

Asia IP

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FANTASTIC RIGHTS

And Where to Use Them



Toasting the
2016 *Asia IP*
Award Winners

The
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Synergies of AI,
the Internet
and IP



Synergies of Artificial Intelligence, the Internet of Things and Intellectual Property

An estimated 5 million devices are added to the internet each day, many of them generating data on their own. Business interests will soon find this very self-generation of data a major concern. **Pravin Anand, Vaishali Mittal and Siddhant Chamola** explain.

Kevin Kelly, the founding executive editor of Wired magazine, once said: "As we shape technology, it shapes us. We are connecting everything to everything so our entire culture is migrating to a 'network' culture and a new network economics. The dynamics of our society will increasingly obey the logic of networks. Ambient intelligence will depend on

being added to the internet each day and, obviously, the success of our future will depend so greatly on software which enables these millions of linkages to occur each second.

It is said that there is a shift taking place from the "algorithm" as a dominating concept to "data." Obviously, in this new paradigm, the proper and timely protection of data is an absolute necessity.

However, it is this new form of data generation and transmission which will result in myriad legal complexities.

Interestingly, when the internet developed as a universal concept and domain names came into existence, a shift took place from physical trials before brick and mortar courts to concepts like the UDRP, i.e. e-mail complaints, responses and an e-mail order within 45 days by a panel located in a distant land. Technology could not wait either

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for legislation or traditional courts and a new dispute resolution mechanism came into existence.

Would artificial intelligence and IoT require such drastic changes in our dispute resolution concepts and, if so, could there be decision making through machines, robots and devices?

the ability to co-relate with the informational environment and with each other.”

Terms like ambient intelligence, Internet of Things (or IOT), Industry 4.0, ubiquitous computing, semantic web, big data, RDF, turtle syntax and artificial intelligence (or AI) are the modern buzz words.

(a) When machines generate data, who owns the same, particularly when no human hand is involved?

In this new world, it is estimated that over 5 million devices are

(b) If software is dominating the IP world, how would the global trend of moving away from the patent protection of software help incentivize the creation of the new software system models and algorithm.

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Who owns this data? Is it the smart-phone manufacturer, the network provider, the airline, all of them or the AI that may one day reside in the phone?

(c) How will differential national protection that impact development of IoT systems?

(d) If software and data resides in the cloud, one of the biggest challenges would be where the invention has occurred and an even bigger challenge would be where infringement has occurred?

(e) If all data is stored in the cloud and transmitted by smart devices, how does one protect the confidentiality and sensitivity of private information?

The following paragraphs analyze and attempt to propose solutions to such complex legal concepts.

The world is reveling in knowing that devices are generating data on their own. However, business interests shall soon find this very self-generation of data as a major concern.

Take for instance a smart phone, through which you purchase a flight ticket online. The device identifies the departure time from your inbox, synchronizes it with your current location, assesses the traffic situation and gives you an automatic update on when you should leave for the airport. *There is data generated and exchanged at every stage.*

However, who owns this data? Is it the smart-phone manufacturer, the network provider, the airline, all of them or the AI that may one day reside in the phone?

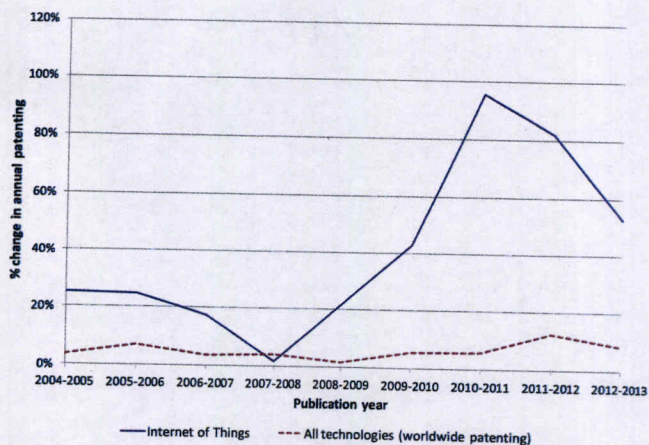


Figure 1. Source: UK Intellectual Property Office, *Eight Great Technologies, The Internet of Things, A patent overview.*

Copyright law offers an instant solution, or at least attempts to. Information upon its creation may constitute a “database” and qualify for protection as literary work. There is a presumption as to its ownership, e.g. rule 1: author, rule 2: employer, rule 3: assignee. However, copyright holds its ground in a limited environment where data is created and stored by a single device.

IoT envisages data-generation by devices, which is transmitted to other devices which change and improvise it further. All of this is performed through AI enabled programs.

It is clear that copyright alone does not hold the solution.

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Contractual agreements can bind all concerned entities (supply partners, network providers, data solution providers etc.) to create strict rights regarding data ownership, data management etc.

Companies can enter into agreements where they agree to confer ownership and proprietorship of data upon one particular entity (either the smartphone manufacturer or maker of the AI program amongst others).

Trade-secret protection can come to the rescue of entities willing to act against infringers. In case the technology cannot be easily deciphered by third parties, and the means of data creation and management is unique to a particular business, this option can be availed.

While IoT involves a larger number of enterprises than any other industry existing today, innovation and creativity remain undeterred as patent applications for IoT related inventions are growing rapidly.

IoT patents have grown 40 percent annually in the period 2004-2013, in comparison to a six percent growth in patents across other technologies.

Securing patents over technology for data creation and transmission can certainly create defined boundaries of ownership. A large number of countries are making changes to their existing regimes in some form or the other, in order to incentivize IoT- and AI-driven business growth.

China and India have introduced the Make in China 2025, Make in India and Digital India initiatives to promote unprecedented growth in their respective domestic manufacturing as well as software based industries. In the case of China, this has already resulted in a large number of IoT-based patent filings, making it the single largest hub of such patents.

India, too, is giving a tremendous push to its software and entrepreneurial industries through filing fee waivers, monetary incentives, etc. The patent infringement and trade secret lawsuit between Jawbone and Fitbit in the United States is a clear example of the seesaw between patent infringement claims and findings of invalidation for both parties’ patents.

IoT is expected to attain an economic value of US\$11.1 trillion by 2025. The economic returns from interdependence and B2B networking (as opposed to traditional B2C networking) through IoT are expected to be two times greater than what conventional industries offer.

As most enterprises see patents as surety for market share and economic success, patent applications for varied AI and IoT compliant technologies are on the rise across the world. Naturally, with an increase in patent infringement claims, there will be a rise in patent invalidation claims, too. The Jawbone/Fitbit dispute

serves as testament, since both parties raised invalidation claims against each other's patents.

With the gold rush in the IoT industry, a lot of players will look to enforce their patent rights more aggressively than before. The greater the number of patents secured before conducting appropriate prior art searches and the greater the number of patents secured without significant improvement over existing technology, the higher will be the number of successful invalidation actions.

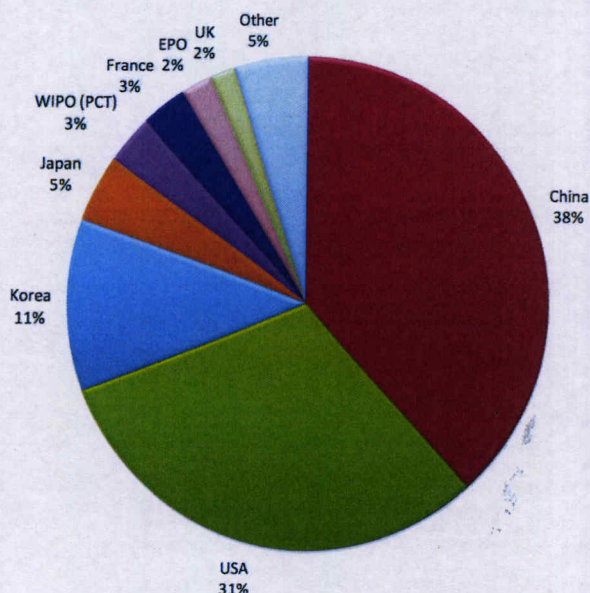


Figure 2. Source: UK Intellectual Property Office, *Eight Great Technologies, The Internet of Things, A patent overview*.

Different branches in the IoT platform are expected to function through basic technology which serve as foundation for growth and development. Such foundational innovation or "standards" are usually patented by a particular entity. In conventional industries, there are several holders of standard patents forming patent-pools, to offer licenses on their patents.

The IoT industry has taken its first steps towards establishing such patent pools, with groups such as Avanci already having commenced the offering of standard patents on wireless technology to enterprises looking to incorporate wireless connectivity to their devices.

Perhaps the biggest risk to the proliferation of AI and IoT technologies is theft of personal information of individuals and corporations. In fact, this risk was specifically identified as a concern by the US Federal Trade Commission

Most individuals often ask themselves what is to happen if personal data from their smartphones and other devices regarding their location, banking passwords, etc. is leaked on the internet. The issue regarding manipulation of one's private information for advertising and solicitation of customers for an entity's product or services has already found its way to court. As we saw, LinkedIn's software accessing private e-mail accounts and soliciting individuals' contacts to join its services (not once but thrice) based on a simple consent given by users to access their e-mail account managed to infuriate thousands of users. Besides, to do such acts constitutes a breach of privacy, but also as a misrepresentation of identity.

Legislation can never keep up with the fast pace of modern



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technology and, obviously, IP solutions to unique problems must either be a contractually-based or based on technical solutions.

However, it is certain that with great innovation leading to great legal complexity, will come great innovative legal solutions, too. **AIP**



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