WIPO-IFIA/SEL/02/17 ORIGINAL:English DATE:December2002 E





INTERNATIONAL FEDERATIONOF INVENTORS' ASSOCIATIONS WORLDINTELLECTUAL PROPERTYORGANIZATION

WIPO-IFIA INTERNATIONAL SYMPOSIUM ON THE COMMERCIALIZATION OF INVENTIONS IN THE GLOBAL MARKET

organized by the World Intellectual Property Organization (WIPO)

and the International Federation of Inventors' Associations (IFIA)

> in cooperation with the Korean Intellectual Property Office (KIPO)

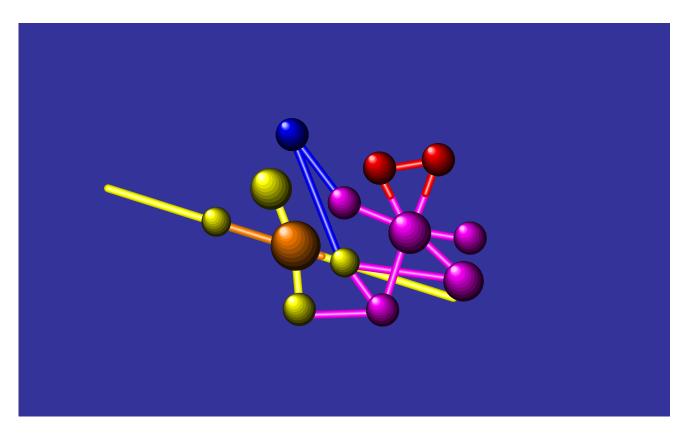
and the Korea Invention Promotion Association (KIPA)

Seoul, December 4 to 7, 2002

TECHNOLOGY TRANSFER THROUGH ONLINE SERVICES AND DATABASES

Document prepared by Mr. Jason Ng, Assistant Director, Enterprise Development Department, Intellectual Property Office of Singapore (IPOS), Singapore

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Definitions

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Intellectual Property

Intellectual Property (IP)
- creations of the mind <u>used for commerce</u>
- Not limited to any industry or technology

Industrial property: patents, trademarks, industrial designs and geographic indications. **Copyright**: literary and artistic works (novels, poems, plays, films, musical works, paintings, photographs and architectural designs)

Intellectual Property

Creations of the human mind About ideas, innovations, inventions, trademarks, trade names, logos, copyrights, know-how, trade secrets, etc. Technology in which there exists a protectable, legal property right

LES definition

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Technology Transfer

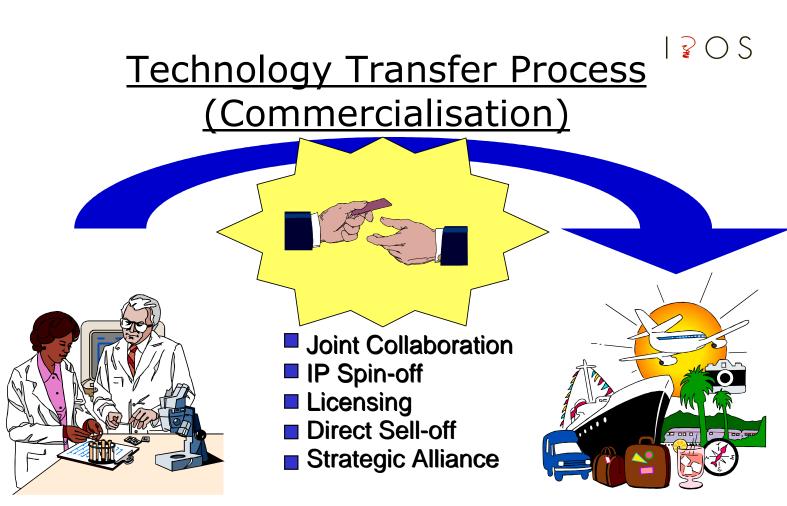
- Applying Technical Information to a specific task
- Initiating Cooperative Research
- Conceiving a Joint Venture
- Establishing a Partnership
- Providing Access to Intellectual Property
- Supplying Training & Education
- Facilitating a Licensing Opportunity

Adapted from Development Techniques for International Technology Transfer, Le Goc 2002

Commercialization



- Commercialization: The act or process of exploiting or taking technology to market for financial gain
- Commercialization Cycle: The steps in the process of taking a technology to market for profit



□ IP Creation

□ IP Exploitation

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Sources of IP Information

- National Intellectual Property Offices
 - Online databases
 - Libraries
 - Published documents
- Private Information Providers
 - Patent Information Content Providers
 - Patent agents / attoneys



IP Information Sources

Patent Office Databases

- WIPO http://ipdl.wipo.int/
- EPO http://ep.espacenet.com/
- USPTO http://www.uspto.gov/
- Canada http://patents1.ic.gc.ca
- JPO http://ipdl.jpo.go.jp/
- Korea http://www.kipo.go.kr/ehtmleLikIndex05.html

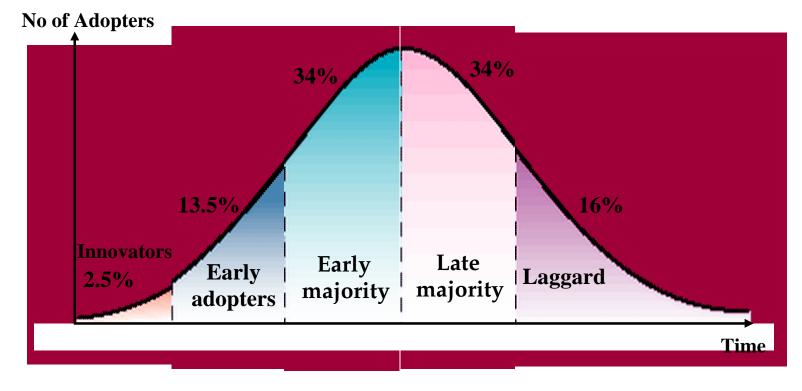
- Australia http://www.ipaustralia.gov.au
- Singapore http://www.epatents.gov.sg
- United Kingdom- http://www.patent.gov.uk
- China- http://www.cpo.cn.net
- German- http://www.deutsches-patentamt.de/

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Understanding the Market

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Technology Adoption Life Cycle



Technology Adoption Life Cycle

 \Rightarrow Segmentation based on characteristic responses to discontinuous innovations.

- Risk tolerance
- Willingness to change

 \Rightarrow Market segments

| ? O S <u>Technology Adoption Life Cycle</u> Innovators

- Trend Setter
- Non-typical customer
- High tolerance for glitches & problems
- High risk taker
- Respond to information from technology conferences, computer bulletin boards, retail storefronts that cater to techies, and technical publications



Technology Enthusiasts

2.5%

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Technology Adoption Life Cycle

- Creative Thinkers
- Easy to sell hard to please
- Moderate risk taker



Futurist

- To provide competitive edge in the 13.5% form of major breakthrough e.g. production efficiency, major cost savings
- Beware of overselling

Technology Adoption Life Cycle Early Majority

- Practical
- Low Profile & Down to Earth
- Make measured, incremental, and predictable progress to remain competitive



Risk Adverse

Technology Adoption Life Cycle Late Majority

- Conservative & prudent
- Traditional thinking
- High reluctance to change



• High tech companies are not sympathetic 34%

Mainstream

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Insights

Timing

- Readiness of buyer/ seller
- Expectation
 - Rationalism of parties
 - Skepticism prevails
- Commercialisation Approaches
 - Online
 - Offline
 - Hybrid

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Technology Transfer Offices

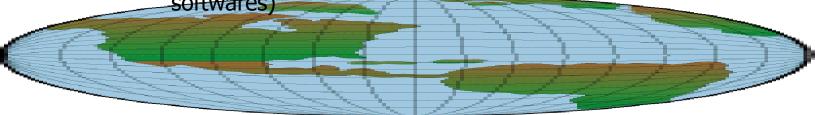
Academic

- Massachusetts Institute of Technology (MIT) Technology Transfer Office
 - work with industry, venture capital sources, and entrepreneurs to find the best way to commercialize new technologies
 - Up to 80 license agreements (patents, trademarks and softwares) signed
 - Rifle-shot marketing: matching specific technologies with specific business/investors needs

Technology Transfer Offices

Academic

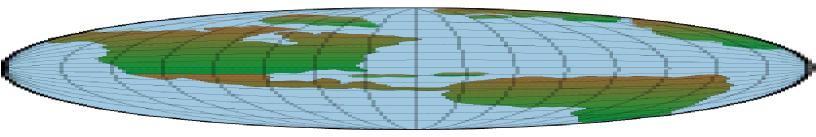
- Harvard University's Office for Technology
 & Trademark Licensing
 - Engage private companies in the market to market and license IP on the universities behalf.
 - Owns a second technology licensing office for the medical and dental faculties.
 - Signed 80 license agreements (patents, trademarks and softwares)



Technology Transfer Offices

Academic

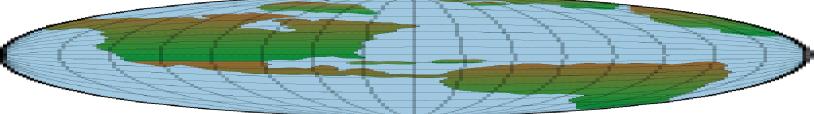
- ICON (Imperial College Consultants Ltd)
 - a multidisciplinary consultancy company providing inventive technology-related services for industry through a network of highly specialised academic experts.
 - Formed in 1998
 - Highest research income university- 117 million pounds



Technology Transfer Office

National

- Korea Technology Transfer Office
 - started in March 2000
 - partners Government and Private Organisations (ventures, financial institutes etc)
 - Services include Technology Transfer, Assessment, Consultation and Brokerage
 - 20 new listings every week

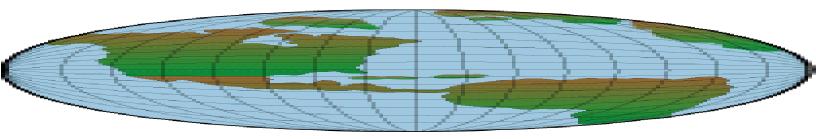


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Technology Transfer Office

National

- Exploit Technologies Pte Ltd
 - commercialisation arm of Agency for Science, Technology and Research (A*STAR) in Singapore
 - assists interested companies to license the technology



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Technology Transfer Office

National

- National Technology Transfer Center (NTTC):
 - Established in 1989, NTTC offers a complete portfolio of products and services that enable American businesses to find technologies, facilities and world-class researchers from federal research centers

Signed 4 license agreements

2 Startup companies

IP Information Sources

Private IP Service Provider

- Derwent
- MicroPatent
- Delphion
- Sliver Platter Search
- PatentCafe
- Yet2.com
- SurfIP
- Global Prior Art

- Questel Orbit
- RWS Group
- Butterworths (LexisNexis)
- PI-x Systems

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Success Stories

- ChromaDex Inc and Bayer AG -
 - toxicity screen (Entreprenuer, 2001)
- Dupont and Battelle

 chemical synthesis (www.dupont.com, 2001)
- Eastman Chemical Company and BKG Pelletizing Systems
 - polymer pellet-conversion technology (www.plxsystems.com, 2001)





One Stop First Stop IP Portal

Research ? Marketplace ? Services

www.SurfIP.gov.sg



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Homepage: www.surfip.gov.sg



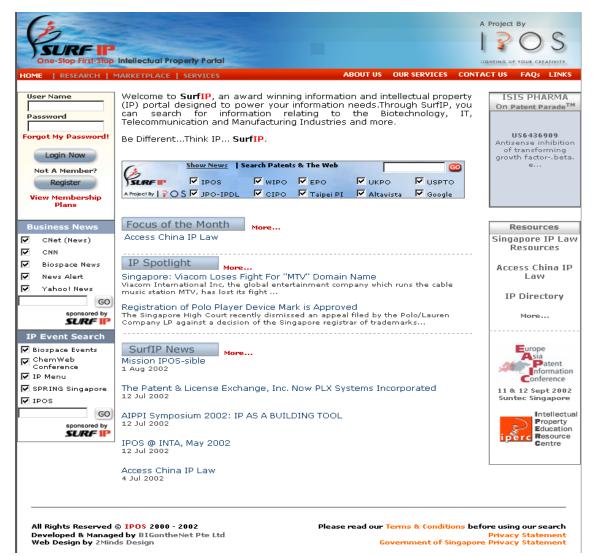
Milestones

- SurfIP is a special project initiated by the IPOS
- q SurfIP was officially launched on November 9, 2000
- q Awarded the prestigious U.S. E-Gov Trailblazer Award in 2001
- q Statistics
 - · Over 1,524,045 queries

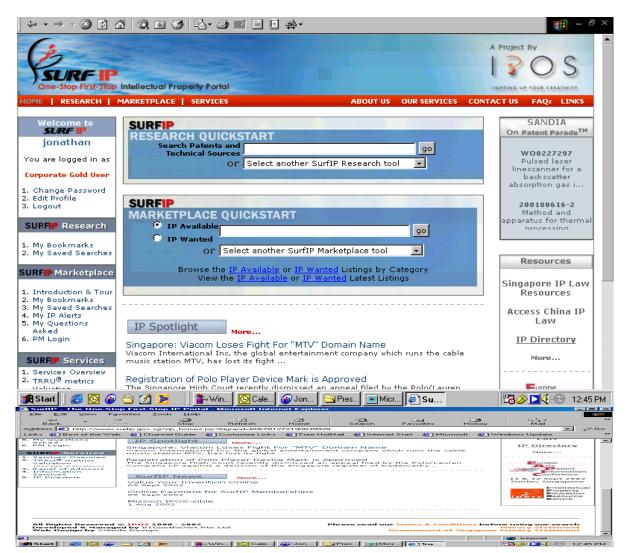


- Over 1,026,704 visitor sessions
- Average 30,000 hits per month
- 6,000 members (1/3- Singapore, 1/3- U.S. and 1/3- Rest of the World)

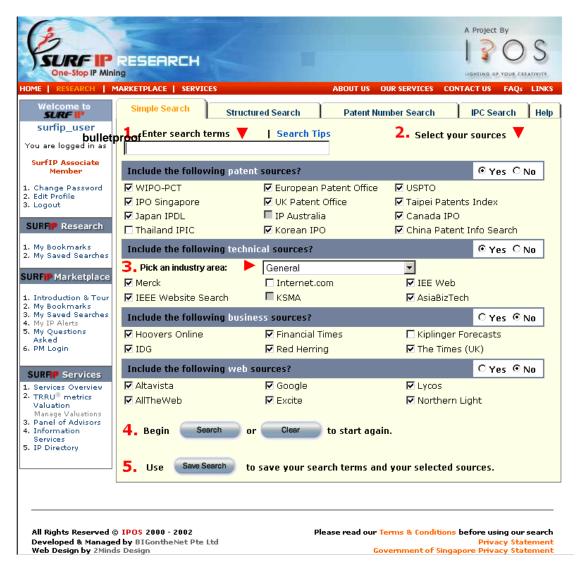
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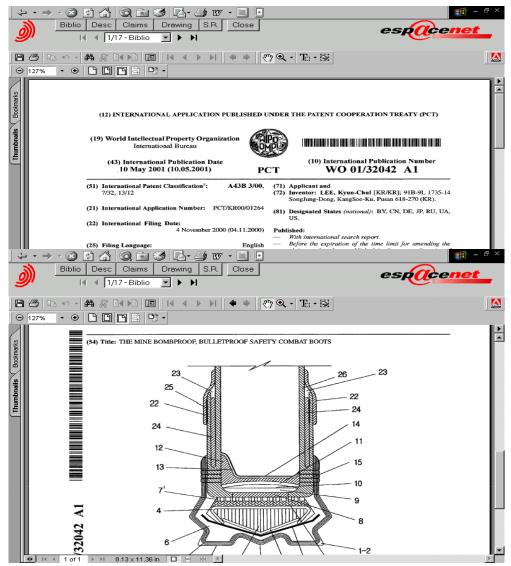
Conducting a search ...



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2. WO02067436 A SIGNAL DISCRIMINATOR FOR A SPREAD SPECTRUM SYSTEM	
3. W002067318 ELECTROMIGRATION TEST STRUCTURE FOR DETERMINING THE RELIABILITY OF	WIRING
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4. WO02067003 TEST CIRCUIT FOR HVDC THYRISTOR VALVES	
[WIPO-PCT BOOK EW GATE TAMALATE]	
5. WO02067001 MULTIPLE-CAPTURE DFT SYSTEM FOR DETECTING OR LOCATING CROSSING CLO DURING SELF-TEST OR SCAN TEST	CK-DOMAIN FAULTS
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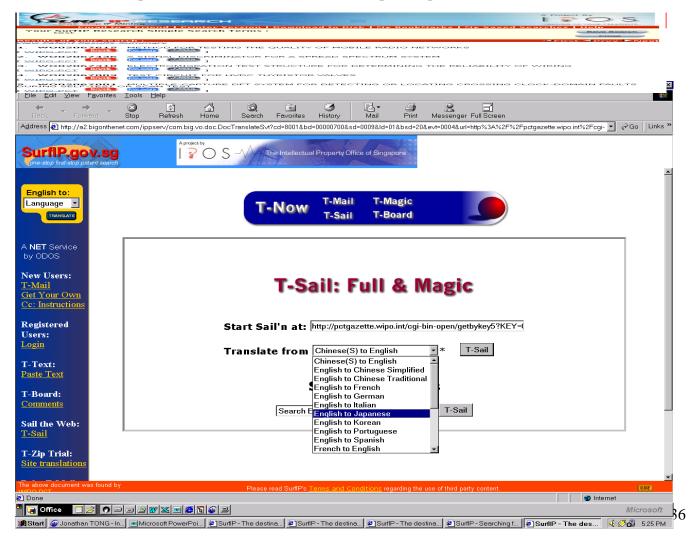
Full Patent Document



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3. WO02067318 ELECTROMIGRATION TEST STRUCTURE FOR DETERMINING THE RELIABILITY OF	WIRING
4. WOD2067003 TEST CIRCUIT FOR HVDC THYRISTOR VALVES	
5. WOD2067001 MULTIPLE-CAPTURE DFT SYSTEM FOR DETECTING OR LOCATING CROSSING CLO DURING SELF-TEST OR SCAN TEST [WIPO-PCT MARK THANK]	OCK-DOMAIN FAULTS

SurfIP Management Tools- Language Translation



SurfIP Management Tools- Language Translation

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or Pin Login	viacom international inc, the global entertainment company which runs the cable music station MTV, has lost its fight	More
SURFIP Services	Registration of Polo Player Device Mark is Approved The Singapore High Court recently dismissed an appeal filed by the Polo/Lauren	
2, TRRU [®] metrics Valuation	Company LP against a decision of the Singapore registrar of trademarks	Europe

SurfIP IP Parade

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Maximize Your IP Polen ick on the Concise, Tec ovide your particulars e listings.)	Indexting up your Cataling choology, or Full Display tab to view the Listing details. You may be requested to to the IP Lister to view the Full Listing Display. (Click <u>Help</u> for more information on using
Title	Anology Display Full Display ANTI-BACKLASH AND BACKDRIVE RESISTANT MECHANISM
Print	
Listing ID	322
Date Listed	29 May 2002 08:43:32
Technical Classification	8.2.2. Engineering elements or units; general measures for producing and maintaining effective functioning of machines or installations; thermal insulation in general
Type of Interest / Collaboration Sought	Other commercial
Abstract	Mechanism applicable to helical mesh elements (worm gear or lead screw), employing two input components both in engagement with the same mating output component. The input components are opposedly sprung by a torsion (not linear) spring, thus jamming the output component rigidly, eliminating backlash and offering true resistance to backdrive.
Function	An anti-backlash and backdrive resistant mechanism employing two helical mesh components (for input of movement) in engagement with one mating component (which produces output movement). Three embodiments disclosed employ: b) two input worms in mesh with one output worm gear, iib two input nuts in mesh with one output lead screw, and iii) two input lead screw in mesh with one output carriage block having two mating threaded holes. The two input components are connected to each other via a torsion spring such that the blasing torque that each component receives tends to move the output component in opposite directions taking up any clearance that is present between the components in mesh and eliminating backlash. The non-overhauling nature of the helical mesh causes the output component to be
	The produments' disclosed employ () two input worms in mesh with one output vorm gen; i) two input nuts in mesh with one output lead screw, and ii) bwo input lead screw, with mesh with one output carriage block having two mating threaded holes. The two input components are connected to each other via a torsion spring such that the blasing torque that leach component receives tends to move the output component in opposite directions taking up any clearance that is present between the components in mesh and eliminating backlash. The ono-overhauling nature of the helical mesh causes the output component is the trade of the helical mesh causes the output component is burned such any clearance that is present between the components is turned such provide the screen set of the helical mesh causes the output component is to screen the resent of the helical mesh causes the output component is such any clearance that is of being lammed.
Problem Solved	Present anti-backlash mechanisms usually employ two spring loaded input components, for example, using two spring-loaded half-nuts on the lead screw or two spring loaded worms on the worm gear. However, the amount of load that the table can thus carry and its resistance to backdrive is limited to the magnitude of the spring force. It is not possible to increase the spring force indefinitely because a higher spring force increases the friction of the mechanism resulting in excessive wear and poor efficiency. It is also not possible to replace the spring with a rigid spacer or non-compensating mechanism such as the Duplex Lead worm or by adjustment of pitch distance because with wear, the clearance increases and the rigid spacer/mechanism will not be able to take up the new clearance. It is also not completely satisfactory to replace the rigid spacer with one that can only lengthen but not shorten because wear of the lead screw/worm gear may not be uniform throughout its length/circumference and the mechanism may bind when it has travelled to a position where the clearance is less. The use of ball-type components

SurfIP Services

SurfIP Services is a suite of value-added IP services for SurfIP Members to equip themselves with the necessary knowledge and skills to manage their IP assets

- 1. Panel of Advisors
- 2. Information Services
- 3. IP Directory
- The IP Directory is a list of IP professionals in Singapore categorized according to their organisations or affiliations.

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Useful Links

1. IPOS Homepage: www.ipos.gov.sg

2. SurfIP Link: www.surfip.gov.sg

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