

## OSS 106 Hand-Out

Christian Science Monitor  
March 21, 2000

### Top-Secret Kodak Moment In Space Shakes Global Security

New satellite images of a Pakistani nuclear facility show how snapshots could be used to influence diplomacy.

By Alexander Colhoun, Staff writer of The Christian Science Monitor

The images are clear and, according to Jim Pike, clearly troubling.

Posted on the Web site of the Federation of American Scientists, the high-resolution satellite pictures reveal to civilian eyes for the first time a completed nuclear reactor and missile base in Khushab, Pakistan.

To Mr. Pike and other members of the Federation of American Scientists (FAS), the images show the danger of Pakistan's nuclear program. As President Clinton this week travels to India and Pakistan, they should serve as a reminder that Pakistan must be firmly dealt with, says the FAS.

**But to policy experts worldwide, the images are an indication of how the commercialization of ever-clearer satellite images promises to reshape the global diplomatic landscape.**

**Never before have private organizations been able to buy satellite photos of such high quality and detail - new "superbirds" can distinguish objects the size of a tank. Moreover, with more commercial satellites going up each year, the opportunity for purchasing images is only increasing.**

**In turn, the emerging marketplace for high-resolution pictures is clashing with issues of privacy and national sovereignty as countries worry that precious information could be sold to the highest bidder.**

"The deployment of commercially operated, satellite-based cameras is furthering the denationalization of the planet's information infrastructure," says Gernot Brodnig of Harvard's Kennedy School of Government in Cambridge, Mass. "In today's world, control of strategic information is power - who has it, when, and how."

Already the purview of geologists, city-planners, and farmers, images

from lower-resolution cameras have been used since the 1970s, but as technology pulses forward, higher- and higher-resolution cameras have become more available.

Satellites launched from the US are licensed by the Department of Commerce, and the US reserves the power of "shutter control," meaning it can decide when and where images can and can not be taken. But satellites launched from other countries operate under the United Nations' "open-skies doctrine," which allows the earth to be photographed by anyone, anywhere, and at any time - with very few exceptions.

In some cases, this can be a benefit to the US and the world. Satellite images provided evidence of mass graves in Bosnia in 1995 and documented Chernobyl's burning reactor No. 4 in 1986.

But some analysts are concerned that America has lost control of the skies. Unable to exercise shutter control on foreign-owned satellites, commercial operators are free to monitor anything from troop movements to secret training facilities.

In this brave new world of private satellite imaging, though, Pike says the distribution of satellite images is for now controlled by two old-fashioned factors: supply and demand. For example, Soyuzcarta, the commercial sales arm of a Russian mapping agency, won't sell Pike images of China. Why? China is its main customer.

"The probability Soyuzcarta will sell you an image is directly proportional to how boring it is," says Pike, a defense analyst at FAS. "The more interesting it is, the less likely we'll see it."

And supposing that Soyuzcarta does agree to take images for commercial purposes, getting the perfect shot is complex.

Clouds cover 75 percent of the earth at all times, and some satellites take days to get back over their target.

Yet this situation is sure to change, and swiftly. Defense analysts expect three new satellites with one-meter resolution cameras to be in space within the next year. The days of America's virtual monopoly of the skies are dwindling.

"In the past, America had undenied access to space," says Jack Spencer, a national-security analyst at the Heritage Foundation in Washington. "We knew what [our enemies] were doing and they didn't."

Case in point: In 1991, during the Gulf war, the US requested some blackouts on picture-taking by non-American commercially operated satellites over the Gulf. The goal was to keep Gen. Norman Schwarzkopf's so-called left-hook flanking operation a secret. Diplomacy worked, but the question remains: Will private operators always serve America's security interests?

The answer to this question is uncertain, but for now, private organizations are likely to continue their own spying. "The use of this imagery is a powerful tool," says Pike. "We're learning things we could not have. The jury is still out on how that will influence policy, but it gives us greater potential than we'd otherwise have."

# OSS 107: Patent/Citation

## A. Mr. Robert Cantrell, Slides

**Mr. Robert L. Cantrell** is the Director of Business Development and also heads up the intellectual property consulting division and the development of consulting models for automated systems of Manning & Napier Information Services (MNIS). Prior to MNIS, Robert managed business development for intellectual property and competitive intelligence sales at Derwent Information, sold securities for Dean Witter, and sold telecommunications for ROLM. Robert also served as an infantry Lieutenant in the 101<sup>st</sup> Airborne Division (Screaming Eagles) and the 11<sup>th</sup> Group Special Forces (Reserve). Robert's mission at MNIS is to develop a technology enhanced consulting practice to support business decision-making in the intellectual property arena. Robert has spoken to over 100 companies and conferences in seven different countries regarding intellectual property strategy and analysis. His most recent article, "The Intellectual Property Revenue Generation Game," appeared as the cover story on *Intellectual Property Today*.

## B. Mr. Dick Klavans, Hand-Outs

**Dr. Dick Klavans** is President of the Center for Research Planning, a firm specializing in the formulation of science-based strategies. Dick received an undergraduate degree in Mechanical Engineering from Tufts University and a Masters degree in Management from MIT. He began his consulting career twenty years ago as a senior consultant for Pugh Roberts Associates, where he was responsible for technology forecasts for major industrial firms in the electronic, chemical and paper industries. He returned for a PhD in Management from Wharton and taught at Wharton and Temple University. His publications focus on competitive intelligence, technical intelligence and science-based competition. He is very active in the Society of Competitive Intelligence Professionals, serving on their Board of Directors (1993 to 1996) and elected as President of the Society (1995). He received their highest award for achievement and contribution to the profession, the Meritorious Award, in 1999.





# Technical Intelligence Using Patents

---

May, 2000

## Opening Statement



*The successful company ensures its success before it enters a market. A success assured before market entry depends upon designing a strategy around a vital disposition.*

*A vital disposition depends upon patents, brands, and the assets to use them.*

© 2000 IP.com 2

# Agenda

---



- Introductions
- Case study
- Obtaining information - key word, index, natural language, citation
- Consolidating information
- Action

© 2000 IP.com 3

## Case Study

---

# How to Profit from Dust

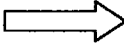


Dust Removal		
1.	29.	32 dust, lamace, arc, electric, recover, waste, treat
2.	8.	27 dust, remove, furnish, material, coat, ben, part
3.	64.	29 dust, clean, collect, filter, machine, air, remove
4.	5.	25 dust, component, print, desk, furnish, remove, assembly
5.	3.	24 dust, bag, filter, remove, clean, impact, crush
6.	65.	23 computer, drive, disk, filter, house, port, air
7.	18.	21 gas, dust, exhaust, treat, remove, fue, manufacture
8.	6.	20 dust, precipitate, electrostatic, collect, clean, remove, lose
9.	1.	19 computer, mouse, desk, clean, display, screen, keyboard
10.	15.	19 clean, vacuum, dust, bag, attach, mount, dispose
11.	35.	18 dust, cement, heat, coat, kin, lamace, nes
12.	92.	16 chair, furnish, outdoor, cover, motion, back, restler
13.	14.	16 rug, dust, bl, diff, attach, port, table
14.	21.	16 clean, dust, floor, remove, see, substrate, cloth
15.	12.	16 dust, table, collect, circle, rotary, sand, saw
16.	10.	16 reflect, print, particle, color, nozzle, read, transmit
17.	17.	15 remove, nuclear, dust, key, deal, record, board
18.	28.	15 dust, tube, particle, extend, blast, surface, material
19.	27.	14 dust, collect, control, i, mine, rock, abate
20.	9.	13 dust, collect, dental, section, model, rotary, automatic
21.	22.	13 dust, clean, suppress, dry, wipe, prepare, substance
22.	60.	11 dust, lime, soil, remediate, solid, dispose, waste
23.	16.	11 dust, remove, open, spin, end, mechanism, frame
24.	49.	11 paper, machine, dust, pest, sub, remove, continuous
25.	117.	10 material, remove, dust, control, build, dispose, super
26.	50.	9 assembly, integral, line, spring, door, cassette, slomer
27.	192.	8 dust, knit, circle, recycle, metal, machine, cathode
28.	57.	8 mite, control, dust, furnish, insecticide, orient, berry
29.	67.	8 ergonomic, support, arm, rest, pad, keyboard, palm
30.	40.	6 rifle, dust, zip, furnish, cover, security, fit
31.	2.	25 miscellaneous

© 2000 IP.com 5

# Dust Removal



- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>■ <b>Basic Methods</b></li> <li>■ Filter</li> <li>■ Vacuum</li> <li>■ Cloth Removal</li> </ul> |  | <ul style="list-style-type: none"> <li>■ <b>Key Purposes</b></li> <li>■ Furniture Cleaning</li> <li>■ Furnace Cleaning</li> <li>■ Electronics Cleaning</li> <li>■ Nuclear Safety</li> <li>■ Mining Safety</li> <li>■ Paper Manufacturing</li> <li>■ Dental Process</li> <li>■ Allergy Treatment</li> <li>■ Disposition Preparation</li> </ul> |
|---|---|---|

© 2000 IP.com 6



# Dust and Allergy



**Sinus Congestion**

**Asthma**

**Prevention**

**Treatment**

© 2000 IP.com 7

# Asthma Control and Prevention



**Eradicate**

**Prevent**

**Control**

**Treat**

**Gene Therapy**  
Pharma/Biotech/Hospital  
Active

**Pharmaceuticals**  
Pharma/Biotech  
Active

**Elimination of Harmful Substance**  
Cleaning/Anti-Pollution/Filtration  
Generally Incidental

**Adrenalin**  
Hospital/EMT  
Active

© 2000 IP.com 8

# As Interpreted by Sun-Tzu



- Best is to see war before it arises so fighting is altogether unnecessary
  - Second best is to fight while the threat is still small
  - Third best is to fight the war and win
  - Eradicate/Prevent
  - Control
  - Treat
- Industry Changing Opportunity  
 Longer Term Opportunity  
 Short Term Opportunity

(Which "war" is the company I am Analyzing following?)

© 2000 IP.com 9

# Clusters Representing Various Asthma Treatments



Cluster #	Top Rank	#Patents	Cluster Title
1.	38.	29	deriva, substitute, pharmaceutical, antispasmodic, inhibit, compound, analog
2.	30.	29	deriva, propeps, sulfonamide, agent, va, quinone, beta
3.	3.	28	deriva, inhibit, lipoygenase, drug, hydroxy, acid, triel
4.	4.	26	anti, treat, antispasmodic, propeps, active, deriva, diester
5.	110.	23	receptor, human, transmembrane, class, code, code, variant
6.	2.	22	antispasmodic, deriva, leukotriene, agent, asthma, substitute, treat
7.	17.	21	inhibit, deriva, agent, compound, inflammatory, active, propeps
8.	49.	20	deriva, compound, propeps, vitamin, agent, isozacoline, pulmonary
9.	12.	19	propeps, remedy, disease, anti, deriva, active, allergy
10.	9.	19	deriva, compound, piperidine, heterocycles, benzopyran, therapeutic, antispasmodic
11.	25.	19	deriva, antispasmodic, receptor, acid, quinoline, tricyclic, naltrexone
12.	70.	18	deriva, antispasmodic, compound, propeps, acid, pharmaceutical, bradykinin
13.	20.	18	deriva, substitute, antispasmodic, propeps, sulfonamide, allergy, tyrosine
14.	8.	17	deriva, acid, gamma, inflammatory, agent, tetrahydrocarbazole, linalolone
15.	78.	16	protein, receptor, couple, human, polypeptide, calcitonin, beta
16.	1.	15	quadrizin, compound, inhibit, therapeutic, active, deriva, peptide
17.	162.	15	deriva, acid, propeps, phenyl, xanthine, urate, intestine
18.	25.	14	vitamin, analog
19.	16.	14	compound, deriva, propeps, amides, carbonic, medicinal, tricyclic
20.	6.	13	compound, deriva, inhibit, antispasmodic, semiolestin, pyrazolopyridine, sulfate
21.	291.	12	deriva, ethanalamine, amino, ethanol, resins, phenethanolamine, disease
22.	19.	12	deriva, treat, antispasmodic, leukocyte, dard, antibody, pept
23.	14.	12	plate, inhibit, asthma, treat, disease, substitute, compound
24.	46.	12	deriva, inhibit, substitute, propeps, bicyclic, naphthyl, carbamate
25.	46.	11	deriva, medicine, receptor, aminoglycoside, active, inhibit, colicine
26.	140.	9	propeps, deriva, methyl, pharmaceutical, tetrahydrodioxin, crystal
27.	22.	9	neurokinin, protein, human, and, deriva, unit, rate
28.	28.	9	anti, propeps, active, deriva, allergy, tetraacyclic, asthmatic
29.	8.	9	compound, lipoygenase, inhibit, ciclosporin, cyclosporin, hydroxyphenyl, butyl
30.	68.	8	medicament, ethoxy, imidazol, thioxy, pyrimidinamine, salmeterol
31.	90.	8	miscellaneous

© 2000 IP.com 10

# Control and Treatment of Asthma



asthma treatment and prevention

Assignee (19)	Investor (19)
Pfizer Incorporated (8)	Anthony Marfat (2)
Merck & Co Incorporated (8)	Gerald J. Gluck (8)
Schering Incorporated (7)	James F. Foster (5)
Novartis (7)	Lawrence S. Hsieh Jr. (5)
The General Hospital Corporation (6)	Alain Hershack (5)
Burroughs Wellcome Company (5)	Christian Marschel (5)
East Carolina University (5)	Erica E. Bantz (5)
Mescher Aktiengesellschaft (5)	James W. Young (4)
Sandoz Limited (5)	Timothy J. Barkachof (4)
Novartis Basle (5)	Warren M. Zandi (4)
Novartis (5)	Craig R. Higgins (4)
Schering Corporation (5)	Frank Coyne (4)
The Upsher-King Company (5)	Hiroshi Masuoka (4)
American Home Products Corporation (4)	Samuel Hsu (4)
AstraZeneca Pty Limited (4)	Hubert M. Sussprich (4)
Novartis (4)	Robert H. Gaudel (3)
Novartis Aktiengesellschaft (4)	Robert H. Baker (3)
Bayer Corporation (4)	William H. Parsons (3)
Northwestern Memorial Hospital (4)	Clara Erhardt (2)
Novartis (4)	Dawn A. Hoadley (2)
Novartis (4)	Helen M. Orfan (2)
Novartis (4)	Mark W. Thomas (2)

© 2000 IP.com 11

# Sepracor – Unique and successful



Cluster#	Top Rank	#Patents	Cluster Title
1.	48.	8	benzamide, substituted, porous, support, porous, vapor, mineral
2.	24.	7	optic, pure, analgesic, antihypertensive, treat, lornoxicam
3.			
4.	23.	7	treat, cisapride, pure, optic, gastrointestinal, dysfunction, motile
5.			
6.	71.	5	resolution, stereoisomers, enzymatic, compound, react, membrane, porous
7.	20.	5	propranolol, precursor, analgesic, captopril, optic, pure, resolve
8.	19.	4	enantioselective, propranolol, optic, erythronolides, intermediate, tetrahydrodano, active
9.	31.	4	treat, pure, optic, disorder, endoneurium, dependent, ropivacaine
10.			
11.	30.	3	perforating, fluoride, base, thienopyridine, prevent, bone, administrate
12.	21.	3	inhaler, powder, dose, dispensa, multiple, dry
13.	18.	3	desflurane, isoflurane, bromine, hydroxylated, urine, incontinent, derivate
14.	61.	3	synthesis, base, imidazole, substitute, compound, terfenadine, derivate
15.	26.	3	fluoxetine, treat, pure, optic, headache, migraine, depress
16.	53.	3	indanone, amino, pure, optic, amide, cis, stilbene
17.	63.	3	carry, hydrolysis, baseless, transport, beauveria, caperata, mediate
18.	89.	2	phase, transfer, di, but, catalyze
19.	91.	2	diol, transform, stereoselective, alcohol
20.			
21.	11.	2	hypertension, treat, pure, optic, enalapril, nitrendipine, lisinopril
22.	14.	2	pulmonary, formoterol, propranolol, disorder, treat, optic
23.	40.	2	disorder, treat, optic, pure, monoamine, oxidase, inhibit
24.	64.	2	stiff, high, elastic, capacity, growth, support, membrane
25.	28.	2	endoneurium, pure, optic, epinephrine, disorder, treat
26.	27.	2	center, nervous, disorder, treat, pure, optic
27.	37.	3	miscellaneous

© 2000 IP.com 12

Every Difficulty is an  
Opportunity for Someone



Sepracor



© 2000 IP.com 13

Obtaining Information

---

## Key Word

---



- Familiar
- Simple
- Precise
- Low to no cost
- Limited complexity
- Inaccurate

© 2000 IP.com 15

## Index

---



- Precise
- Logical
- Limits/Includes
- Complex
- Limited scope
- Expensive\*

© 2000 IP.com 16

## Natural Language



- Technically simpler
- Broad scope
- Variable term understanding
- Relevancy ranking
- Reverse analysis
- Different
- Slow retrieval
- Relevancy ranking
- Art vs. Science

© 2000 IP.com 17

## Citations



- Outside the box searching
- Historical records retrieval
- Competitive perspective
- Old data
- Non-correlative data

© 2000 IP.com 18

# Consolidating Information

## Key IBM Internet Access Competitors



Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address (46)

International Business Machines Corporation (I) ←  
 AT&T Corporation (I) ←  
 Sun Microsystems Incorporated (I)  
 Bell Atlantic Network Services Incorporated (I)  
 Bell Atlantic Network Services (I)  
 Microsoft Corporation (I)  
 Infos Corporation (I)  
 ITT Industries Incorporated (I)  
 Metacom Communications Corporation (I)  
 Open Market Incorporated (I)  
 Vermeer Technologies Incorporated (I) ←

**Note: The Internet industry allows AT&T to claim an IP space**

**Note 2: Individual inventor**

**Note 3: Bought by Microsoft**

Rank	Patent	Patent Title (Patent Holder) [Class]	Relevance
1	5,737,612	World wide web browsing with content delivery over an idle connection and interstitial content display (inventors: David Hugh Judson) [395/761]	★★★★★
2	5,937,494	Apparatus for bleaching a de-activated link in a web page of any distinguishing color or feature representing an active link (Appaloosa Interactive Corporation) [707/1009]	★★★★★
3	5,728,367	Automated on-line information services and directory, particularly for the world wide web (Network Engineering Software, Inc.) [707/1010]	★★★★★
4	5,710,918	Method for distributed task fulfillment of web browser requests (International Business Machines Corporation) [395/461]	★★★★★

© 2000 IP.com 20

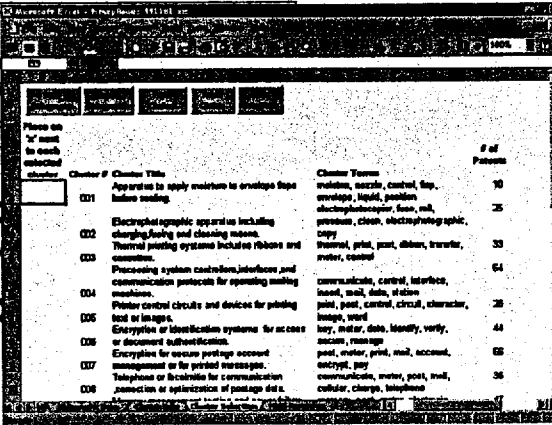
# Data Delivery



## Cluster #4 "stable, noise, vibration, platform" Noise and vibration abatement

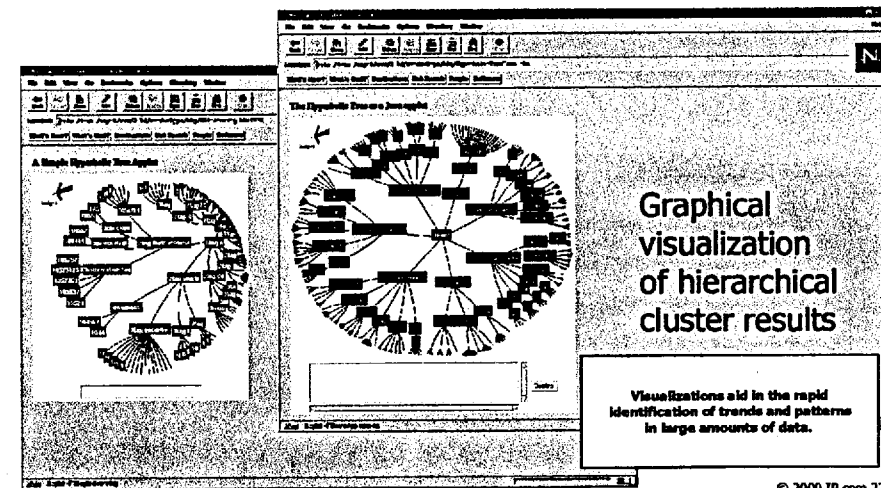
Patent #	Title
5202865	Orientation stabilization by software simulated stable platform
5012174	Method and apparatus for countering vibrations of a structureborne noise isolator
5267720	Radar video detector and target tracker
4845500	Touchscreen control panel with sliding touch control
5053758	System for digital transmission and synthesis of intra-video image enhancement utilizing a two-dimensional aperture correction filter
4970569	Method and apparatus for establishing a threshold of a delay line
5274273	Circuit for gating an image intensifier
4952735	Passive range finding apparatus utilizing television camera
4724432	Generation of graphic symbols for cathode ray tube

Portfolio organization tools to allow for effective analysis of relevant patents.



© 2000 IP.com 21

# Clustering tools



© 2000 IP.com 22



## Strength Indicators

---



- Publication activity
- Citations
- Claims
- Problem solved

© 2000 IP.com 23

## Forecast

---



- Speed, precision, cost...
- TRIZ list of 39 problems
- Research team mapping
- Next step – live contact

© 2000 IP.com 24

## Action

---

## The Greater Picture



- Protect the right to practice a core competency
- Gain control of disruptive technologies
- Gain control over standards
- Identify change ahead of the crowd
- Develop strong-side complementary relationship

© 2000 IP.com 26

## Final Note



---

*Ensure an acquisition includes the assets you believe you acquired. Do not buy tangible assets alone when the core value rests in the intangibles. Do not buy the intangibles alone when the core value lies in the intellectual property. Do not buy intellectual property and find it really belongs to someone else.*

© 2000 IP.com 27

# 01-OSS 21 PRIMER Essential Elements of Information Joint Planning, Operations Other Than War and Open Source Intelligence - Link Page

[Previous](#)      [Geospatial Intelligence Options](#)

[Next](#)      [OSS 108: Tradecraft](#)

[Return to Electronic Index Page](#)