

INTELLECTUAL PROPERTY IN THE ERA OF BIG AND OPEN DATA

It has become increasingly obvious that a few recent tech-related developments (i.e. big data, cloud, mobility and social media) already have, and will continue to have, a profound impact on the way enterprises, government and individuals interact and do business. However, an equally impactful albeit not so recent aspect that cuts across all such trends is the question of intellectual property rights in the digital economy. With this in mind **Jude Umeh** FBCS, Capgemini, discusses some of the key issues and ways in which enterprises, and other owners of intellectual property, will need to navigate the era of technology and big open data.

The concept of intellectual property (IP) is well proven as a powerful incentive that drives creativity and innovation, but it is increasingly challenged by today's highly connected world, particularly in all aspects of digital information and content life-cycle. To further complicate matters, the evolution and emergence of rapid technology-led change is only likely to increase and accelerate. According to Gartner Research, four recent key developments have combined to produce what amounts to a paradigm shift in the way we do business, and they describe it as the 'Nexus of Forces', comprising: cloud, mobility, social media and big data. These, and other similar trends, are starting to have a major impact on the way in which organisations and individuals create, manage, transact, use and reuse information assets (and associated intellectual property rights). As it will require an entire book to do full justice to this topic, we shall focus on top level themes and how to address the key issues, challenges and opportunities facing enterprise decision makers today.

Setting the scene

Irresistible forces of rapid technology change and evolving user expectations are challenging and altering the business enterprise. Some typical research findings and conclusions are highlighted below:

Surprisingly, not many decision makers appear to understand, or are willing to discuss, how such developments might affect their business, particularly with regards to information assets and IP. Is it just too early for any meaningful dialogue? Are the impacts unlikely to be anything compared to the other trends and does it really matter? Or are business leaders far too busy dealing with harsh economic realities to focus on this aspect too? The respective answers are no, yes and probably. However, it is clear that the likely impact will be anything but trivial if you consider just how tightly IP is interwoven with such key developments.

What are the key issues?

Some key implications and links between

IP and the four major technology-led trends are illustrated in Figure 2, and described briefly, as follows:

IP and the cloud

Cloud technology delivers flexible, managed compute and storage capabilities as a service to users across a distributed network. Key IP implications, (aside from relevant cloud technology patents) are related mainly to access and use of data held within the cloud as well as the services they feed. Given how the cloud is increasingly used to power the daily transactions, interaction and communication of millions of ordinary users, it is easy to appreciate the major implication for IP.

IP and social media

Social media describes the product of all interactions between individuals in a social network, including any information created, modified, exchanged and shared between members of the network, in various formats (e.g. images, video, audio and text). Such content, their usage and user behaviours have huge implications for IP (e.g. copyright infringement).

IP and mobility

Mobility is about access to enterprise information and other resources using an appropriate mobile device without restriction of a fixed location. Key implications for IP include unauthorised access and use of location-dependent material (e.g. territorial rights over copyright content).

IP and big data

Big data describes the huge amount of digital data that resides and flows in and out of the enterprise. It comprises both structured and unstructured data (e.g. images, video and audio), and the sheer variety, volume and velocity of such data is mind-boggling, in comparison with a just decade ago. Big data arguably has the most implication for IP, especially since digital data

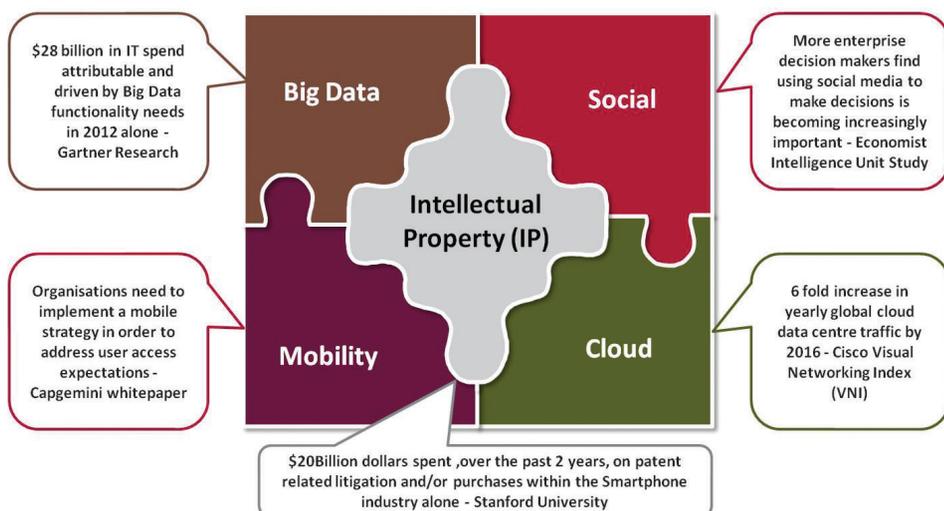


Figure 1: Typical research Findings

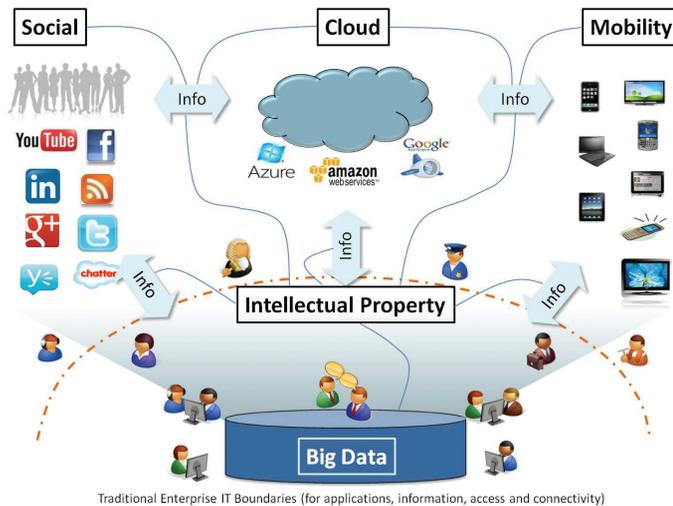


Figure 2: Key IP implications and links

is both the raw material and output / enabler of the information age, which permeates and binds all the other technology and behaviour trends mentioned above.

IP and litigation

Following the recent spate of patent lawsuits between several consumer technology companies, it has become clear that IP is regarded by some as a crucial weapon. According to recent news on the BBC website, serious attempts are being made by the International Telecommunications Union (ITU) to address what is described as 'an unwelcome trend in today's marketplace to use standard-essential patents to block markets'. Standard essential patents are core to industry standards, therefore holders of such patents can effectively throttle competition if / when they so wish. However, the cost and impact of such 'weaponised IP' litigation is truly stifling real innovation, leaving only a feeble battle zone of IP lawyers, court cases and multi-million figure penalties, which goes against the key sentiment and objectives of IP.

Top five things enterprise decision makers need to keep in mind

1. Stakeholder perspectives

Always bear in mind the motivations and interests of five key IP stakeholder groups (i.e. the creative, technology, commercial, legislative and end-user stakeholders). No one group is completely independent of the others, therefore a balanced approach is required for all IP-related decisions.

2. Clear policies

Create and communicate clear enterprise policies for IP, social media, cloud, mobility and data. It is a well known fact that

employees and their activities comprise a significant amount of security risk to any organisation. According to a recent Forrester survey, almost half of employees do not know their organisations policy on data. It is not difficult to imagine the same applies for IP, social media, cloud and mobility.

3. Evolving the real-time enterprise

This is almost inevitable, and requires embracing some key elements, for example, self service BI (e.g. data mashups), complex event processing (CEP), analytics and data discovery, location-based services, and cloud capabilities. In all cases, early consideration of IP implications will be crucial.

4. Architecting the digital enterprise

The key to digital transformation and architecture in a fast moving dynamic environment may be found in alignment with constant business model innovation. The biggest challenge facing many organisations in the digital era is how to incorporate a more fluid and dynamic approach to their business and operating models (because these won't stop changing). The architecture of such an organisation, its processes and technology, must also be dynamic in order to provide any sustainable value.

5. Your customer, your IP, your business

This represents a flipside to the traditional organisational view of the world, (i.e. business > product-service > customer). However, the main difference is that customers come first, and IP becomes the 'value' centre of the enterprise, rather than the products or services it is used to create. This view is even more compelling when one considers that digital trends appear to indicate mere products and services will no longer be sufficient differentiators in a

digital world with ever-diminishing barriers to entry. It ultimately boils down to a question of how, and not what, you create and deliver to your customers.

In conclusion, several tech-related developments are driving some far-reaching changes in how we conduct business today, and this is only likely to increase and accelerate in the near-to-mid-term. IP is a key strand that runs across such developments and must be kept close to mind in any digital strategy. All decision makers should remain vigilant of their key stakeholder motivations, and deploy clear policies when adopting elements of real-time enterprise and business model innovation. Finally, digital transformation must be based around the customer, IP considerations and key business proposition.

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