Patent Protection for Computer Software and Indirect Infringement

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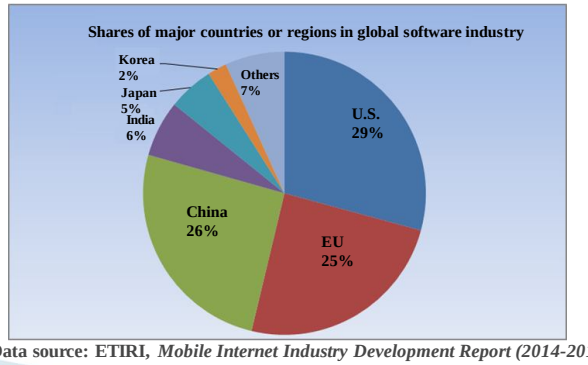
The Status Quo of China's Software and its Information Service Industry

- Globally, U.S. and EU still remain as the main software market. At the same time, China, with its 25.6% shares and 1.3% year-on-year growth rate, is taking an eye-catching new look in the global software market.



Data source: ETIRI, *Mobile Internet Industry Development Report (2014-2015)*

China's Software and its Information Service Industry

- According to the statistics given by the Ministry of Industry and Technology, China's software industry generated RMB4,300 billion in 2015, up by16.6% y/y.

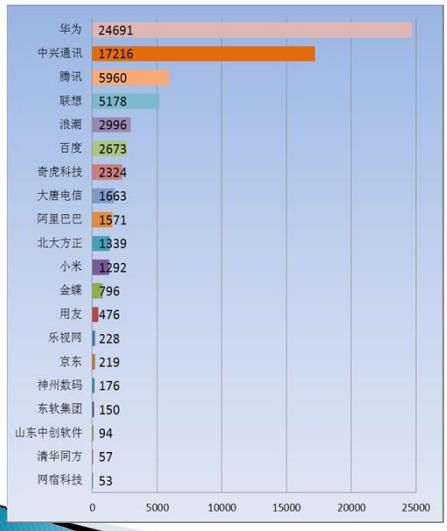
Index	unit	2015	Rate %
software industry income	Billion Yuan	4300	16.6
1 software income	Billion Yuan	1404.8	16.4
2 IT service income	Billion Yuan	2212.3	18.4
3 plugged-in software income	Billion Yuan	707.7	11.8
The export of software industry	Billion US Dollar	54.5	5.3

Patent Application of Computer Software in China

- At present, the total amount of patent applications of computer software are over 600,000.
- The transnational enterprises, especially communication and electronic enterprises, are more likely to apply for patent protection.
- Except Microsoft, the enterprises centering on software barely apply for patent protection.

- Retrieval time: July 30, 2015
- Database: Industrial IP data resource retrieval and analysis system

The Patent Application Status quo Computer Software in China



- Among domestic enterprises, communication and internet-based enterprises in China are also more likely to apply for patent protection.
- Conventional domestic software enterprises barely apply for the patent protection. The amount of patent applications is relatively small, compared with communication and internet-based enterprises.

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The Characters of Computer Software Patent

- The essence of invention are generally of intangible processes and steps.
- it will inevitably involve algorithms and arithmetic.
- The application of these steps may involve interaction of different equipment operators.
- Invention often involves background algorithms. The cost for representing or verifying these steps on end products is often high.

The Claims of Products (with means plus function)

- **Claims of constructing of functional module**
  - All based on computer program flow
  - Complete correspondence(name and limited context)
    - to every step of the computer program flow
    - to the claims that reflect the computer program flow

- **Example:**

1 A way to adjust power. It includes
Receiving the examining report from UE.
Using the received report to calculate the power that required by UE.
Sending UE a controlling information which are used to calculate the power in order to adjust the transmitting power of UE.

2 An device to adjust power. It includes
An unit to receive the examining report from UE.
An unit to calculate the power that UE needs based on the report.
An unit to send UE a controlling information which is used to calculate the power in order to adjust the transmitting power of UE.

Relevant Questions of Computer Software Patent Protection

- **Patent protection on the object of the software**
- **The multiparty infringement in process patent claims or the constructing of functional module.**
- **Drafting of system claims.**
- **Explanation on functional module（virtual devices）**
- **Determination of the sued infringing technical schemes.**

Existence of multi infringers

- Many software patent technical schemes involve more than one infringers
- Article 11 of the existing Patent Law of People's Republic of China
  After the granting of patent for an invention or utility model, unless it is otherwise prescribed by this Law, no entity or individual is entitled to, without permission of the patentee, exploit the patent, that is, to make, use, promise the sale of, sell or import the patented product, or use the patented process and use, promise the sale of, sell or import the product directly obtained from the patented process, for production or business purposes. After the granting of a patent for a design, no entity or individual shall, without permission of the patentee, exploit the patent, that is to say, they shall not make, promise to sell, sell, or import the product incorporating its or his patented design, for production and business purposes.
- The law only prescribes direct infringement but no prescription of indirect infringement
- Article 8 of the Tort Law of People's Republic of China
  Where two or more persons jointly commit a tort, causing harm to another person, they shall be liable jointly and severally.
- Article 9.1 of the Tort Law of People's Republic of China
  One who abets or assists another person in committing a tort shall be liable jointly and severally with the tortfeasor.

The existing questions of multi infringers

- Article 21 of the Interpretations of the Supreme People's Court on Several Issues concerning the Application of Law in the Trial of Patent Infringement Dispute Cases (adopted in January 2016 and effective from April 2016)
  - If an actor know the relative products are the material, equipment, components or intermediates specifically used for the implementing of the patents, still supply the products to others with production or business purposes, violating the rights of patentee. When patentee claims that the provider's action should be regard as aider infringement prescribed in Article 9 of the Tort Law of People's Republic of China, People's court shall support.
  - If an actor know the relative products or methods are granted by patent and possess no permission from patentee, still induce others to violate patentee's rights. When patentee claims the actions of the inducer should be regard as abettor infringement prescribed in Article 9 of the Tort Law of People's Republic of China, People's court shall support.
- According to the existing provisions, multi infringers' software infringement action could only be categorized into joint infringement or indirect infringement, which requires the premise of direct infringement, in joint infringement.
- The legal relationship is complicated. The burden of proof is too heavy. Patentee displays no willingness to sue. It is hard to acquire protection.

Comparative law research in indirect infringement

- **U.S.** : 35 U.S.C. § 271(b)——induced infringement
  35 U.S.C. § 271(c)——contributory infringement
- Limelight Networks, Inc. v. Akamai Technologies, Inc. (2014): "the liability of indirect infringement must base on direct infringement"
- Assistant infringement components: the essential components of patent, full awareness and with no intention to infringe

- **Japan: Article 101**

1 Only can be used for the special objects which are used to produce product patent
2 Special components in producing product patents, full awareness and with no intention to infringement
3 Special objects only for implementing process patent
4 The special objects of implementing process patent, full awareness and with no intention to infringement

- Indirect infringement should based on direct infringement

Comparative law research in indirect infringement

EU:

Article 26 of the Community Patent Convention(Article 10 of German Patent Law)

- A patent shall have the further effect that a person not having the consent of the patentee shall be prohibited from supplying or offering to supply within the territory to which this Law applies a person, other than a person entitled to exploit the patented invention, with means relating to an essential element of such invention for exploiting the invention, where such person knows or it is obvious from the circumstances that such means are suitable and intended for exploiting the invention.
- Subsection shall not apply when the means are staple commercial products, except where such person induces the person supplied to commit acts prohibited by the second sentence of Section 9.

Conclusion and dilemma

Conclusion

- China's judicial interpretation about indirect infringement in the existing provision and Article 271 (a) (b) of American Patent Law are basically identical.
- The indirect infringement in joint infringement require direct infringement as premise.
- It requires common legal fault (intentional or negligent)

Dilemma

- The body of infringement of software often involves more than one parties. Sometimes, one of the parties could be the ultimate user(with no intention to earn profit), for example, tagging in the Akamai case. Under this circumstance, how to form a joint infringement?
- Can process patent or technical features in the product patent of functional module be regarded as the materials, equipment, components or intermediates, which are made specially for the implementing of patent?

Personal Opinion

- In patent claims, there should be at least one action, which possesses technical features performed by the non profit-driving actors. Because there is no direct infringement, there exists no indirect infringement. However, this conclusion should be precluded if the plaintiff proof that the actor with production and business purposes will also implement this technical features.(Symantec)

- When more than two infringers (they have common faults), implement the patent through network by using their separate actions. This should be treated as multiparty direct infringement according to Article 8 of Tort Law of People's Republic of China and Article 11 of the Patent Law of People's Republic of China.

Personal opinion

- The one who plays a holding or dominating role in a multiparty infringement should be regarded as direct infringer. For example, through contract or the connection relationship, which is referred as control or direct in the case of RMC Resource.
- The technical features, which belongs to the essential part of the patent and possess no other non infringing purposes, for example the special software for the drive of the hardware, should be regarded as "the components which are specially made for implementing patents."
- The subjective legal fault of Indirect infringement is full awareness, namely intentional infringement. Negligence cannot form indirect infringement.

Some suggestions on the Drafting of Patent

- The drafting of the patent would be better if there is only one user. Don not involve too many actors.
- The drafting of the patent should have different layers with possible more patent claims.
- The actions performed by the actors with no production and business purposes should not be included in the patent claims.

Thank you

Thanks