

The clash of mindsets

In order to capture the full value of intellectual property, a new generation of IP professionals needs to arise: people who can think and act in an interdisciplinary way, and define value from a business, legal and technical perspective

By **Roya Ghafele** and **Alexander J Wurzer**

Is the intellectual assets debate anything more than a rediscovery that, yes, indeed, people do matter in the end? Today's post-Fordist production model increasingly relies on brainpower, rather than machinery. While Fordism reduces the human being to just another production factor – the role of humans as machinery is well expressed in Charlie Chaplin's movie *Modern Times* – the knowledge-based economy relies primarily on the creativity of the human mind, rather than factories and an automated production chain. We live in an era where management consulting firms which produce nothing more than new perspectives on established structures can often prove to be far more profitable than, say, chocolate factories, which do have a tangible – and eventually quite tasty – output.

Up to now, the intangible assets debate has been primarily driven by economists. Sociologists, anthropologists and other human scientists have hardly made a contribution to the discussion. In addition, the historical evolution of various schools of thought in Europe has led many to ignore the human dimension. One of the side effects of the French Enlightenment movement is an over-emphasis on Cartesianism, so leaving little scope for soft factors such as culture. In fact, the notion soft factor is in itself a slight because it implies that soft factors are less serious or important than hard factors, which are usually associated with quantifiable data. Or, to put it another way, we live in a culture that tends to reduce the importance of cultural factors and discredits them with the simple term soft factors. For

the intangible assets debate, this has serious consequences: intangible assets, primarily an expression of the human mind, are being treated in an ambiguous way. In order for them to be taken seriously there is a need to consider them as hard factors, despite the fact that by their very nature they are more correctly categorised as being soft.

This confusing dichotomy needs to be challenged so that instead intangible assets are by their very nature seen as having their roots in the human mind so that they cannot be treated separately from the human dimension. In essence, IP management is nothing more than people management. Intangibles fundamentally differ from the assets that drove the industrial revolution. Thoughts, ideas, creativity and IP – as the most tangible of intangibles – are the drivers of the knowledge-based economy, rather than land or machinery. The factors of productivity remain the same: capital and labour.

However, the nature of capital is understood in a different way: only humans and not companies do business with each other. Business interaction is – like any other form of interaction – primarily a human endeavour. Trust and confidence between the interacting partners are essential for successful deals. These values are rooted in experience, knowledge and the general cultural background of the individuals interacting with each other (there is, for example, substantial research on the challenges surrounding cross-cultural business deals). This is also in line with Hernando de Soto who, in his book *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, argues that trust is the basis for wealth creation. According to him, the major

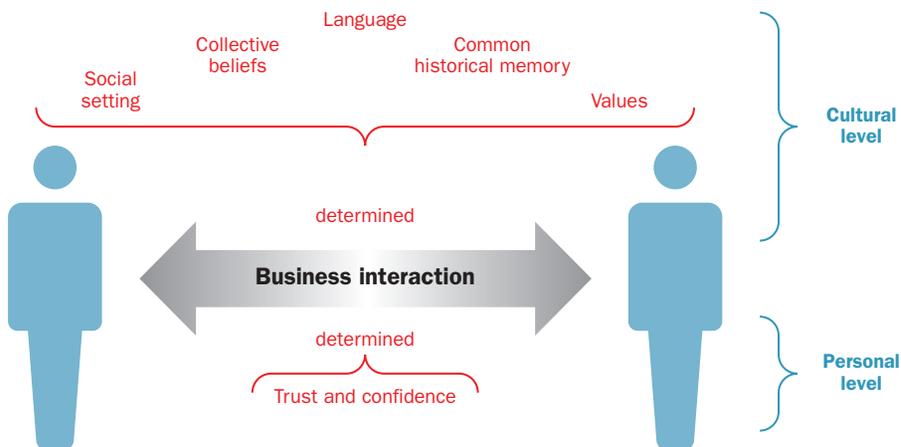
difference between developing and developed economies is the level of trust that market participants have in the economy. Wealth creation is much easier in developed countries because the respective actors believe in the economic system and the rule of law, and have confidence that their property rights are guaranteed.

Culture or rather a cultural shift, as broad and vague as the concept may be, is therefore key to helping the knowledge-based economy take off more rapidly. Without adequately trained market participants, the IP-based knowledge economy will be hampered in its expansion. Therefore, if the knowledge-based economy is to expand faster, there is a need to initiate programmes that build up IP professionals with a different cultural background from those currently acting in the market; or to put it another way, to counteract market failures that are rooted in the current inadequacies of addressing the IP dimension of business transactions, there is a clear need to develop and further expand training that builds up professionals who can grasp not only the legal but also the business and technical dimension (in the context of patents) of IP.

This is the true challenge when it comes to IP management. Managerial methods are well proven; what is missing, however, are humans who know how to associate these concepts with the notion of intellectual property and intangible assets in general. The strategic vision of the World Intellectual Property Organisation (WIPO) as set out by the Director General, Dr Idris, recognises this need for a cultural shift. According to WIPO, it is important that we begin to demystify IP and to make the concept available to all peoples of the world. Rather than seeing it as an abstract notion, rooted in the field of law, WIPO seeks to enhance general awareness about IP so that people can perceive it as something that is about assets rather than about legal rights.

The notion of culture is strongly interwoven with the human dimension of business. Business culture is primarily determined by collective beliefs, values, language, common historical memory and the social setting used by the people doing business with each other. Currently, the IP market is crowded by managers, business analysts, bankers, engineers and patent attorneys who either have a very minimal knowledge about IP and other intangible assets or who have a rather one-dimensional perspective. It is for this reason that, if the

Getting the deal done



full potential of IP value is ever to be achieved, there is a need for adequate educational opportunities that approach the subject holistically from a business, legal and technical point of view.

People and IP management

The primary aim of business is to maximise profits, in order to make money. The problem is that the majority of people currently working in IP management do not have the inter-disciplinary educational background which will allow IP to make a full contribution to this process. That is not to say, however, that there have been no advances. In several European countries, for example, certain steps towards inter-disciplinary education in the field of IP have been taken. German patent attorneys are legally required to have a degree in both natural sciences and law. But this still means that they usually lack the kind of business training, something which almost inevitably makes it much harder for them to grasp the full potential value of IP to the company that owns it.

In order to create value, the assets and liabilities of a company need to be recognised and managed. Business behaviour is driven by a search for profits while keeping costs as low as possible. Hence, a firm's main driving forces need to be identified and subsequently optimised. This is not an easy task because intangible assets, such as IP, often go unnoticed due to a lack of awareness about their (true) value to business. For example, the balance sheet historically focuses primarily on tangible assets. Intangible assets were (and still are in many instances) treated as a left over and

vaguely summarised under the term goodwill. This approach is slowly changing. For example, there is the increased commitment towards intangibles under the US's Generally Accepted Accounting Principles (GAAP) and the International Financial Reporting Standards (IFRS). This again has had an impact on business culture. The fact that accounting standards allow businesses to make the value of IP explicit on the balance sheet – though only in specific contexts – may be considered a first move towards a more intangible assets based business culture. Managers are hence becoming increasingly aware about the value of IP.

By its very nature, IP management cuts across various areas. It can primarily be categorised into three elements: the creation and processing of information; the need for interdisciplinary holistic thinking; and the necessity to take action. Actions are therefore based on decisions, which, in turn, are influenced by the socio-cultural background of the respective actors.

These factors come into play when one looks at the very fundamental act of filing a patent. The patentable invention is created by a researcher. At the invention stage, technical innovation and creativity are required. After that, patent lawyers come into play. They ensure that all legal requirements are met to guarantee the necessary ownership of the invention. In most cases, only the technical and legal viability of the invention are being examined. But in reality, the business relevance of IP matters from day one of the invention process. By not allowing for this, the traditional approach to patenting means that, while the business relevance of patents may frequently come into play at a later stage, many companies miss out on the full economic potential of IP, so that while patent portfolios may be legally viable and technically solid, they actually have little meaning with regards to how a company works on a day-to-day basis.

The cornerstone of IP management should be to establish a business culture that permits companies to look at IP from all the various angles. It is above all decision management. Decisions about whether to deepen a particular area of research; or on whether to file a patent and, if so, which geographical protection to opt for; or on whether to maintain a patent, license a patent or keep it as a defensive weapon that can block other market participants. All these decisions are taken by humans – humans who have a particular educational, social and cultural background. Decisions

always concern the future and are based on the experience and socio-cultural bias of the respective individual. If this background is primarily influenced by a particular school of thought, a decision-making process that does not allow for the complete maximisation of the benefits of a given IP portfolio will almost inevitably follow.

Clash of schools of thought

Engineers, lawyers and economists are currently the people dealing with IP. The different academic training of each of these professional groups brings with it a fundamentally different perspective. In practice, people trained in different schools of thought interact on a daily basis without usually being aware of the fact that they have a different cultural background and may perceive, understand and judge the same situation and the same words in a very different way.

Engineers are usually the ones that develop patentable technology. Their work is primarily driven by a search for new technical solutions. Engineers are trained in conducting experiments and apply mathematical models in order to identify objectively measurable methods to discover the way in which nature behaves.

Engineers may not care too much about the market relevance of their work or intellectual property. As a consequence, engineers may often miss out on conducting an in-depth patent search. The result can often be that creativity, talent and funding are wasted on areas of knowledge that have already been patented. While engineers are strong at doing literature research, researching patent databases (where appropriate) is less common practice. Engineers are not the only ones to blame. The language used in patent claims is usually difficult to decode without a legal background.

Individually assigned property rights over technological inventions strongly facilitate the commercialisation of technology – hence the need for lawyers and patent attorneys. Lawyers and attorneys know how to handle patent applications, maintain patents, pursue patent litigation and prepare the procedures for a licensing deal. A lawyer perceives intellectual property assets primarily as intellectual property rights. A lawyer's activities are framed by the complex interplay of various national and international norms, and the legal architecture in general. While the filing of a patent means business to the lawyer, the lawyer will not look at the business relevance of the filed patent. More

patents are better business (for the patent lawyer). In-house lawyers may also seek to legitimise their existence by the number of patents filed and so the same logic applies.

The legal school of thought does not want to observe nature, but instead seeks to participate in the social endeavour. Lawyers compare decisions with legal norms and interpret and judge information. This approach is fundamentally different from the scientific school of thought.

According to *Knowledge Unplugged: Global Survey on Knowledge Management*, written by Jürgen Kluge, Wolfram Stein and Thomas Licht, management may be defined as “conscious and systematic decision-making about the best use of scarce resources under uncertainty to achieve lasting improvements in an organisation’s performance”. If we accept this, it would be fair to say that managers are therefore trained to take decisions based on estimates and judgements. This approach is fundamentally different from the legal or scientific school of thought.

Managers are trained to look at cash flows and seek to maximise profits. Yet intangibles, and particularly IP, frequently do not generate direct cash flows, although they will often have an indirect impact on them. As a consequence, IP is rarely to be found on the agenda of senior management (a survey conducted by WIPO among 45 companies of all sizes all over the world found that IP management was considered a priority for senior management in less than 5% of them).

Charting the way forward

Intellectual property has become established as the new currency in the knowledge-based economy. As the most tangible output of knowledge assets, IP can make or break a business deal. Increasingly, patents are traded as door openers to new markets. For example, in 2005 the Chinese company SAIC offered Euros 97 million for the patents relating to the auto models Rover 25 and 75. The Chinese interest was primarily in the codified, patented know-how and the market access related to it. The British car manufacturer’s Euros 4 billion-worth of tangible assets did not catch their attention to the same extent.

The primary relevance of IP in business deals can also be demonstrated by the Mercedes CDI-technology. Today’s success of the diesel engine driven automobile is the result of a patent deal. The foundations for the common rail technology were created in Italy by Fiat in 1993. However, serial

Operating in silos

	Engineering	Lawyer	Manager
Activity	Develop patentable technology	Handle patent applications, maintain patents, pursue patent litigation...	Make decisions about the use of scarce resources
Reason for poor IP management awareness	Focused on the search for new technical solutions, lack of attention to IP or market relevance	Filing and maintenance of patents mean business	Hardly any directly generated IP cash flows
Effect	Research overlaps, poor market performance	Too many patents filed and maintained	Loss of money because of poor recognition of IP-related criteria

development failed and Fiat sold the patents to Bosch. Bosch succeeded in advancing the technology until serial production. Mercedes finally brought the technology to market five years later with the 220 CDI.

Equally, patent pools helped the German Fraunhofer Gesellschaft to make substantial profits with the recently developed MP3 technology; while in 2005 alone, financial institutions like Crédit Suisse First Boston issued patent funds worth Euros 20 million. Stock exchanges are also starting to look more closely at IP. The news of the licensing agreement between Qiagen and Applied Biosystems immediately impacted on stock prices. The access to Applied Biosystem’s patent protected real-time polymer chain reaction technology allows Qiagen to conduct biotech research by using the latest testing systems. Unsurprisingly the company’s stock price went up when the deal was announced.

In his book *Communicating Knowledge Capabilities*, Baruch Lev demonstrated that there is a positive correlation between the market price of stocks and news on the expiration of patents or patent litigation. While these examples clearly demonstrate that IP does have a significant impact on the market, it is still surprising that market participants have not yet succeeded in adapting to the market conditions required by the knowledge-based economy.

It seems clear that the current debate on IP management has not sufficiently recognised the human dimension. IP

management is too often seen as a technical process that can best be accelerated by investing in software or data processing systems. While these are clearly essential tools to facilitate the process, it remains the case that IP management is – like any form of management – principally about people management. But due to the historical evolution of various schools of thought, the human dimension tends to go unnoticed. This may have serious consequences in that the full value of IP remains unexploited.

The market is overcrowded with people who have developed one-dimensional competencies. The current educational system does not lead to the training of IP professionals in a multi-dimensional way. There are very few programmes that aim to train students in IP across various disciplines. While we have clearly succeeded in building up a solid labour force of IP lawyers, as well as general managers and engineers, there is a clear need for IP entrepreneurs who can think and act across disciplines. A little bit more of a renaissance approach – a few more Leonardo da Vincis, as opposed to highly specialised professionals – would clearly benefit the market. ■

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