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Getting Smart on IP: How to protect your IP in China and South-East Asia in the smart technologies sector

China & South-East Asia IPR SME Helpdesk

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Helika Jurgenson
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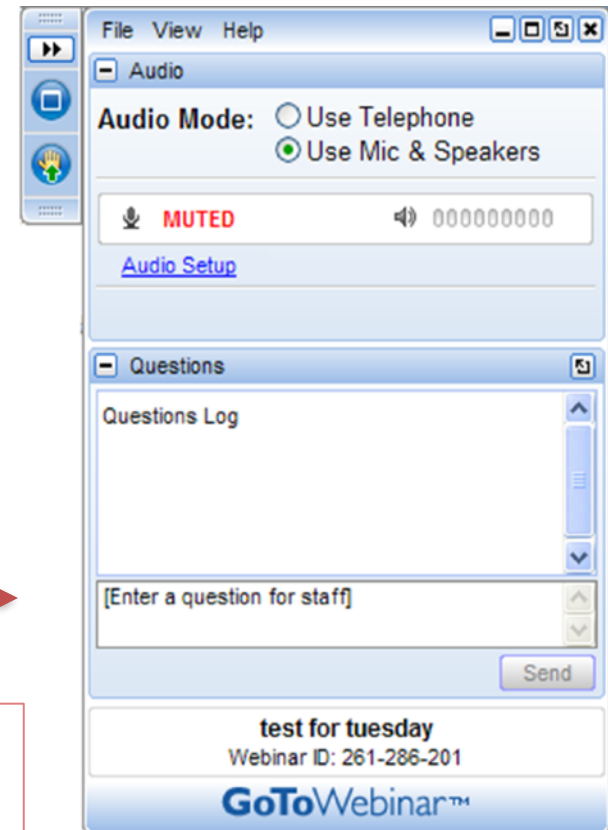
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Speaker's Bios

Name: Mr. Philippe Girard-Foley
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Over a continuous presence of more than 25 years, Philippe Girard-Foley has helped many European companies protect and defend their IP rights and establish a successful business in Asia, through direct investment, partnership, distributorship, agency, franchising or otherwise. He is a regular speaker at events focusing on ASEAN matters, and has authored several publications on ASEAN IP laws.

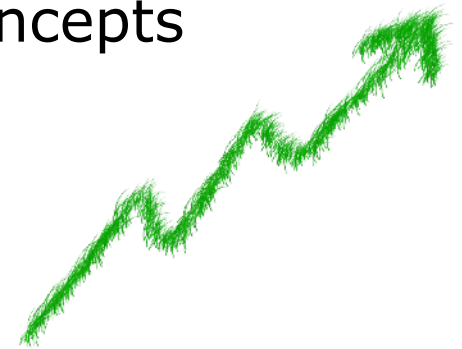
Philippe Girard-Foley has received both a civil law and common law education (Paris Sorbonne, Paris Institute of Political Sciences, University of Pennsylvania Law School, CIArb London) and is a member of the Paris Bar from France as well as an associate member of the Victoria Law Institute from Australia. Philippe joined the Helpdesk network in 2011.

Outline of the Presentation

- Smart technology: definition and IP perspective - examples in Asia
- How IP can protect smart technology inventions - examples from Singapore
- Focus on China as the main potential market for EU SME's

SMART TECHNOLOGY and INTELLECTUAL PROPERTY: An uneasy relation

- Smart technology: a new concept, evolutive, without clear borders and clear definitions
- Intellectual property: a legal system of protection designed for “older” type of industry and commerce, relying on clear and long established concepts

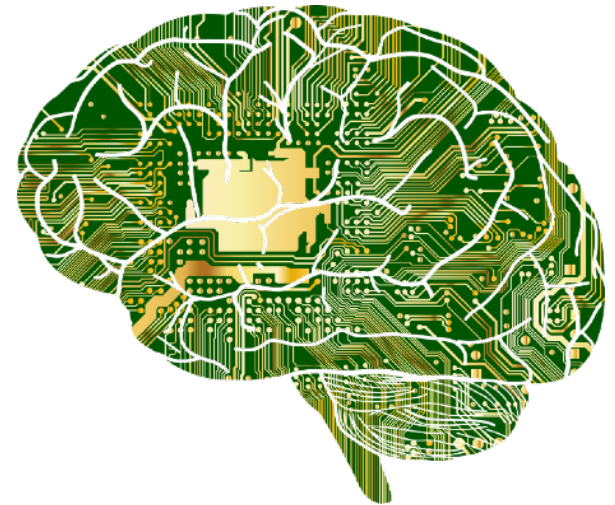


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What is “smart technology” ?

- No uniform definition
- therefore no protection of smart technology per se -
will have to fit within one of the existing categories of
Intellectual Property: patents, copyright, trade secret
et trademarks



A Tentative Definition

A “solution” which:

- » uses communication technology to collect data and feed it back to suppliers and end users
- » connects or communicates with other devices or systems to realise service automation

Also considered as part of smart technology are “big data” and the Internet of Things (IoT)

Two Ways How Smart Technology Functions

- Can be active e.g. smart lighting systems and building management systems aimed at optimising energy usage automatically based on data collected
- Can be passive e.g. smart meters which collect usage, occupancy and environmental data and transmit it to users and suppliers



Examples of Smart Technology (simple solutions)

- Smart meters: meters which digitalise meter readings and provide “near real-time” i.e. quasi instant information to energy suppliers
- benefit: in theory, energy suppliers may inform consumers of their consumption patterns and consumers may adjust their behaviour to reduce energy costs
- Intellectual Property perspective: combines hardware and software, marketed under a brand / protection as patent, copyright and trademark



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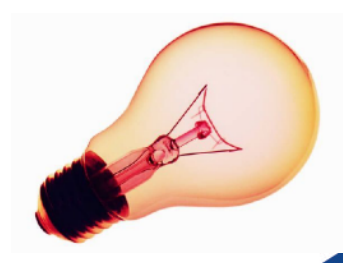
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Examples of Smart Technology (simple solutions)

- Smart lighting systems: sensors and wireless communication technology to adjust automatically lighting to the environment (no feedback to supplier)
- benefit: reduces energy consumption / increased comfort
- Intellectual Property perspective: patent, copyright, model (shape / can be other than functional), trademark



Examples of Smart Technology (simple solutions)

- Smart heating controls: a combination of automation devices (thermostats, sensors...) and software services (end user applications and data analytics) with wireless communication
- Benefit: reduces energy consumption by allowing the end user to control heating and cooling systems either automatically or remotely
- Intellectual Property perspective: relies more on software innovation than on hardware - software may be copyrightable but is combination patent protectable?



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Examples of Smart Technology (integrated solutions)



- Integrated building management systems: computer-based control systems integrating the controlling and monitoring functions of building equipment (electrical and mechanical)
- Benefit: goes beyond mere energy saving by optimising the use of the building by controlling and monitoring ventilation, lighting, heating, cooling, power, security...etc.

Examples of Smart Technology (integrated solutions)

- Fleet management: software-based optimisation of fleet usage through collection and analysis of vehicle data (vehicle types, speed, driving routes, vehicle locations, driving behaviours...etc.)
- Benefit: reduces petrol consumption and improves safety

Examples of Smart Technology (integrated solutions)

- Logistics and transportation: big data analysis of business operations
- Benefit: optimise travel routes, reduce petrol consumption, enable full loading capacity, cut carbon emissions



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Summary of Smart Technology: all about energy

- smart buildings
- energy efficiency
- energy storage
- renewable energy generation
- smart (electrical) grid
- smart mobility



Largest world market is Asia (Source: The Global Cleantech Report 2012)



The Ultimate: smart cities

- Integrates more or less all of the following
- More than 300 smart city pilot schemes in PR China with a three key objective: provide energy, move people and things around, keep people safe
- A precursor: Songdo in South Korea launched in 2009 - a purpose-built smart city, under-occupied but a plan for "100 years" ahead (too early?)
- in less developed Asian countries, "partial" smart solutions e.g. Jakarta's real-time of flooding by reports from Twitter
- In Hong Kong, Kowloon East

The Example of Kowloon East (Hong Kong)

- sensor analyses the crowd and determines the colour (green or red) of the traffic light
- integrated waste-handling systems replace refuse stations
- drivers are pointed by panels to available parking slots
- time sensors discourage delivery trucks from parking for too long
- ...etc.



Whereas in China...

Opportunities exist for European SME's which pay attention to "Chinese characteristics":

- different applications: "in the mainland, you pay for [rented] bicycles using WeChat and everything is recorded. If you park illegally three times you will be fined on the spot...Not only did this improve efficiency, it also improved law enforcement" (Source Councillor Regina Ip Lau-Suk-yea as quoted in South China Morning Post 3rd August 2017)

..everything is a breakthrough

- Xiongan Green City in Hubei Province (public funding 19 billion US\$) is meant to be “smart” as well as green
- the megacity is supposed to run on renewable energies
- smart solutions will be the answer, for transportation and other energy saving



Intellectual Property Summary

- Smart technology can be protected not as a whole but by breaking it down into its protectable elements
- has to fit within the known categories of intellectual property
- due to the nature of the technology (“new”), question of protectability: hardware (patent protectable ?) / software (copyright protectable ?)
- “trade secret” often the most efficient legal protection by default



The Limits of IP Protection for Smart Technology

- “core” smart technology can more or less fit into the traditional categories of IP since it consists of a solution marketed under a brand (trademark) combining a hardware (patentable) with a software (copyrightable)
- “big data” is different since data is neither patentable nor copyrightable

...and even more so in relation to big data

- Raw data is not patentable, nor its collection, nor just assembling, organising or manipulating it. Patentability require an “inventive concept”
- The selection, coordination or arrangement of data such as to constitute an original work may be copyrightable, but the protection does not extend to the material itself
- The compilation of data and its process which meet the criteria (independent value, efforts to keep secret) may be qualified “trade secret” and protected against “misappropriation”

How Smart Technology Fits within “Traditional” IP: Trademarks

- A hardware device or a service can be marketed under a trademark, but how about a software?
- It is possible, such as the registered trade mark “Sherlock” for which Apple Inc. obtained registration in Singapore in respect of computer software (class 9)
- Sherlock is a software application integrated into version 8.5 of the Macintosh operating system, Mac OS.





“Sherlock” continued...

- Sherlock had two primary functions: conducting internet searches and carrying out file search within the Mac OS system
- in spite of this “dematerialised” feature it was granted trademark registration in 1998
- the ordinary rules applicable to trademarks applied to Sherlock and it was struck off on the grounds of non use (following several consecutive Mac OS updates) by the Intellectual Property Office of Singapore (Bigfoot Internet Ventures Pte Ltd v Apple Inc [2017])

Another Example in Singapore

- Another good example is the registration in Singapore of “Oracle” by Oracle International Corporation, covering both class 9 for the goods “computer programs included in class 9” and class 16 for the goods “introductory manuals, use manuals and guiding books, all being printed and all relating to the operations of computerised data-based management systems”

How Smart Technology Fits within “Traditional” IP: copyright, trade secret and patent

- “Confidential information” can be protected as “trade secret” as long as the generally accepted criteria are met (intrinsic value, steps to protect...)
- ...which can consist of a method or technique which gives the company over its competitors
- ...which implies action: limit access, keep clear records, use NDAs
- provided this, it is not subject to either registration or time limit



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Compatibility, Complementarity...and Incompatibility

With regard especially to smart technology

- A dual protection may be available between trade secret and copyright: copyrighted information such as instruction manuals, computer software and databases may be protected by law of confidential information and copyright
- “For example, a computer software developer can commercialise his software while still keeping the underlying software architecture, algorithm and source code confidential” [Source: Intellectual Property Office of Singapore]



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...not with patent

- “As a general rule, it is not possible to maintain a patent and ensure non-disclosure of confidential information.
- This is because in return for obtaining a 20-year monopoly to exclude others from making, using or selling the invention, the owner of the invention will have to make full disclosure of the invention during the patent application process”

[Source: Intellectual Property Office of Singapore]



China - Basic Principles

A legal environment that takes into account the requirement of software protection:

- Processes and function claims of modules patentable under the Patent Law
- Computer software and model works (written and graphic) copyrightable under the Copyright Law
- “Secret information” protected as trade secret under the Anti-unfair Competition Law

China - Some Recent Improvements

- The protection of computer software has been enhanced by the Newly Amended Guidelines for Patent Examination that came into force on 1st April 2017
- The New Guidelines allow claims for “Medium & Process of Computer Program” and “Device Claims Comprising Program”



Adding to an Existing Legal Framework - General

- Copyright Law
- Implementation Regulations for the Copyright Law
- Interpretation of the People's Supreme Court on Issues Relating to Application of Law to Adjudication of Cases of Copyright Disputes



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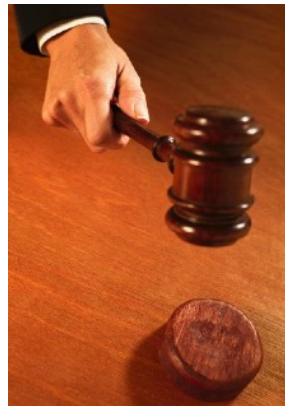
...and to more specific regulations

- Regulations on the Protection of Computer Software
- Regulations on the Protection of Information Network Transmission Rights
- Provisions of the Supreme People's Court on Several Issues Concerning the Application of the Law to the Trial of Civil Dispute Cases of Infringement of Information Network Transmission Rights



...and the Courts Follow and Get Tougher

- A general trend as quoted in the Report of the Work of the Supreme People's Court of March 2017: "The Intellectual Property Courts of Beijing, Shanghai and Guangzhou (Canton) are considering applying punitive damages to correct the imbalance between the high cost of defending one's rights and the low cost of infringement"



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Recent Case-law Shows a Sharp Rise in the Amount of Damages for Infringement of Software Copyright

- Guangzhou Net Easy Computer Co., Ltd. v/ Guangzhou Duoyi Internet Co., Ltd: 15 million renminbi (September 2017)
- Blizzard Entertainment Ltd v/ Shanghai Net EasyNetwork Development Co., Ltd: 4 million renminbi (August 2016)
- SAP Corporation v/ Langze Enterprise Management Consulting (Shanghai) Co.,Ltd: 1.8 million renminbi (July 2016)



Increasingly Regulations Acknowledge the Specificity of Smart Technology

- Circular of the State Council on Issuing the Outline for the Development of Big Data (2015)
- Regulations on promoting the Smart City of Yinchuan City
- Cybersecurity Law (2017)
- Regulations mostly aimed at the protection of personal information but show the recognition of smart technology



To Compare with Singapore

- Another country to watch for its interest in IP is Singapore
- In April 2013, the Singapore Government announced a “10 year master plan to guide the country towards becoming a Global IP Hub in Asia”
- But the “Update to the Intellectual Property Hub Master Plan” published in May 2017 by the Government of Singapore and Intellectual Property Office of Singapore does not mention even once “smart technology”, focuses instead on easy IP filing, IP disputes resolution and other matters

The Conclusion to Draw

- The future of smart technology is in countries with big landscape, big population, big requirement for infrastructure
- In Asia, may be later it will mean Vietnam, or the Philippines, but meanwhile...
- the largest and most promising market for EU SME's in smart technology is... clearly China
- As far as IP protection is concerned, focus on the legal framework in China

Take-Away Messages

- If there is one continent to look at for smart technology it has to be Asia
- Political will, funding, realistic requirements, and relatively easy way to do business as compared to eg the US
- For the foreseeable future, focus is on China for actual projects
- Be aware of and keep abreast of the regulatory environment of smart technology in China





Take-Away Messages

Be aware of the fact that the regulation of smart technology in China is not limited to IP

- General Rules of the Civil Law (effective date October 1, 2017): “Natural persons enjoy the right to privacy” (article 110); “Any organisations and individuals who need to obtain personal information of others shall obtain the information according to the Law and shall ensure the information safety. It is not allowed to illegally collect, use, process or transfer the personal information of others. It is illegal to buy and sell, supply or publish the personal information of others”

Take-Away Messages



- Cybersecurity Law [article 41](effective date June 1, 2017): “Network operators shall abide by the principles of “lawful, justifiable and necessary” when releasing rules for the collection and use of such personal information, expressly notifying the purpose, methods and scope of such collection and use and obtaining the consent of the person whose information is to be collected”



Take-Away Messages

- Ninth Amendment to the Criminal Law [New article 286(a)]: “It is a crime for network service providers not to perform their duties relating to the safety of personal information”
- Cybersecurity Law [article 37]: “The operator of a key information infrastructure shall store personal information and important data wherever collected or generated in the People’s Republic of China, within the territory of the People’s Republic of China”

Take-Away Messages

Conclusion:

Opportunities are huge in Asia especially China (but will spread to other countries) for EU SMEs' in smart technology

IP Protection is there but proper attention must be given to other regulations



Q&A

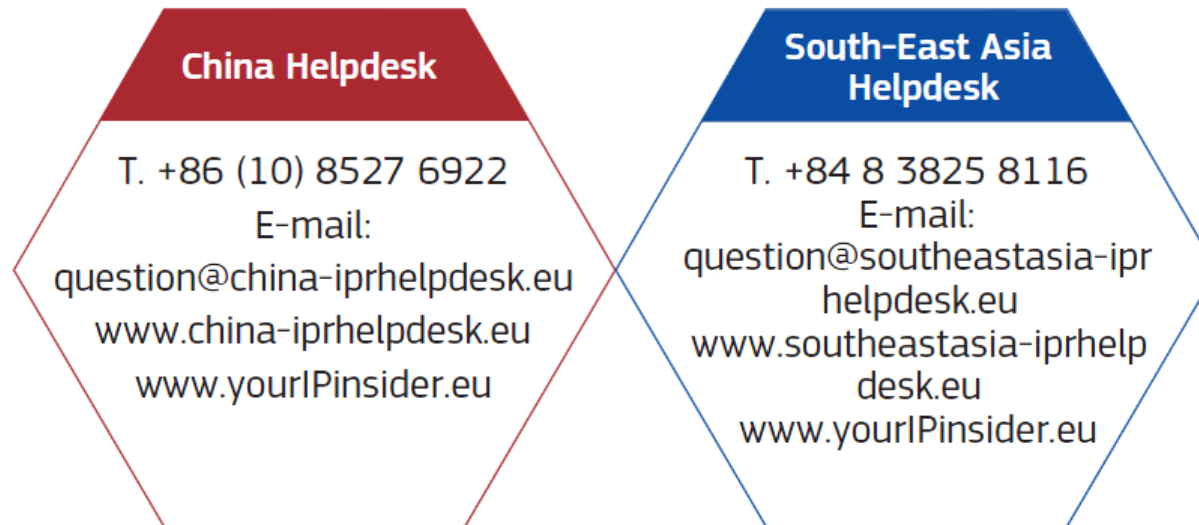
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To learn about any aspect of intellectual property rights in Vietnam or elsewhere in South East Asia, including

✓Local partners

✓Due diligence

✓IP audits

✓Or to simply learn about the local landscape and adapt your IP plan accordingly - something which can save you EUR in the long term