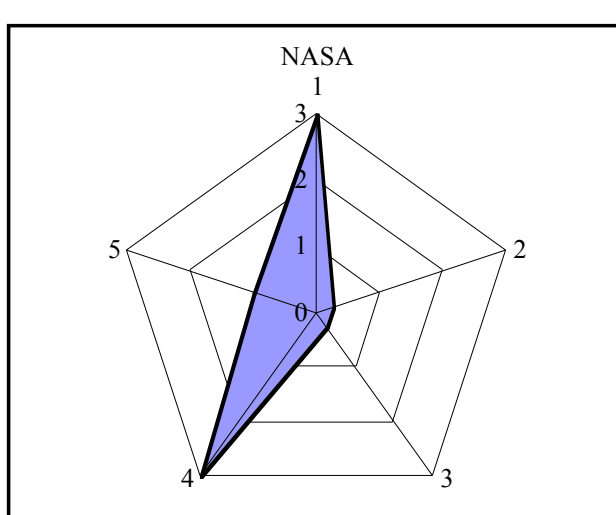
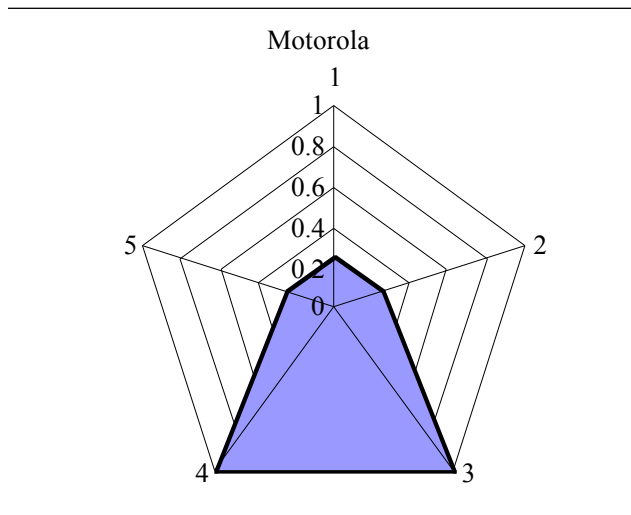
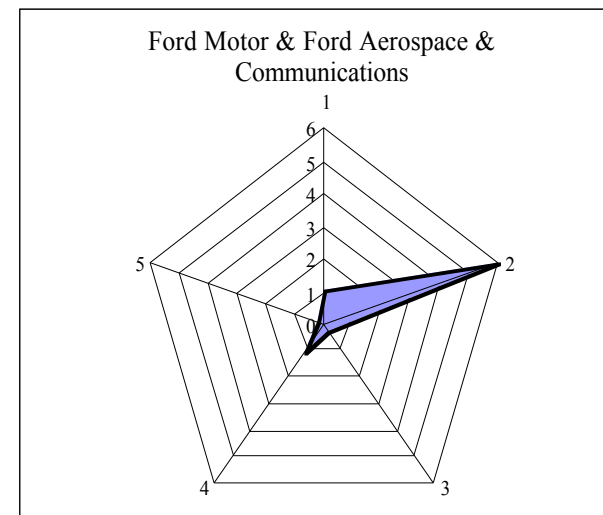
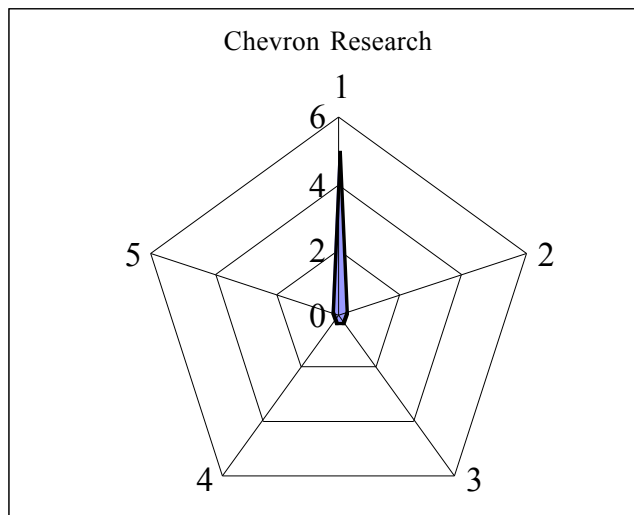
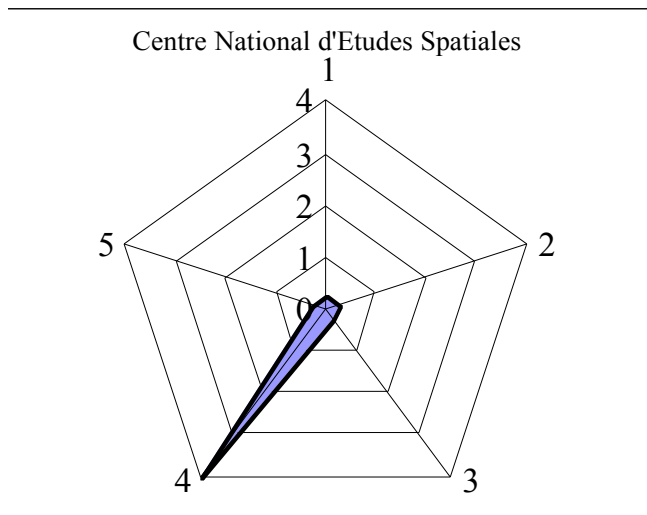


Sumitomo Mitsu-Toatsu

Mitsubishi Toray

AIII/JPO Training Course

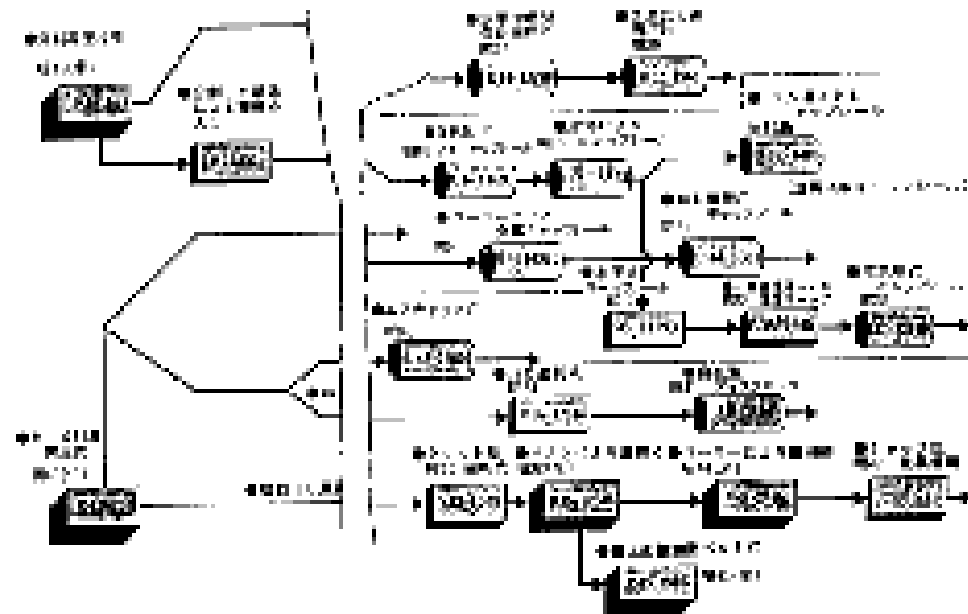
# STORAGE BATTERIES



1=storage, 2=housing, 3=charging, 4=regulation, 5=others



# PATENT MAPPING



AIII/JPO Training Course

- Technological advancement
  - incremental invention
  - jumps in technology

# THE CANON STORY



1950s



1960s



1970s



1980s

- Patent analysis is routinely practiced by Japanese firms
- Cannon Cameras entry into
  - photocopying machine business in the 1970s

# THE THAI EXPERIMENT

- 1998 National Research Council Exercise on Analysis of Patent Documents
- Space Telecommunications Storage batteries for use in space environment
- Over 2,700 patent documents were read and selected for analysis
- Results fed into a roundtable discussion to pinpoint the niche and strategies for Thai companies engaged in space

# MANUAL V. COMPUTER MAPPING

- Manual mapping
  - Each patent is read by at least 1 expert
  - Collected data includes ranking score for importance or relevancy
  - Computer tool -> table, flow chart, etc.
- Computer-generated mapping
  - Computer tool used to
    - Group similar document together
    - Build landscape based on semantic concepts
    - Discover trends and do statistical analysis
  - There is no substitute for actual reading of patent documents.

# PATENT SOFTWARE LIST

- Check out various kinds of patent softwares at

[http://www.european-patent-office.org/  
online/#soft](http://www.european-patent-office.org/online/#soft)



# COMPUTER-ASSISTED MAPPING

- Data Mining
  - Data extracted from “field” in patent documents
  - Many analytical capabilities
    - Temporal analysis
    - Clustering
- Text Mining
  - Text extracted based on AI algorithm

# STRUCTURED DATA EXAMPLE

- Patent Number
- Title
- Inventors
- Application Filing Date
- Publication Date
- Grant Date
- etc.

# INTEGRATED TEXT-DATA MINING SW

## Examples

- Micropat's Aureka
- Micropat's ThemeScape
- ClearForest
- Synthema's TWID
- Vantage Point
- Invention-Machine
- Bizint's SmartChart
- Chemical Abstract's SCIFINDER
- OmniViz
- Thomson's Current-Patent
- WisDomain
- Delphion
- Patent Citations
- Patent Value Predictor
- TEMIS
- VxInsight

# MICROPAT'S AUREKA

[\*http://micropat.com/aureka/\*](http://micropat.com/aureka/)

- web-based comprehensive, integrated solution that is used to manage innovation assets.
- Aureka streamlines the creation and extraction of value from innovation assets at all levels and functions across the enterprise: research and development, licensing, corporate intelligence, patent portfolio management, and strategic planning.

# AUREKA PATENT SEARCH

The screenshot displays the aureka Gold web interface. The top navigation bar includes 'Home Admin Support Log out' and a menu with 'Search Citations Preferences Maps Reports Documents'. The main content area shows a 'Document List' with 85 patent documents. A table lists the first five results:

Document ID	Title	Type	Assignee	Inventor	Issue Date	Filing Date
6474679	Vehicle air bag syst...	US	Nissan Motor Co...	MIYASAKA, HIROY...	2002-11-05	2001-06-27
6474680	Side air bag apparat...	US	Nissan Motor Co...	MIYAHARA, TAKEH...	2002-11-05	2000-08-31
6467798	Vehicular airbag app...	US	Nissan Motor Co...	Inomata, Kazuyu...	2002-10-22	2001-02-08
6462649	Air bag failure disp...	US	Nissan Motor Co...	Kimura, Makoto	2002-10-08	2000-01-24
6427106	Control apparatus fo...	US	Nissan Motor Co...	Kimura, Makoto	2002-07-30	1998-11-13

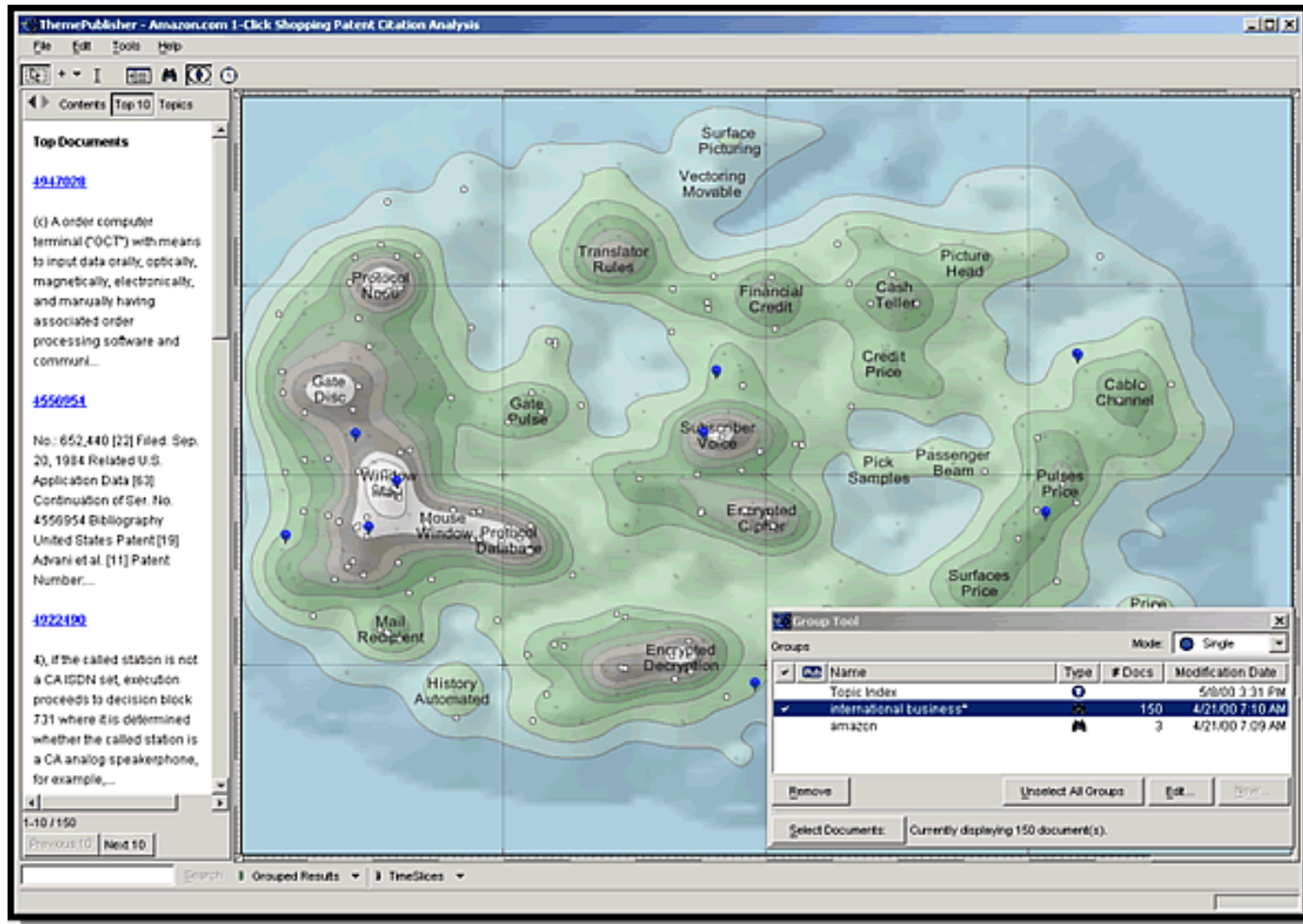
A citation tree for document 5407228 is shown in a separate window, illustrating forward and backward references to various entities such as Toyota, Nissan, Bosch, and others.

- Easy management of patent documents
- Forward and backward references

[http://www.micropat.com/0/aureka\\_online.html](http://www.micropat.com/0/aureka_online.html)



# MICROPAT'S THEMESCAPE

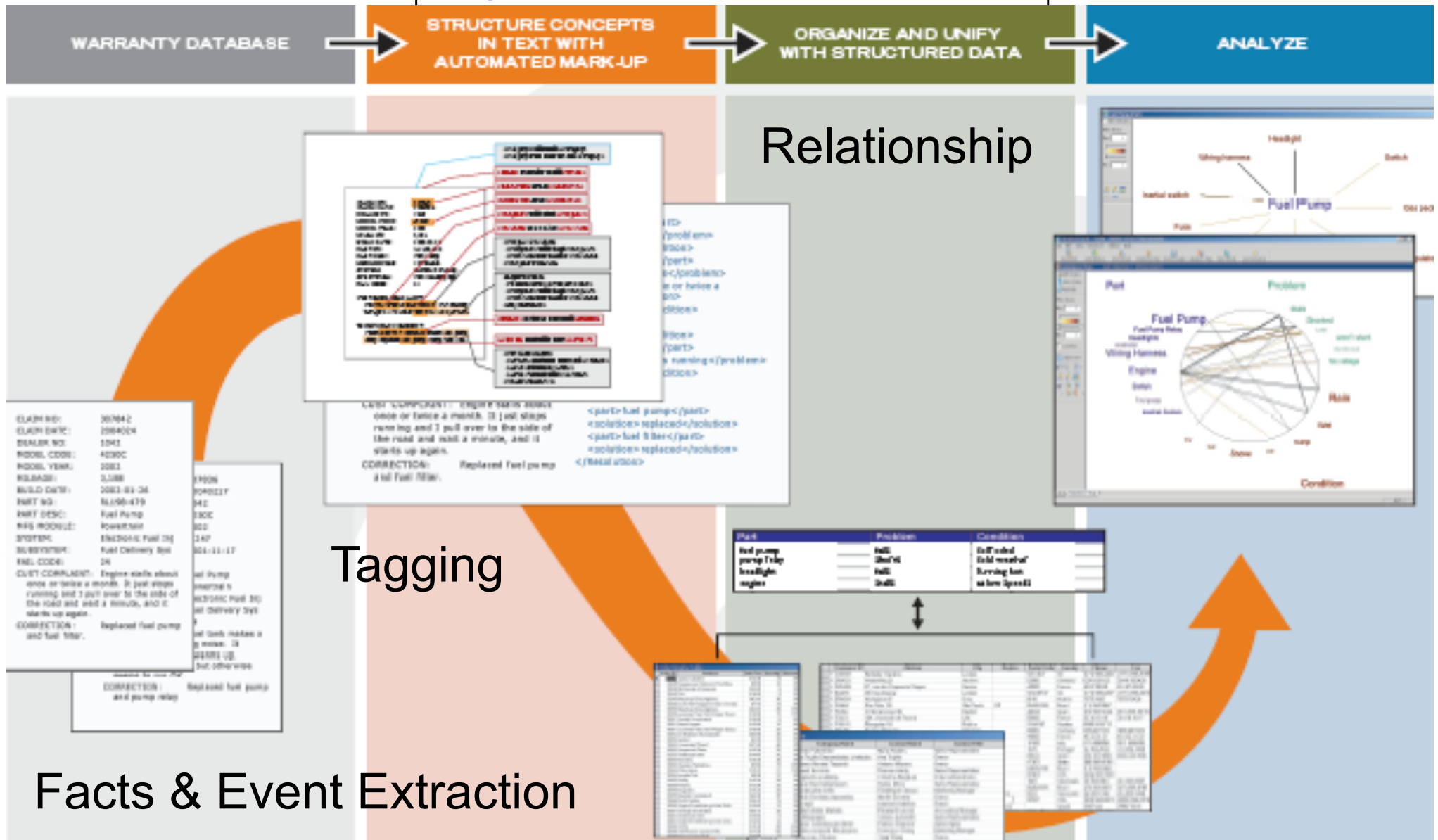


- Topographical map from text analysis
- Select keywords or phrases to collect number of hits
- Searching tool

[http://www.micropat.com/0/aureka\\_online.html](http://www.micropat.com/0/aureka_online.html)

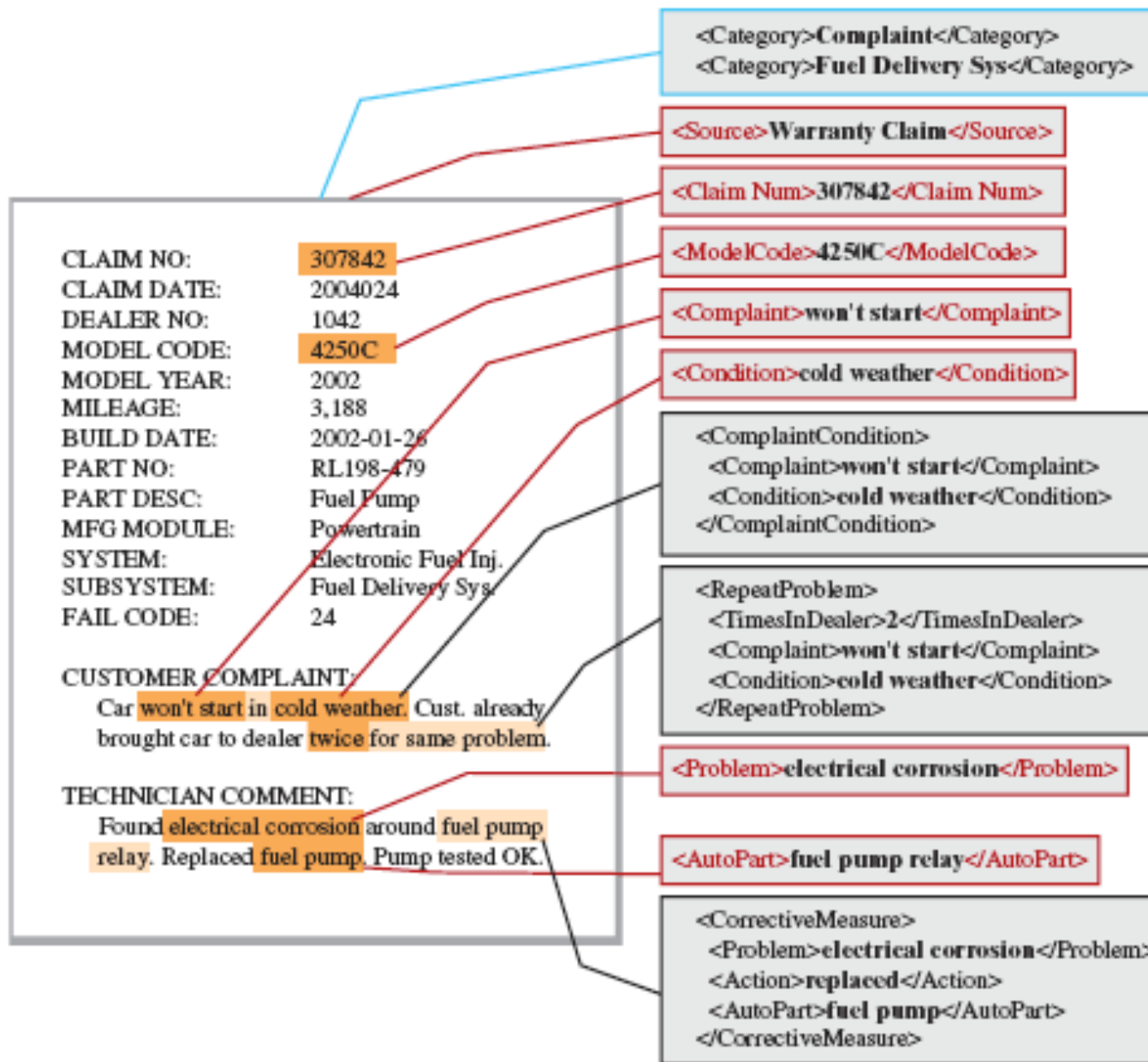
# CLEARFOREST

<http://www.clearforest.com>



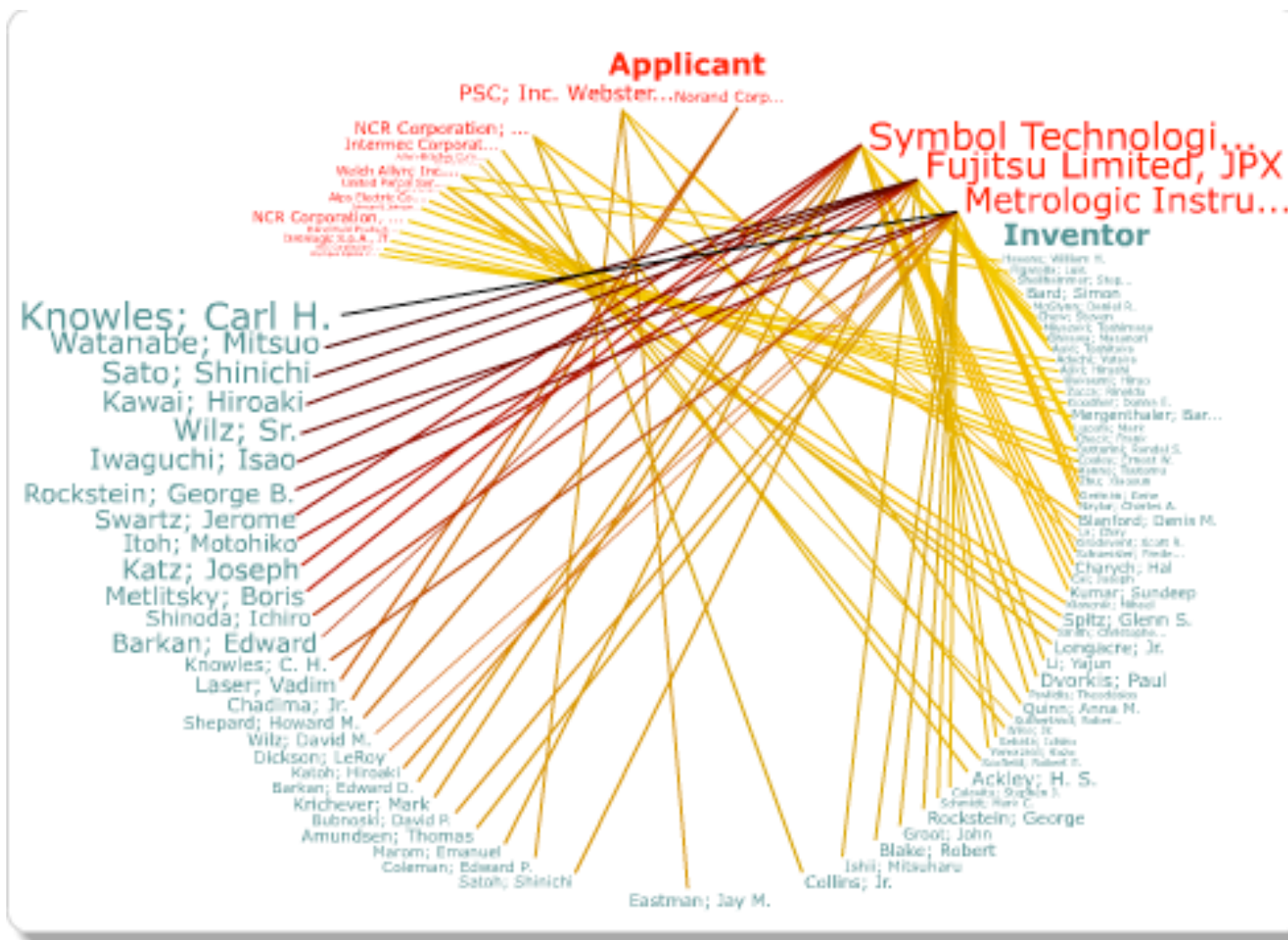
Facts & Event Extraction

# CLEARFOREST TAGS



Extraction of unstructured data into structured data

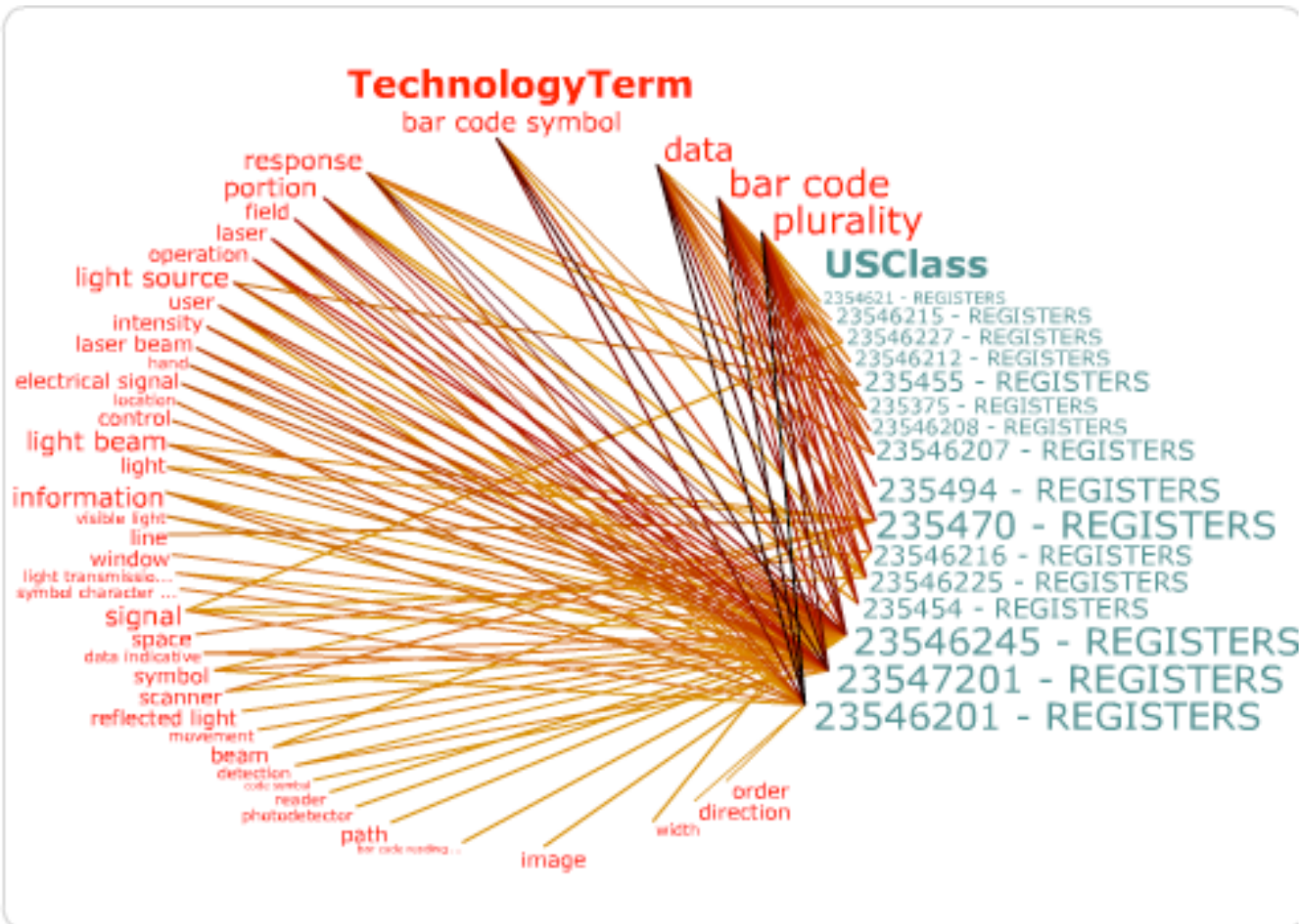
# EXAMPLE: MAJOR PLAYERS



- “Bar Code” AND US Class  
235 (registers)  
250 (radiant energy)
- Applicant and claim terms

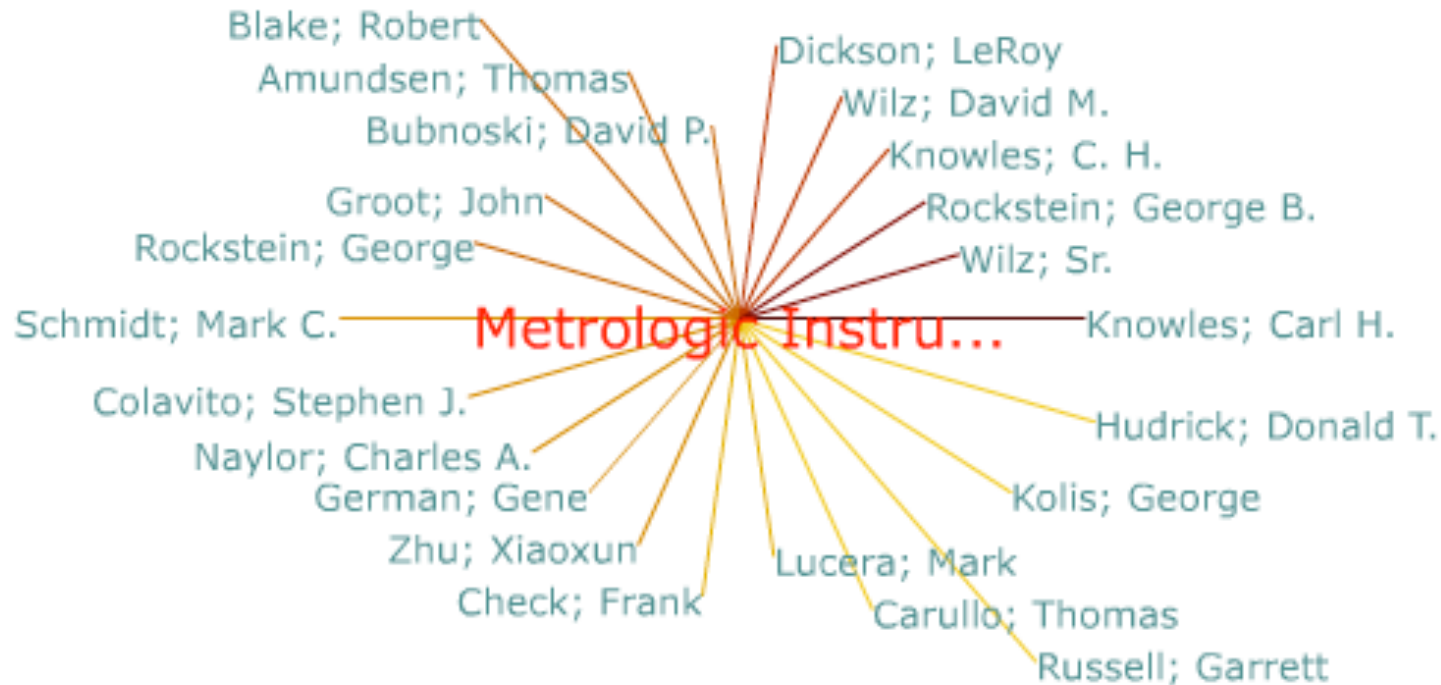


# EXAMPLE: CLASSIFICATION



- Claim terms link to class 235/472.01 = coded record sensor, hand-held
- 235/462.45 = coded record sensor, bar code, rotating mirror, hand-held

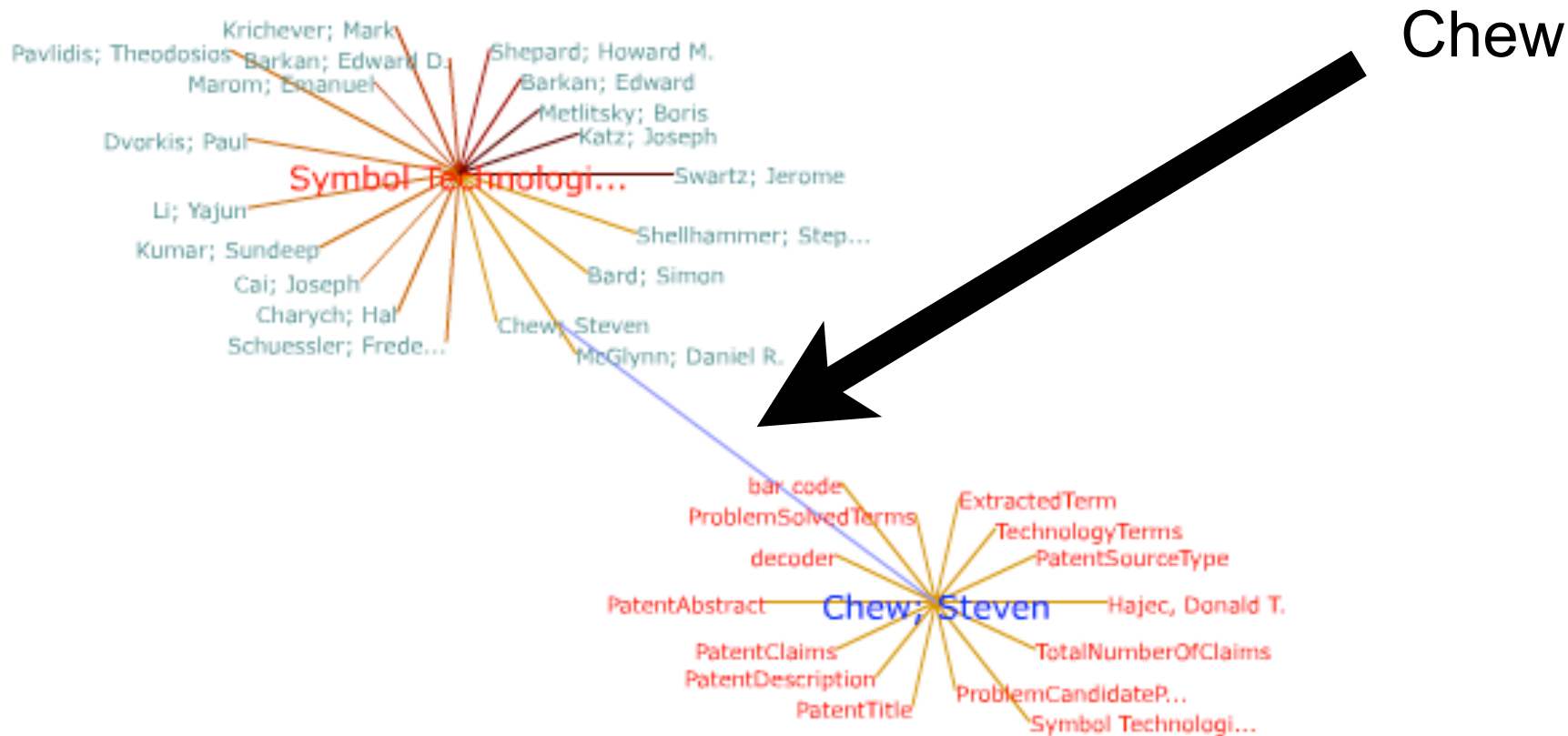
# R&D TEAM OF A COMPANY



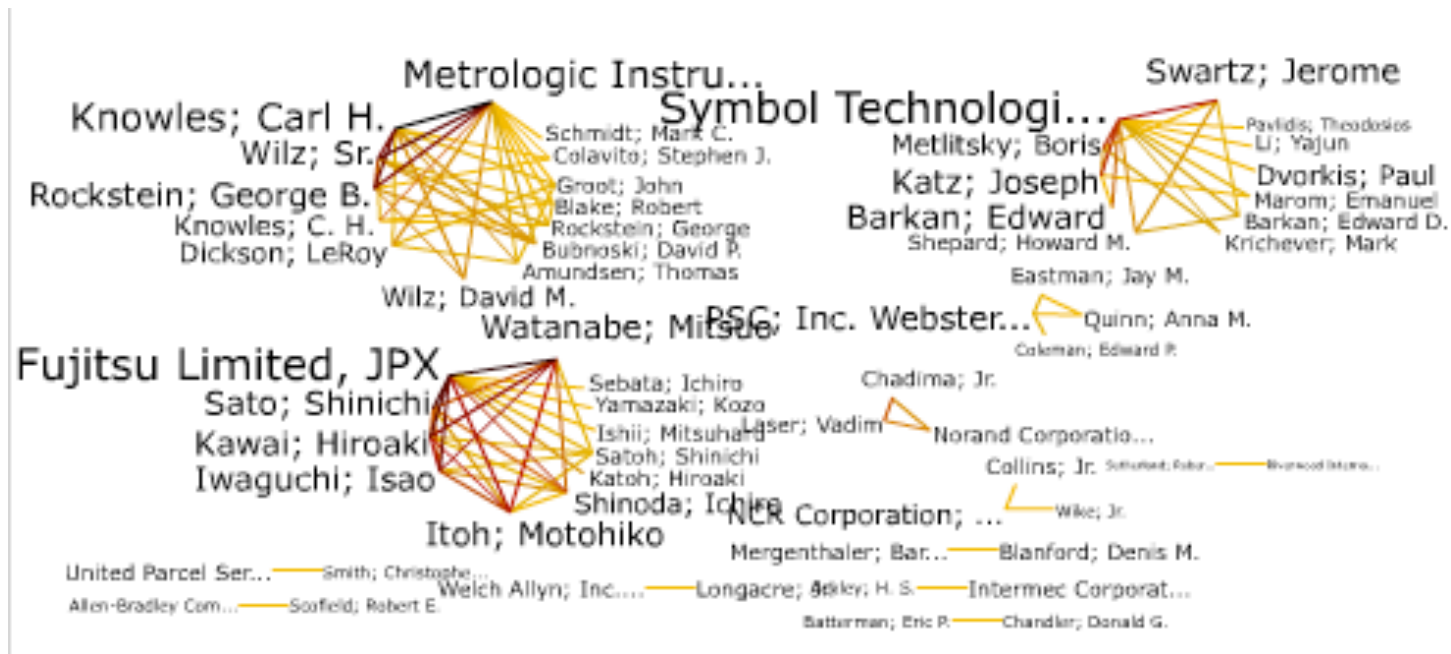
- Focus on only one company
- Show the most prolific group of inventors



# PROFILE OF EACH INVENTOR

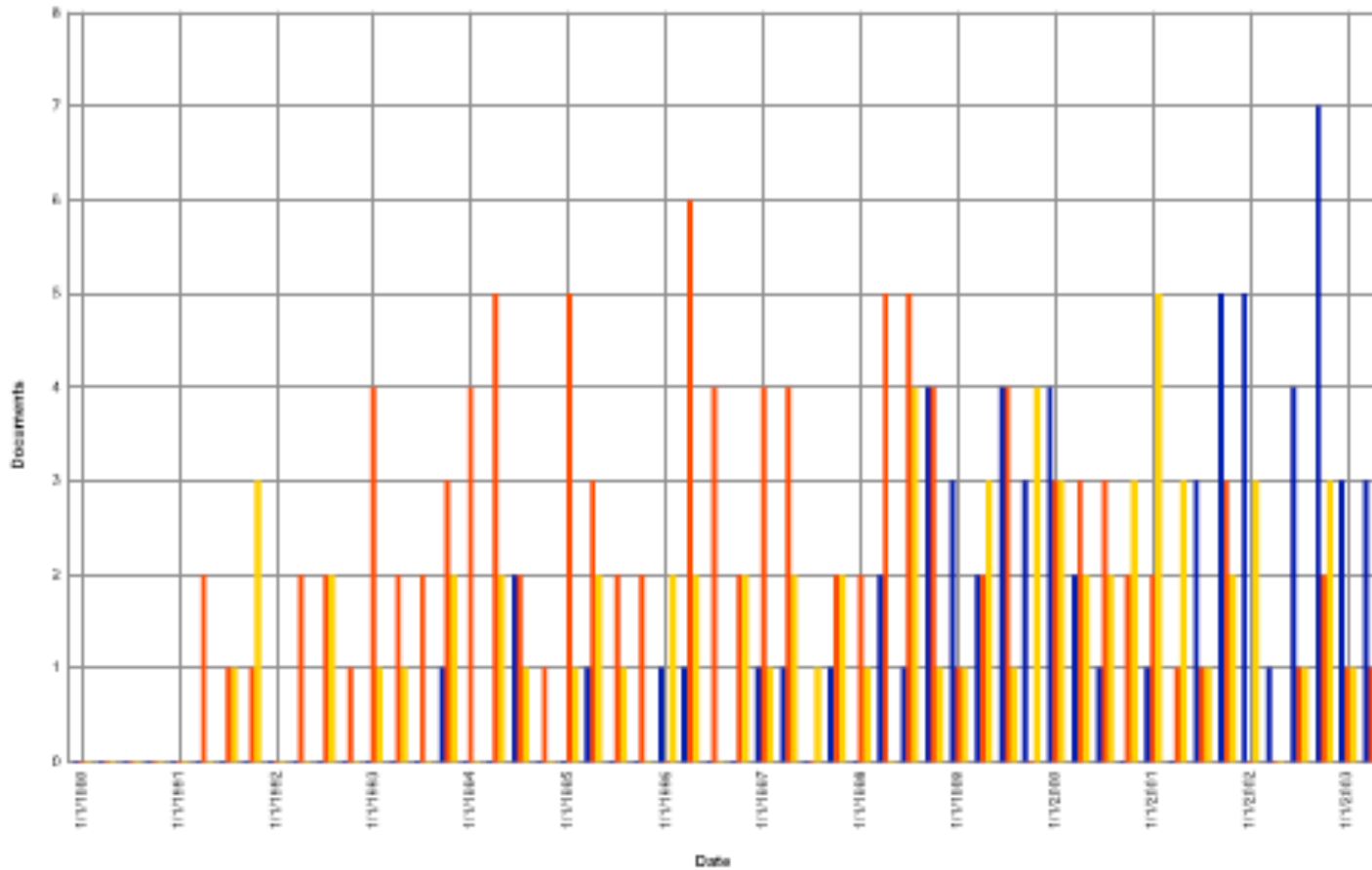


# CO-INVENTOR MAP



co-inventor in each company

# EXAMPLE: PATENTS BY YEAR



comparing 3 companies

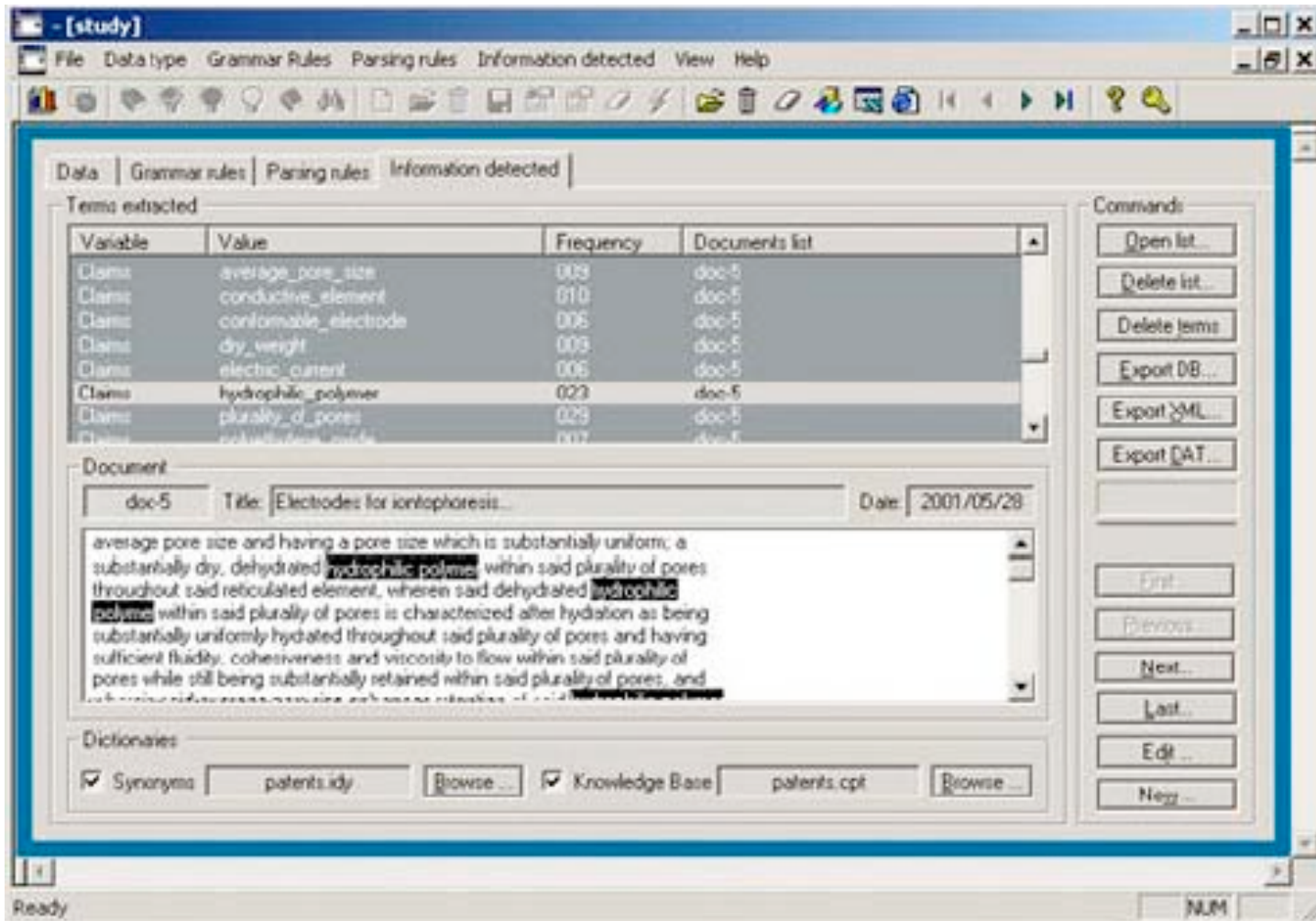
# SYNTHEMA

[www.synthema.it](http://www.synthema.it)

- Several pieces of software and services to do data and text mining for patent information.
- Technology watch from several types of clustering analysis

- Lexical Engine based on a Morphological and a Statistical approach: only particular words or Multi Word Expressions (MWE) are extracted from the texts basing on Statistics (frequency, relevance to the corpus) and Grammar Rules.
- Analyze all the phrases, classifying each word, detecting its attributes and reducing its inflected forms to the normalized form, i.e. infinitive form for verb, singular form for nouns.
- The normalized form is then used as a descriptor for the document.

# TWID

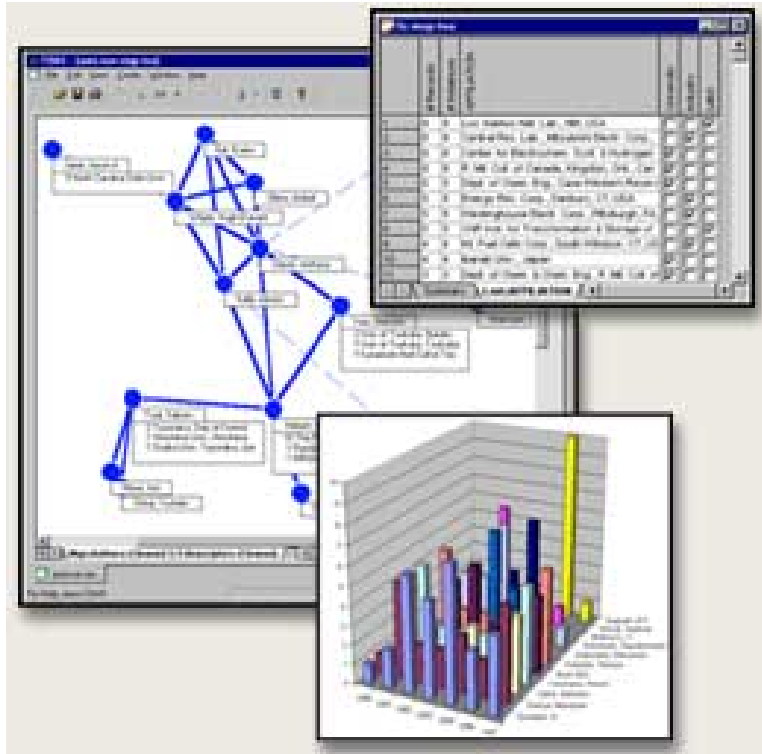


- Grammar and other rules have to be

The Knowledge Extractor Screen



# VANTAGE POINT



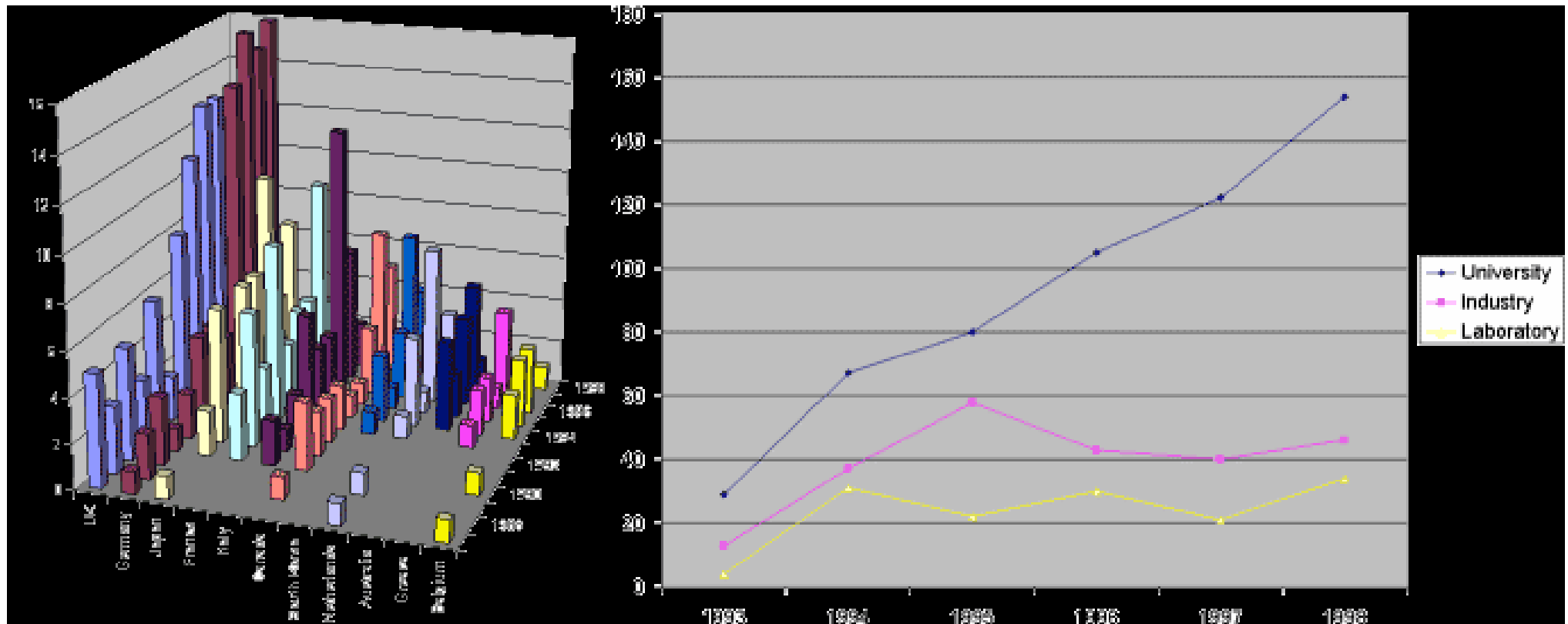
- Scanning (new tech)
- Profiling (people & org)
- Mapping
  - Temporal analysis
  - Co-occurrence matrix
  - Etc.
- Trending
- Forecasting

# TOPTENLIST@VANTAGEPOINT

	# Records	# Instances	AFFILIATION	University	Industry	Labs
1	8	9	Los Alamos Nat. Lab., NM, USA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	8	8	Central Res. Lab., Mitsubishi Electr. Corp.,	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	8	8	Center for Electrochem. Syst. & Hydrogen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	8	8	R. Mil. Coll. of Canada, Kingston, Ont., Can	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	5	5	Dept. of Chem. Eng., Case Western Reserv	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	5	5	Energy Res. Corp., Danbury, CT, USA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7	5	5	Westinghouse Electr. Corp., Pittsburgh, PA,	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8	5	5	CNR Inst. for Transformation & Storage of	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	4	4	Int. Fuel Cells Corp., South Windsor, CT, US	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10	4	4	Ibaraki Univ., Japan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	3	3	Dept. of Chem. & Chem. Eng., R. Mil. Coll. of	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

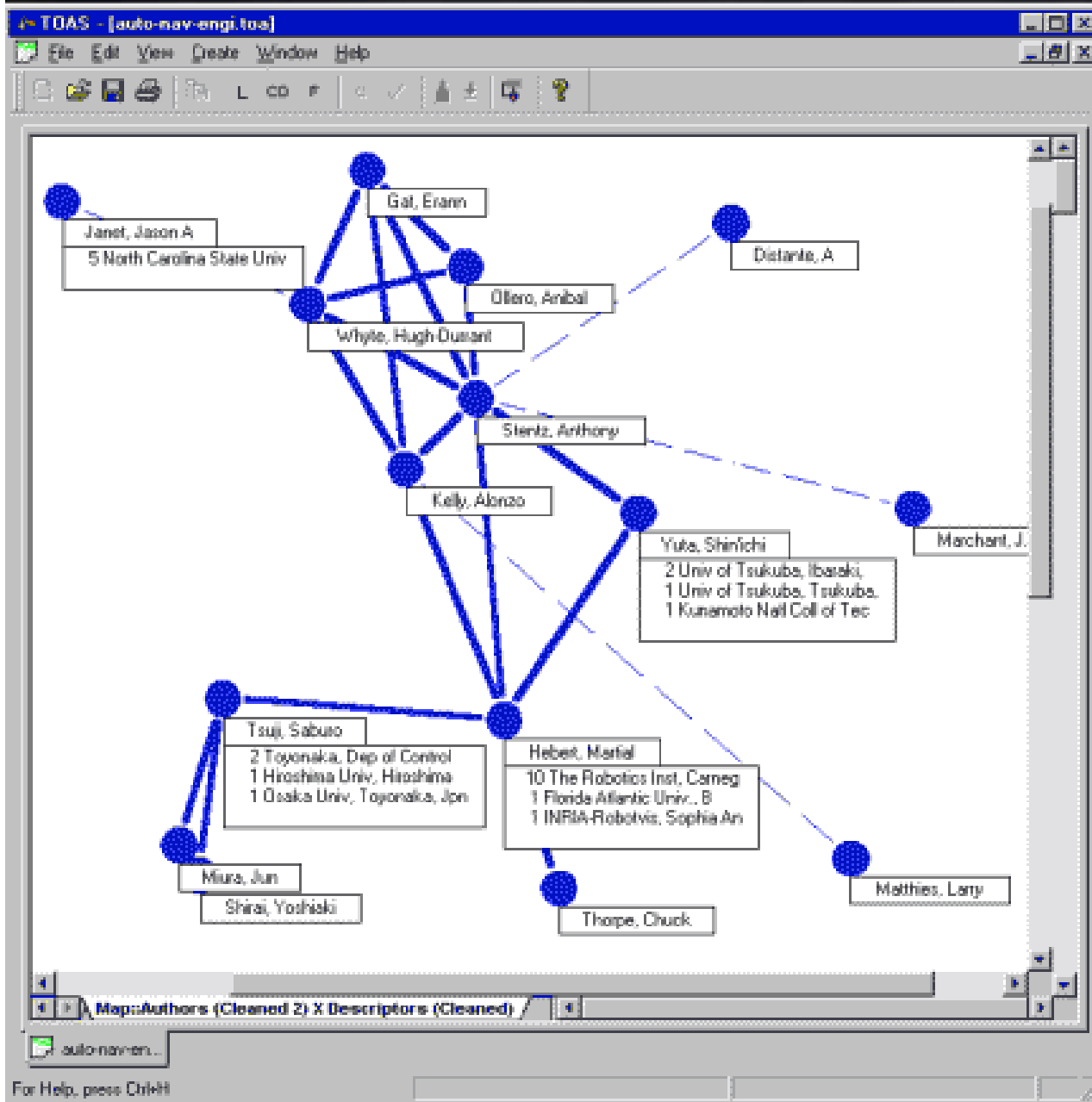
- By inventor
- By country
- By affiliation
- etc.

# CO-OCCURENCY MATRIX @VANTAGEPOINT



- Look at any 2 variables, e.g. Inventor & Yr

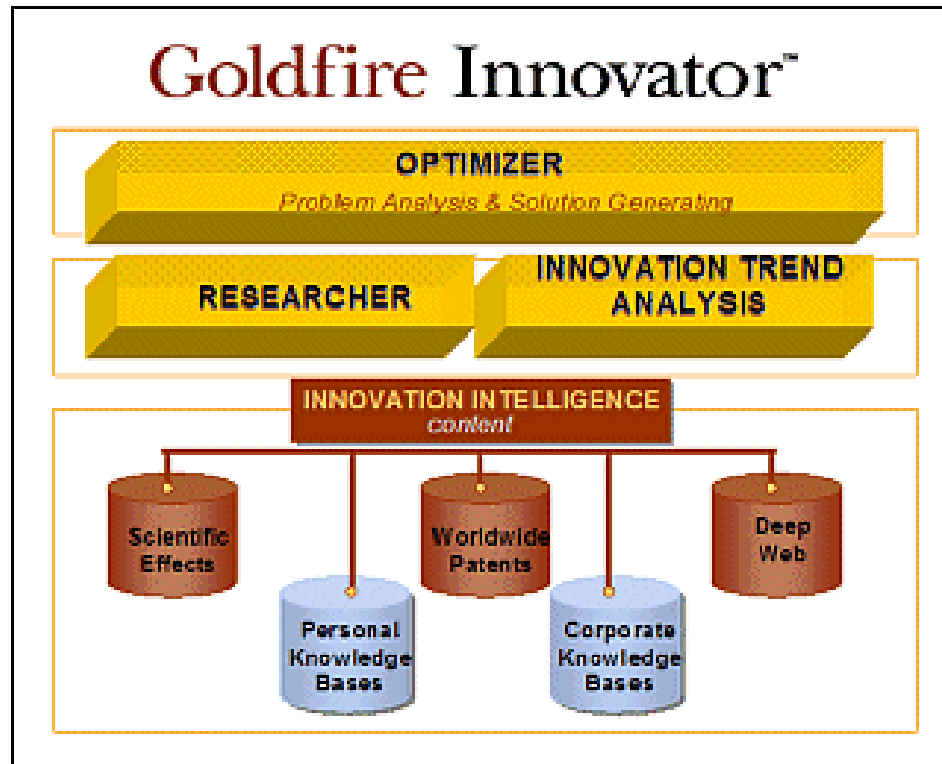
# Mapping@vantagepoint.net



- Here each node represents an inventor
- Linkage by user-given set of descriptors
- Many other types of map

# INVENTION-MACHINE

<http://www.invention-machine.com>



- Optimizer
- Trend analysis
- Innovation intelligence

<http://www.invention-machine.com/prodserv/GFIN.cfm>

# BIZINT'S SMARTCHART FOR PATENT

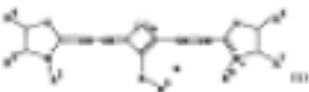
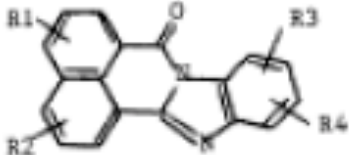
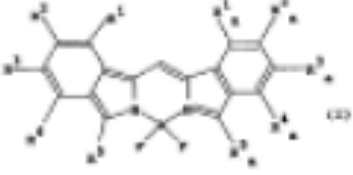
<http://www.bizcharts.com/sc4pats/>

- Reporting tool
- Consolidate data from several patent data bases CA, IFI, WPI
- Dialog or STN input



# CHEMICAL ABSTRACT

<http://www.cas.org/SCIFINDER/>

	Title	Patent Assignee	Image
1	<b>New thio-substd. bis-oxazole deriv. dyes - absorbing throughout the near infrared, useful in laser applications such as recording systems and cancer treatment.</b>	STERLING DIAGNOSTIC IMAGING INC (STER)	
2	<b>New fused benzo isoquinolinone derivs. useful for treating neoplasms - are e.g. 10-amino-2-(di methylamino)-7H-benzimidazo (2,1-a)benz (de)isoquinolin-7-one..</b>	LILLY & CO ELI (ELIL)	
3	<b>New bis cyclo-alkylidene ethane dyestuff cpds. - useful as photopolymerisation initiator, in electrophotography or in photo dynamic therapy of tumour.</b>	BASF AG (BADI)	

- 2D grid comparing chemical structures to CAS indexin

# SCIFINER

Get References Frequency Sort 100% Magnification Sort Row or Column

AA6 = 0

Book1

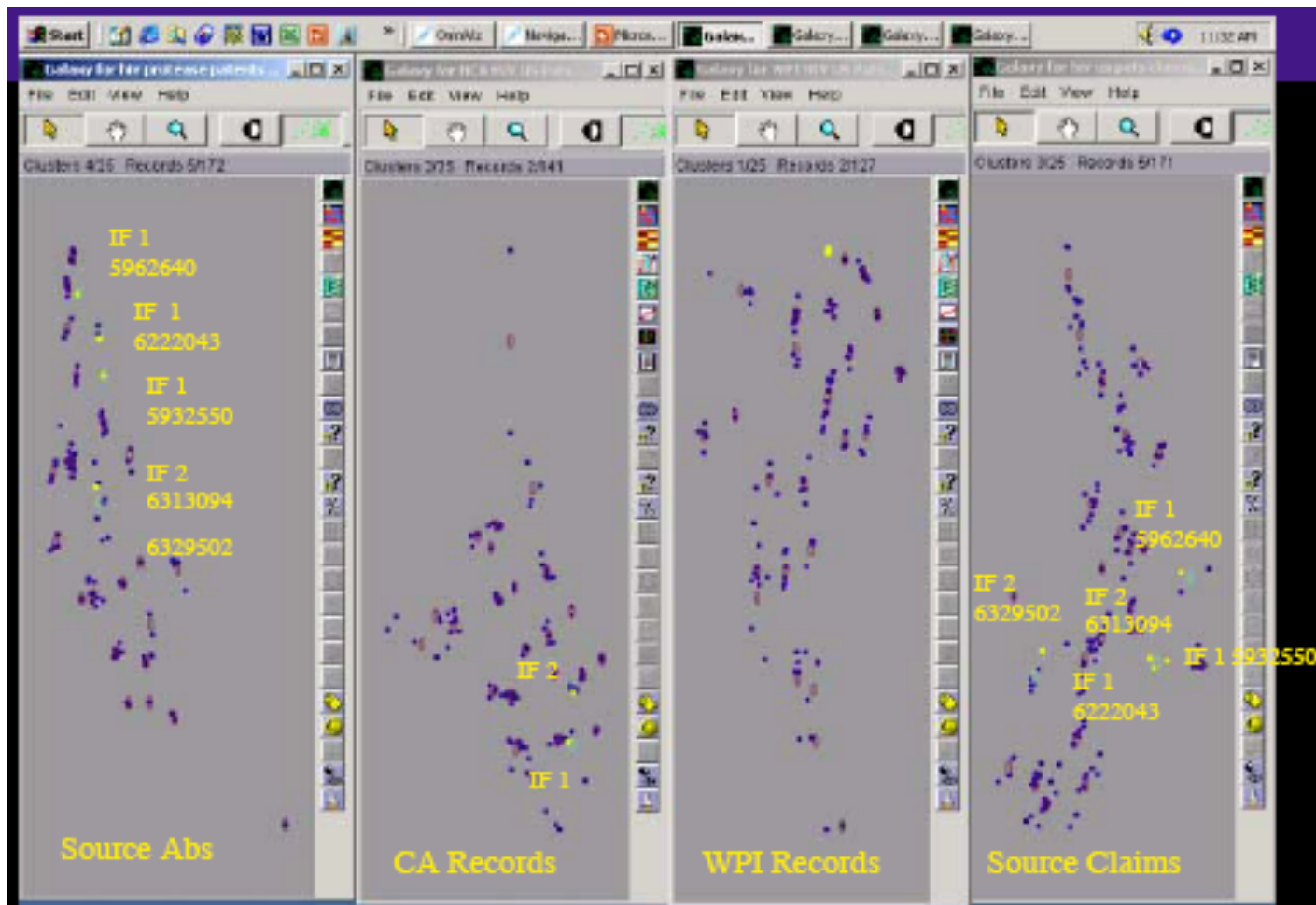
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
1		Allergens	Immunoglobulins	Immunoglobulins, E	Antibodies	Gene, animal	mRNA	Proteins, specific or class	Histamine	Interleukin 4	Interleukin 5	Cytokines	Probes (nucleic acid)	PN: W09963065 PAGE: 91 unclaimed DNA	PN: W09963065 SEQID: 109 unclaimed DNA (91C)	
2	Pollen	62	24	14	10	6	6	4	7	3	3	1	6	6	6	
3	T cell (lymphocyte)	10	13	2	8	10	9	5	3	7	5	7	7	7	7	
4	Nose	6	6	1	4			7	6	1	2	3				
5	Eosinophil	7	5	2	1	1	1	3	3	3	7	1				
6	Basophil	2	3	4				1	6							

Cross-tab

- Another tabular

# OMNIVIZ

[www.omniviz.com/applications/omni\\_viz.htm](http://www.omniviz.com/applications/omni_viz.htm)



Text analysis

Cheminformatics

Gene Expression

answer fundamental questions about data, such as how is every record related to every other record, or how are the attributes distributed throughout the data set.

analyze and visualize multiple data types provides for valuable analytical integration.

Numerous query tools including dynamic query devices, plotting tools including interactive 3-dimensional graphs, sophisticated statistical packages, and many other unique functions

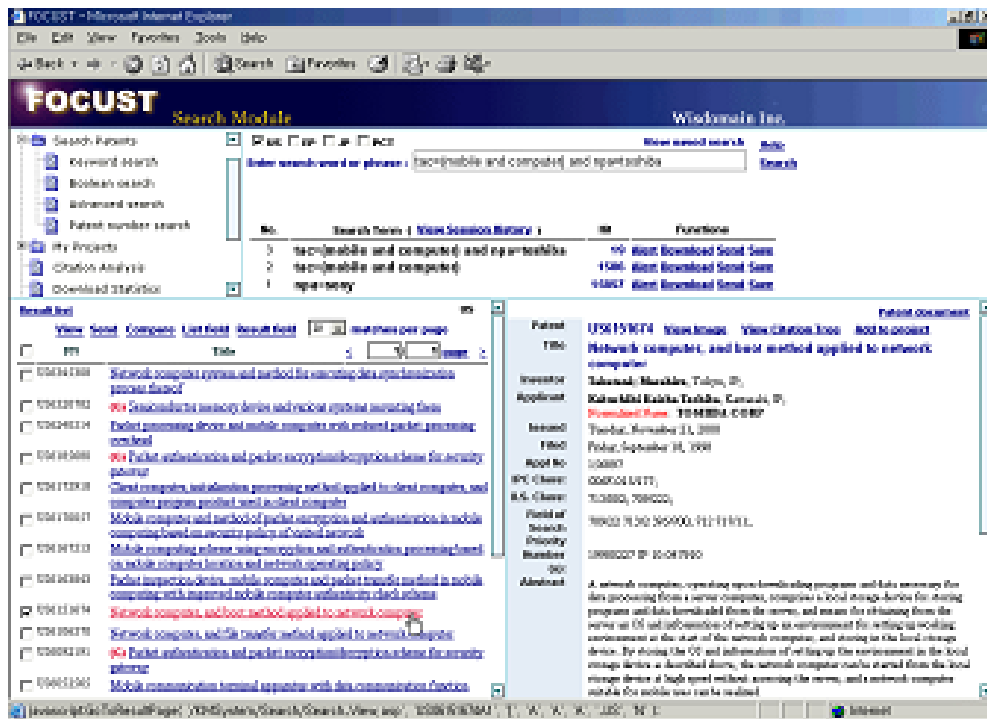
# THOMSON'S CURRENT-PATENTS

<http://www.current-patents.com>

- DOLPHIN = Database of All Pharmaceutical Inventions
- therapeutic patents
- patents in areas such as packaging, drug delivery devices, biotechnology inventions with no direct therapeutic application
- consolidates the family and legal status information from INPADOC for twenty-eight countries with information dating back as far as the sixties.
- A unique indexing policy allows highly specific searching and analyzing of patents with relevance to particular drugs or companies

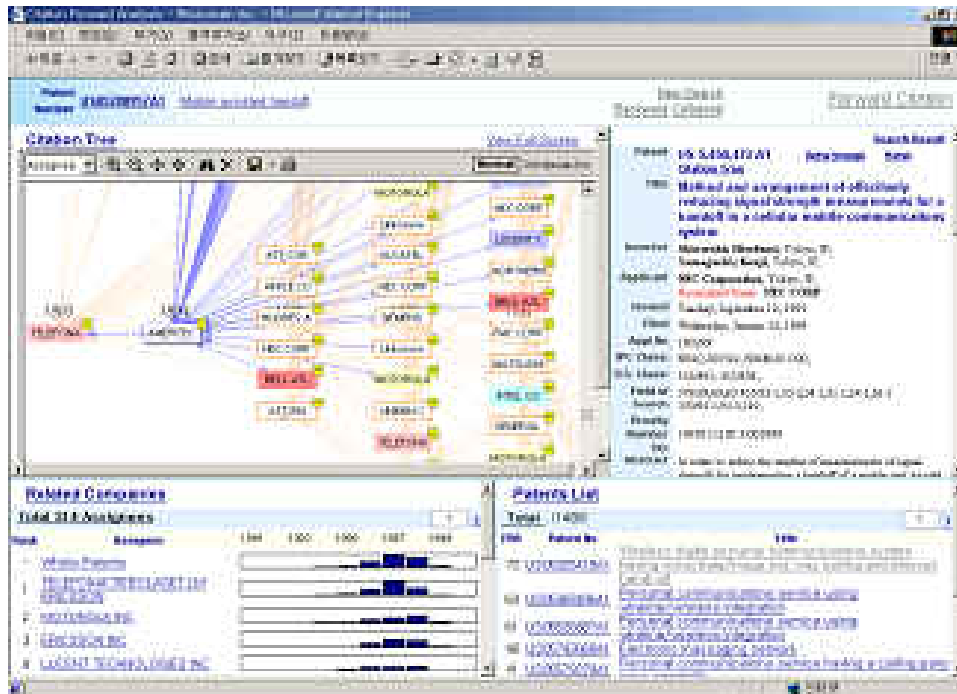
# FOCUST

<http://www.wisdomain.com>



- Search module  
<http://www.wisdomain.com/SearchModule.htm>
- Citation module
- Analysis module

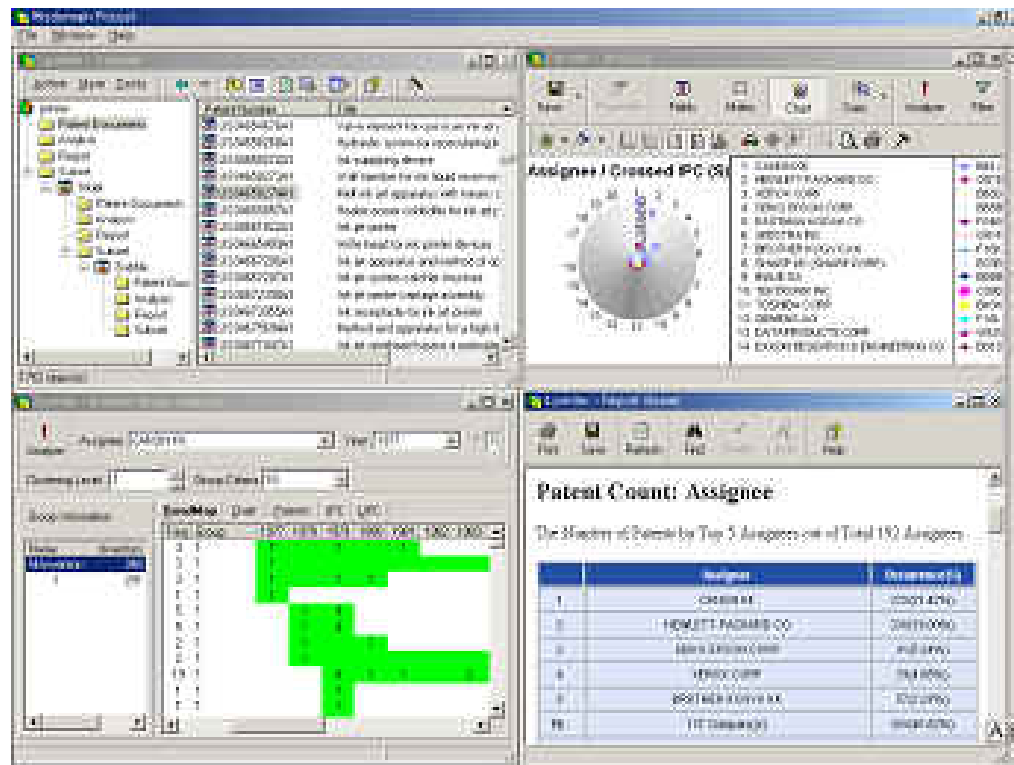
# FOCUST CITATION MODULE



- Forward
- Backward
- Collateral



# FOCUST ANALYSIS



- Text mining
- Charts & Tables
- Flexible Document

# THOMSON DELPHION

<http://www.delphion.com>

- Citation link - forward & backward map
- Snapshot - simple bar chart analysis
- Patentlab II - 3D graph display
- Clustering - keyword-based linguistic analysis
- Corporate tree - Assignee names
- PDF Express - facilitates downloading

# DELPHION'S CITATION LINK

**Citation Link**

The screenshot displays the 'Citation Link' interface. On the left, a citation tree shows a sequence of patents connected by arrows. A yellow box with an arrow points to a specific patent in the tree, stating: 'Follow a trail by double-clicking a patent on the map and seeing its Citation Link results'. Another yellow box with an arrow points to a patent node, stating: 'See a patent's forward and backward references to better understand its value and use'. A third yellow box with an arrow points to a group of patents, stating: 'Plot relationships by key bibliographic fields and color-code specific groups'. On the right, the 'Mapping Controls' panel is visible, featuring a 'Map Type' dropdown set to 'Citation Tree', a 'Label Displayed' dropdown set to 'Assignee', and a 'Citation Direction' dropdown set to 'Forward and Backward'. Below these are 'Generations Displayed' (set to 'Three Generations') and checkboxes for 'Show: Links' (checked) and 'Duplicates' (unchecked). A 'Display Attributes' section includes a checked 'Apply to Branch' checkbox and a table with columns for 'Label', 'Color', and 'View'.

Label	Color	View
Autoliv ASP, Inc.	Gray	Hide
Autoliv Developme...	Blue	Show
Automotive Syst...	Gray	Show
Bradford Industrie...	Red	Hide
Ford Automotive ...	Red	Show
ROLL ARTHUR D.	Red	Show
Dana Corporation	Red	Show
Delphi Corporation	Cyan	Show
Delphi Technologi...	Pink	Hide

# DELPHION 3D PLOTS

**PatentLab-II**

The screenshot displays the 'Analysis Wizard - Selection of analysis type' dialog box. It features two main sections: 'Select a field to analyze' and 'Select assignee'. The 'Select a field to analyze' section has radio buttons for 'Assignee' (selected), 'Inventor', 'IPC, UPC', 'Priority year, Issued year', and 'Priority country'. Below this is a note: '\* Selected field will be rows on a table and a chart.' A 'Row by Assignee' graphic is shown at the bottom of this section. The 'Select assignee' section has radio buttons for 'All' and 'Select'. To the right, a data table is visible with columns for 'Year' and 'Count'. A 3D bar chart titled 'Assignee / Priority Year' is shown, with a legend on the right listing years from 1989 to 1997. A toolbar with various chart icons is positioned above the chart. Three yellow callout boxes provide instructions: one points to the 'Assignee' radio button, another points to the chart, and a third points to the chart toolbar.

**Customize your presentation using wizards to select from over 30 patent data fields.**

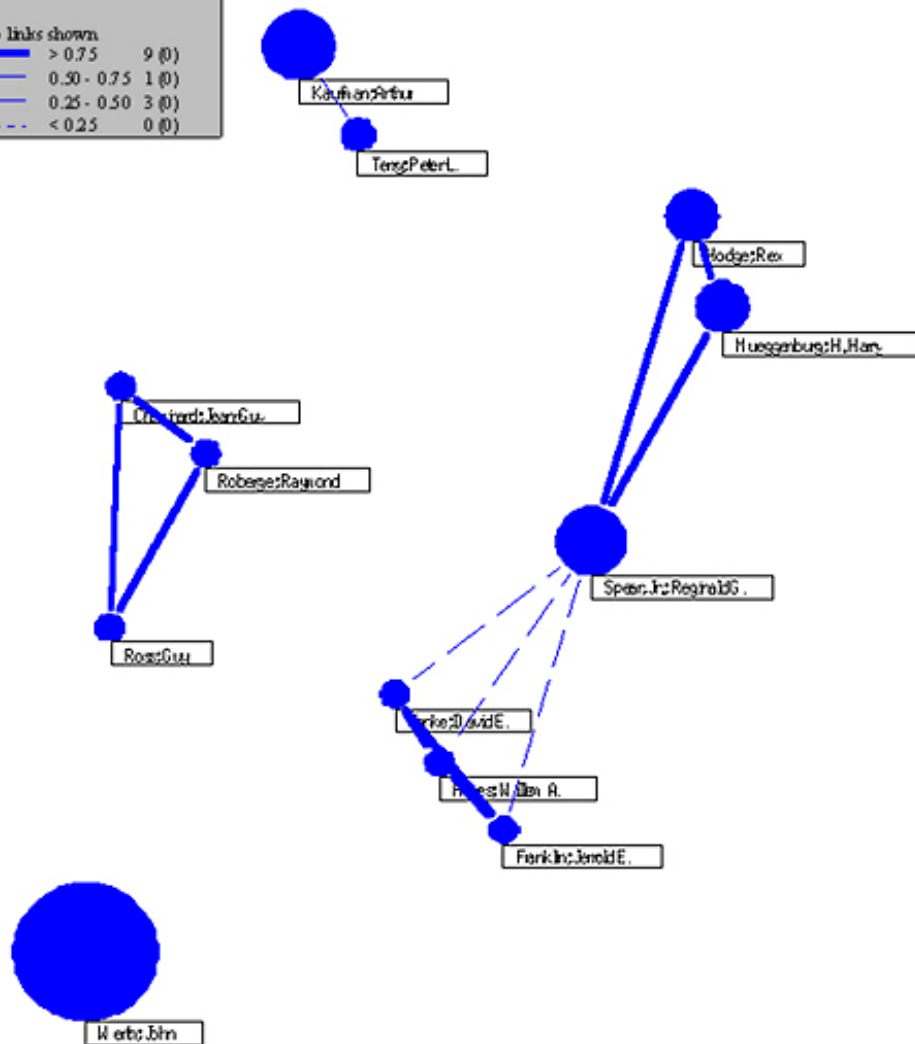
**Visualize industry trends or competitive developments for up to 20,000 records.**

**Choose 2D or 3D pie, bar or scatter charts in a single click.**

# METRICS' PATENT CITATIONS

<http://www.patentcitations.com>

Auto-Correlation Map		
Inventor (Cleaned)		
VPTop links shown		
<b>Thick solid line</b>	> 0.75	9 (0)
<b>Thin solid line</b>	0.50 - 0.75	1 (0)
<b>Thin dashed line</b>	0.25 - 0.50	3 (0)
<b>Very thin dashed line</b>	< 0.25	0 (0)



- Free patent citation analysis
- Link to 3D analysis by VxInsight
- Patent Team Map  
Dot size = No. of pat app  
Solid line thickness = coinventorship
- Patent Trend Analysis
- Reference Watch

# TEMIS

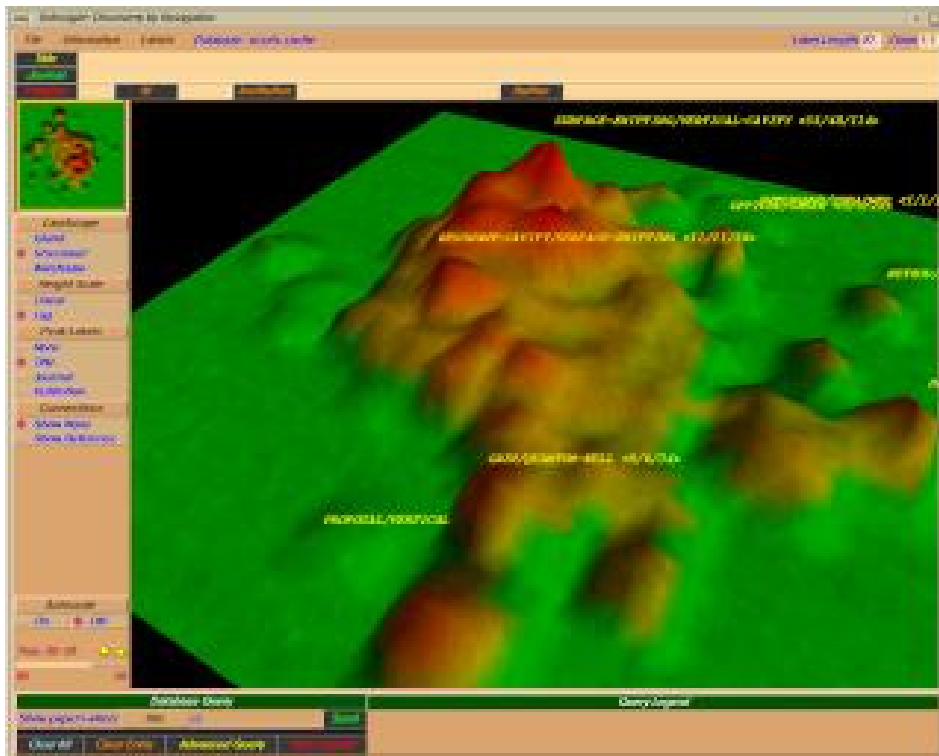
<http://www.temis-group.com/solutions.html>



- European-based on-line data and text miner
- Well-developed tools for text analysis
- In 2003 acquired a Xerox Linguistic Product Operations

# VXINSIGHT

<http://www.cs.sandia.gov/projects/VxInsight.html>



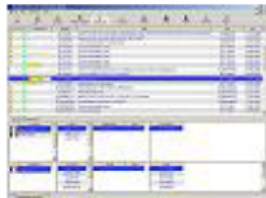
- Created by Sandia National Labs & ISI
- tool for discovering relationships within large databases.
- While most data retrieval tools and most data mining tools are able to find information in a database, they only tell you about the data elements.
- VxInsight(TM) reveals the implicit structure of the data. VxInsight(TM) can help analysts uncover strategically important connections and patterns making it an important knowledge



# MATHEO PATENT



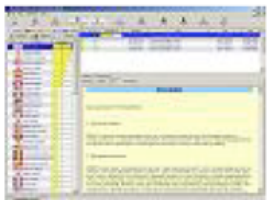
Request on Espacenet



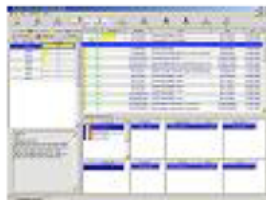
Patent Description



Figures



Assignees analysis



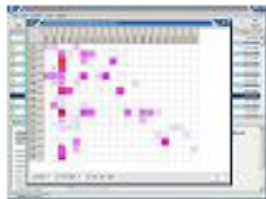
IPC Codes Analysis



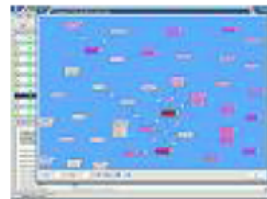
Help on IPC



Charts



Matrices



Networks

- Matheo Patent (Jean-Marie Dou, 2005) is for people on the budget
  - EspaceNet Patent Database
  - Competitive Intelligence
  - Patent Information Mapping
  - Patent Portfolio Analysis
  - Creation of Technological Indicators
  - Technology Management

# GREEN TEA - FIELD PARSING

**Matheo Patent 6.1 - [GreenTea]**

File Edit Statistics Reports Exports Tools Window ?

New Open Save Add patents Update Patent Analysis Patent Info Patent filter All read Graphics... Report

S	C	D	Pertinence	Number	Title	P.N.	PR.D	F...
			■	WO2005006871	COMPOSITIONS CONTAINING	WO2005006871	3/7/2003	
			■	WO2004086873	A GREEN TEA COFFEE CONS	WO2004086873	1/4/2003	
⚡			■	WO03022065	PROCESS FOR PRODUCING T	WO03022065	10/9/2001	
⚡			■	WO02071855	ENZYME INACTIVATOR FOR G	WO02071855	25/1/2001	
⚡			■	US6268009	GREEN TEA EXTRACT SUBJEI			
⚡			■	Tw443090Y	DEVICE FOR SELECTING DAR	Tw443090Y	9/10/2000	
⚡			■	SU993902	APPARATUS FOR HEAT TREA	SU993902	19/5/1981	
⚡			■	SU991979	METHOD OF PRODUCING GRI	SU991979	13/2/1981	
⚡			■	SU978814	GREEN TEA PRODUCTION ME	SU978814	18/11/1981	
⚡			■	SU967451	METHOD OF PRODUCING GRI	SU967451	10/11/1980	
⚡			■	SU827009	METHOD OF PRODUCING GRI	SU827009	8/6/1979	
⚡			■	SU824948	DEVICE FOR HEAT TREATME	SU824948	10/4/1979	

Bibliographic Data | Abstract | Claims | Description | Inpadoc

**A GREEN TEA COFFEE CONSISTING OF GREEN TEA EXTRACT AND COFFEE EXTRACT**

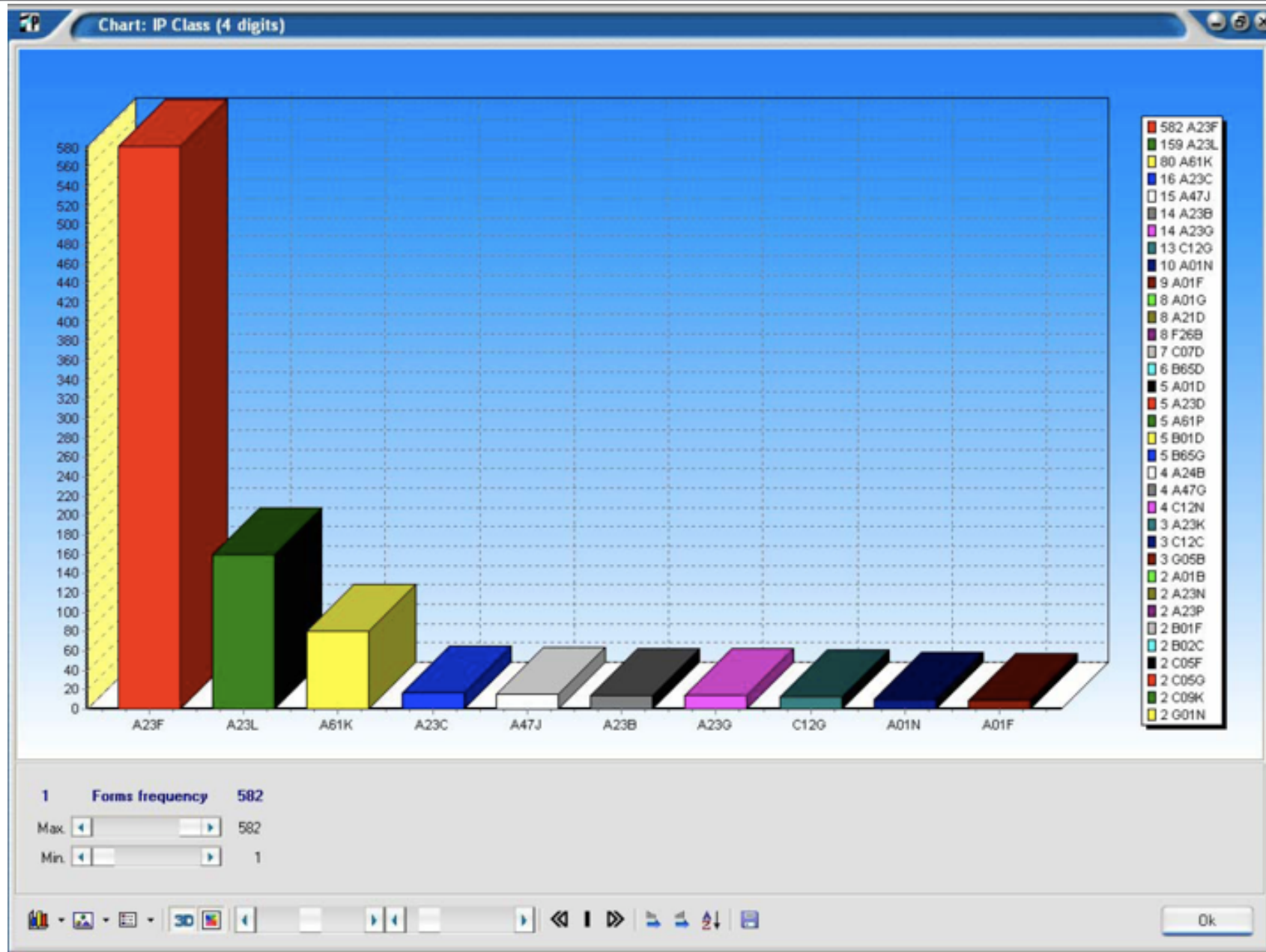
Patent number : WO2004086873  
 Publication date : 14/10/2004  
 Inventors : [LEE BYOUNG-RAE \(KR\)](#)  
 Applicants : [HYUNDEOK BIO and TECHNOLOGY CO.,L \(KR\)](#); [LEE BYOUNG-RAE \(KR\)](#)  
 IPC (4 Digits) : [A23E](#)  
 IPC (All Digits) : [A23E/00](#)  
 ECLA (All Digits) :  
 Publication date (Year) : [2004](#)  
 Application number : WO2004KR00713 29/3/2004;  
 Priority number(s) : KR20030020355 1/4/2003;  
 Equivalent(s) :  
 Cited document(s) : KR2001109776; JP6189681; KR384308; KR2002093692; KR99014187;  
 Group(s) :  
 Family : WO2004086873;

COFFEE; TEA; THEIR SUBSTITUTES; MANUFACTURE, PREPARATION, OR INFUSION THEREOF (coffee or tea pots A47G 19/14; tea infusers A47G 19/16; apparatus for making beverages, e.g. coffee or tea, A47J 31/00; coffee mills A47J 42/00)

Patents : 901 Request(s) : 1 \*\*\* Evaluation Version \*\*\*

Boonyong, P. and P. Tammarate. 2005. Green Tea Patent Mapping. <http://www.toryod.com/pdf/Green%20Tea%20Patent%20Mapping.pdf>

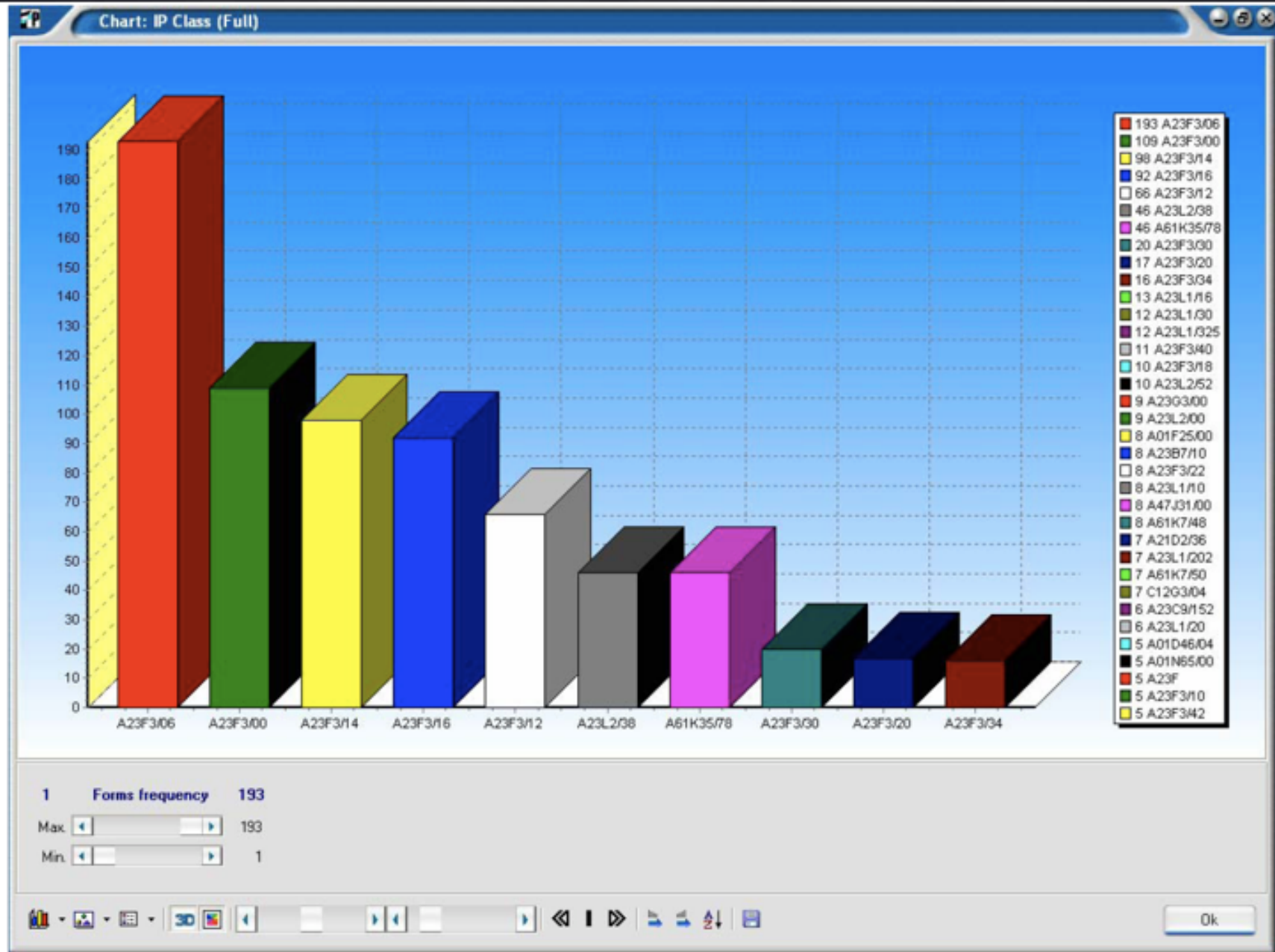
# GREEN TEA IPC ANALYSIS



Boonyong, P. and P. Tammarate. 2005. Green Tea Patent Mapping.  
<http://www.toryod.com/pdf/Green%20Tea%20Patent%20Mapping.pdf>

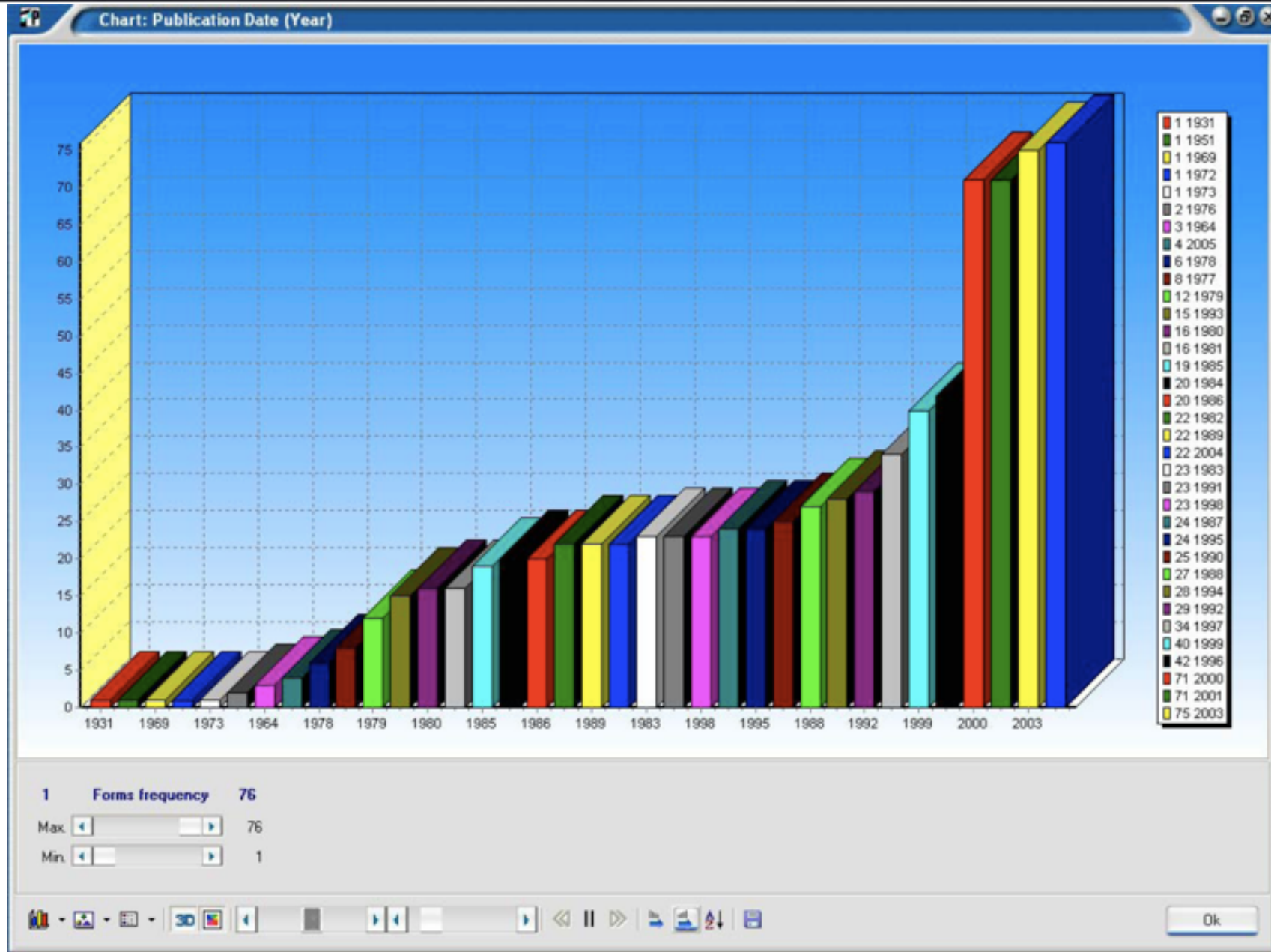


# GREEN TEA IPC FULL ANALYSIS



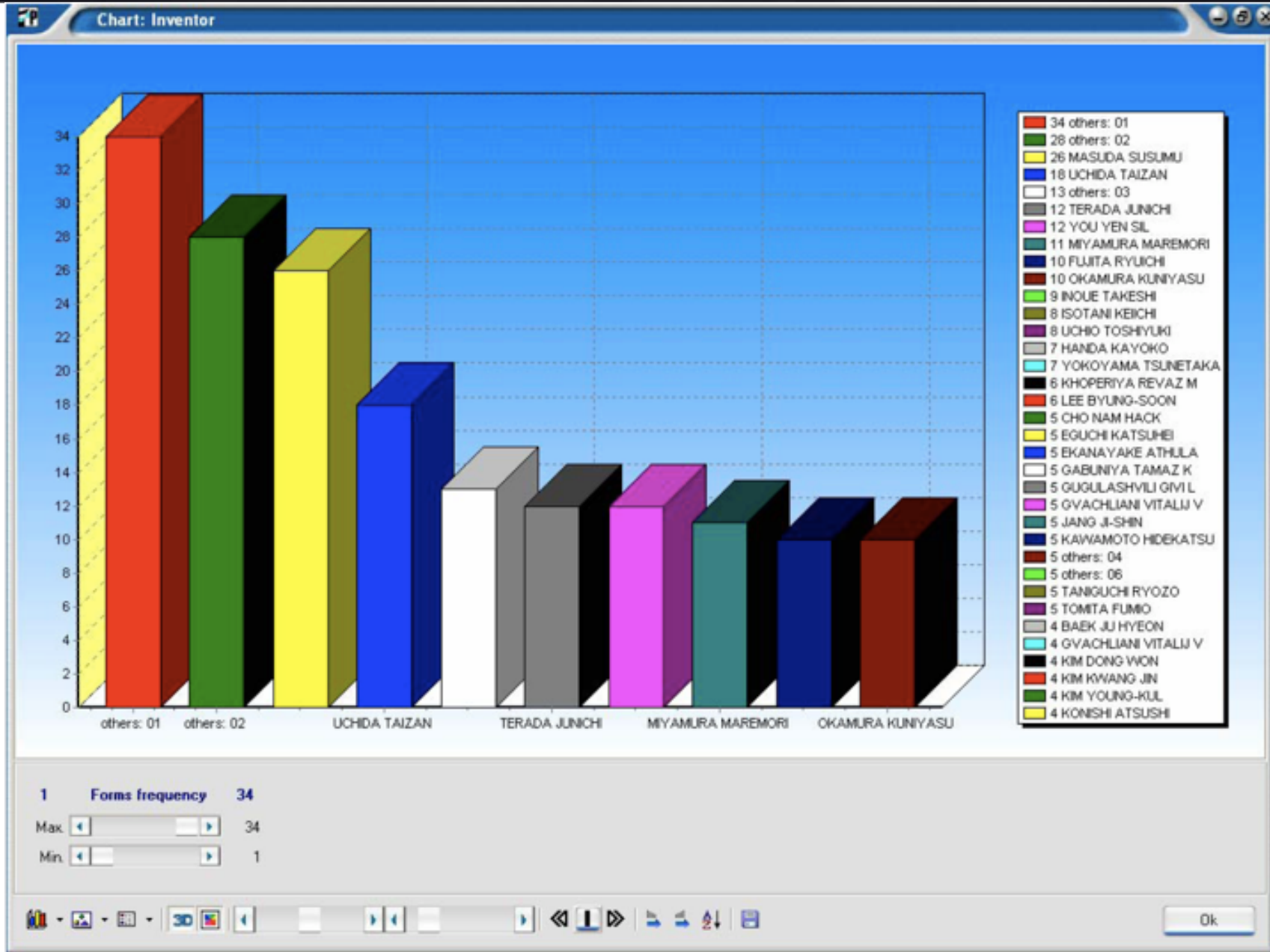
Boonyong, P. and P. Tammarate. 2005. Green Tea Patent Mapping.  
<http://www.toryod.com/pdf/Green%20Tea%20Patent%20Mapping.pdf>

# GREEN TEA TECH GROWTH TREND



Boonyong, P. and P. Tammarate. 2005. Green Tea Patent Mapping.  
<http://www.toryod.com/pdf/Green%20Tea%20Patent%20Mapping.pdf>

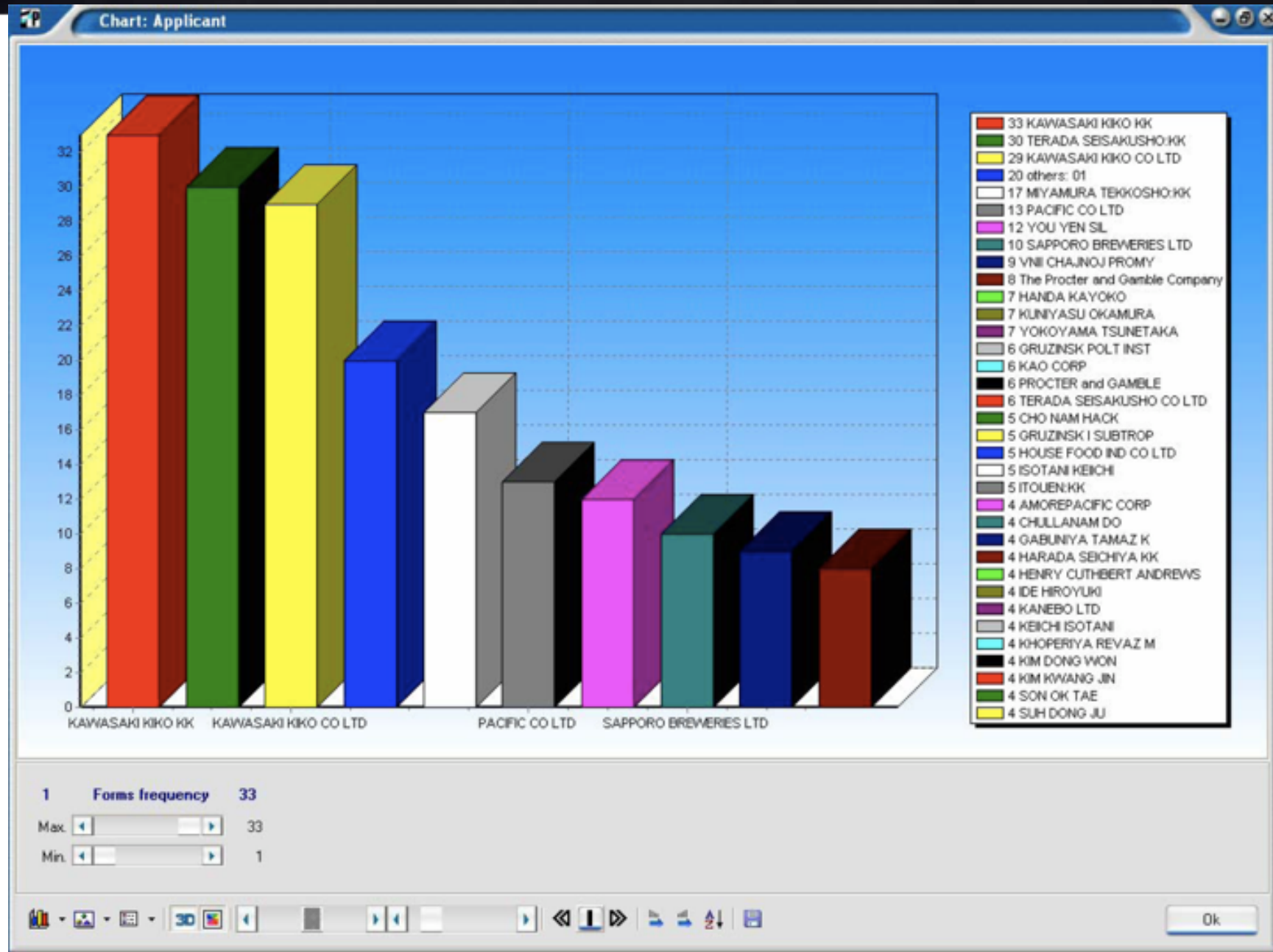
# GREEN TEA INVENTOR ANALYSIS



Boonyong, P. and P. Tammarate. 2005. Green Tea Patent Mapping.  
<http://www.toryod.com/pdf/Green%20Tea%20Patent%20Mapping.pdf>



# POTENTIAL APPLICANT ANALYSIS



Boonyong, P. and P. Tammarate. 2005. Green Tea Patent Mapping.  
<http://www.toryod.com/pdf/Green%20Tea%20Patent%20Mapping.pdf>



# PATENT FAMILY ANALYSIS

The screenshot displays the Matheo Patent 6.1 software interface. The main window shows a list of patent families for the title 'DECAFFEINATION PROCESS'. The selected patent is IN145529, with a publication date of 27/5/1976 and 38 family members. The interface includes a menu bar (File, Edit, Statistics, Reports, Exports, Tools, Window), a toolbar with icons for New, Open, Save, Add patents, Update, Patent Analysis, Patent Info, Patent filter, All read, Graphics..., and Report. On the left, there are filters for IPC Class, E Class, P.D. (Year), Inventors, Applicants, Groups, Family, and PR. (Year). A table lists various patent numbers and their family sizes. The main area shows bibliographic data for the selected patent, including its number, date, inventors, applicants, IPC and ECLA classifications, and a list of equivalent patents.

C	Name	Family
	IN145529	38
	RU2057453	18
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 Applicants : [NESTLE SA \(-\)](#)  
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# IPC vs YEAR MAP

Matrices: Publication Date (Year)/IP Class (4 digits)

	2002	2003	2001	2000	1999	1996	1997	1992	1995	1994	2004	1982	1990	1988	1987	1989	1984	1991	1983	1986	1985	1986	1981	1980	1993	1979	1977	1978	2005	1976	1972	1973	1969		
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A23G	3	2	4	1		1	1		1	1																									
A23B	2	3	2	3	1	1				1									1																
C12G	2	1	2	5	1						1						1																		
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C12C		1	2																																

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