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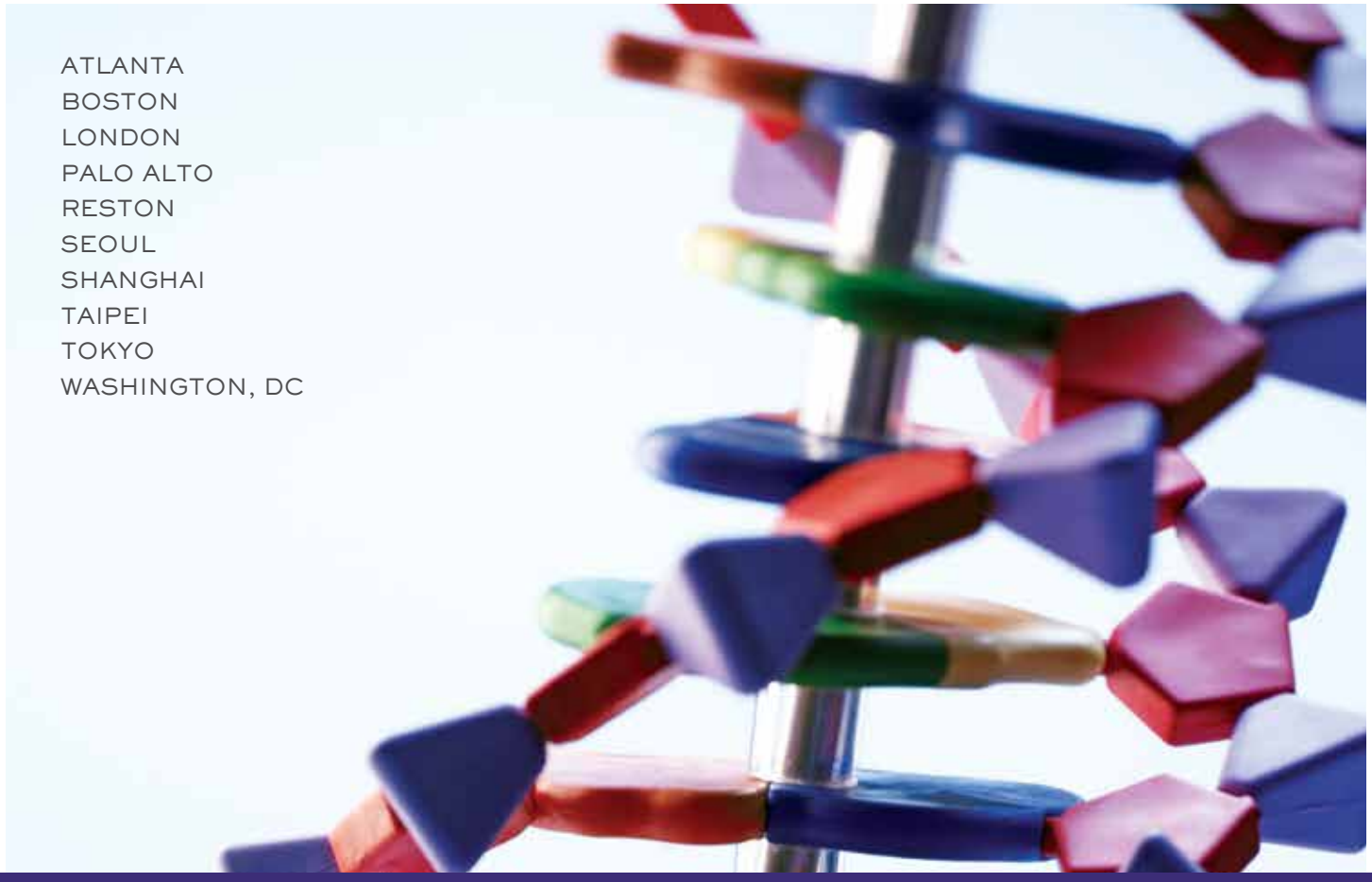
We reveal the individuals who are driving the world's rapidly changing IP market



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LEADING THE WAY FOR IP PROTECTION IN LIFE SCIENCES

As the research and scientific discoveries of the past decade have moved beyond the lab into the commercial application of biotechnology, explosive growth has occurred in related sectors that require intellectual property protection for survival. Finnegan has advised biotech pioneers on every aspect of IP, including patenting ground-breaking advancements, enforcing patents in litigation, and defending against claims of infringement or ownership by others.

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IP in the financial services industries

On May 8 2017 a group of senior IP executives working in the financial services sector got together with *IAM* North America editor Richard Lloyd and Finnegan partners Jeff Berkowitz and Elliot Cook at the W Hotel in mid-town Manhattan to discuss some key patent-related issues confronting their industry. The talks were wide ranging and touched on a number of subjects – including patent eligibility and quality, new IP value creation strategies and internal communications – with debate continuing throughout the afternoon. While the exact nature of what was discussed – as well as who said what – was for the ears of those present only, Berkowitz and Cook, along with colleague Michael Young, have put together a special report which provides an overview of some of the key points.

We are grateful to them for their contribution and also to the following for the commitment and enthusiasm they showed both in preparing for the meeting and on the day itself:

- Bob Rutherford (Carneros Bay)
- Alexander Greenberg (Barclays)
- David Cunningham (The Hartford Group)
- Debbie Segers (FIS)
- Colm Dobbyn (Mastercard)
- Sean Reilly (The Clearing House Payments Company)
- Malina Moshe (Citigroup)
- Lisa Knight (American Express)
- Tracey Thomas (IP Zone)

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Separate no more – fintech leaders consider collaboration key to convergence

By Michael V Young, Sr, Elliot Cook and Jeffrey Berkowitz

The last decade has seen ever-increasing acceleration in convergence between the computing, communications and content industries, which all affect the financial industry. This trend is posing significant challenges to senior corporate IP leaders seeking to protect corporate innovations in these areas. By their nature, large companies innovate more slowly than smaller companies; this is especially true in highly regulated industries such as the financial sector. Yet falling behind when it comes to technological innovations can quickly lead to dire consequences in today's fast-moving and competitive environment. Many IP leaders in the financial industry have therefore started collaborating with smaller, fast-moving innovators to gain a competitive edge.

Start-up companies tend to employ enthusiastic innovators interested in generating a large amount of technology fast. However, they lack access to the resources needed to fully test and develop their offerings. Thus, one increasingly popular form of collaboration is that of fixed-term start-up accelerator programmes. Under these, a financial institution typically provides several start-up companies with physical space in which to work, as well as resources to which they would otherwise have no access – notably, the institution's wealth of customer information and experience. In return, the financial institution gets an extra tool for its technology development.

If a programme results in promising technology, the financial institution gets the first opportunity to take on an equity interest in the start-up involved or license the technology. But such programmes are about far more than increasing revenue – they are designed to provide true cross-collaboration between the employees of financial institutions and those of start-up innovators and to give financial institutions a view into where the industry is heading. Collaborating with outside innovators can also help foster an entrepreneurial spirit internally.

However, to get the most out of accelerators and similar programmes, IP leaders must recognise the challenges involved. While start-ups can develop technology fast, this does not necessarily translate into a quick return on investment. Because of long-established protocols and industry regulation, financial institutions face major challenges when it comes to deploying new technologies and, in many cases, find it impossible merely to purchase start-ups and incorporate their innovations. Start-ups tend to focus on developing technology which works and which solves perceived problems with existing technology. While this approach sometimes translates to great leaps forward, it seldom takes account of industry regulation. As a result, such technology cannot be scaled up to the massive level required for the financial industry without modification.

As larger financial services companies are only too aware, getting through the regulatory process takes time. Some financial institutions try to pre-empt this issue by educating start-ups with regard to compliance issues on the front-end (eg, before accepting them in an accelerator or during the accelerator process). While this approach may help, the sheer amount of state and federal regulations involved means that the financial institution will still be investing a great deal of time and resources before adopted technology meets applicable regulations. Knowing this, financial institutions often set up separate funding for start-up innovation collaborations.

A further hurdle is that corporate IP leaders sometimes react sceptically to new technology because it signals change and cost. While accelerator programmes help to address these potentially negative reactions, they do not eliminate them. It thus becomes important for IP leaders to message new technologies appropriately, for instance by explaining that the cost of non-adoption will soon outweigh the cost of adoption, particularly at the early stages of development and especially for ground-breaking technology.

Giving start-up companies a better chance of success also offsets some of the risk from those entities – regardless of whether they ultimately succeed – because intellectual property created by failed start-ups can potentially end up in the hands of non-practising entities (NPEs). In an accelerator environment, the financial institution would have a licence to that intellectual property from its inception. Thus, bringing in start-ups through an accelerator programme can reduce the risk of start-up innovators ultimately contributing to NPE portfolios.

Universities have also shown interest in collaborating with financial institutions, which comes as little surprise given their existing experience with accelerator programmes in the software and healthcare industries. While universities may be less interested in financial technology (fintech), the convergence of computing, communications and content industries have given

financial institutions and universities more areas for cooperation and joint development. For example, while machine learning, cybersecurity, big data analytics and cloud computing all have clear applications in the financial sector, advancements in these technologies affect a far wider audience. Thus, while less common than start-up accelerator programmes, financial institutions have begun to also create similar agreements with universities, where the financial institution provides access to what universities need in other areas: data.

Dealing with change: fintech patent portfolios in a post-*Alice* world

Regardless of whether financial institutions externalise their R&D or keep it in-house, IP professionals now face the challenge of deciding how to best protect their innovations. For many years, financial institutions routinely obtained patents that broadly protected not just their digital technologies but also novel business methods and financial practices.

That changed in mid 2014, when the US Supreme Court refined the test for what computer-implemented innovations qualify as patent eligible in *Alice Corp v CLS Bank Int'l*. Courts had long held that abstract ideas (eg, fundamental economic practices, methods of organising human activities, an idea "of itself", and mathematical relationships or formulas) cannot be patented. However, the Supreme Court in *Alice* went further by ruling that producing a computer implementation of an otherwise abstract idea cannot make an innovation patent-eligible. Rather, patent-eligibility requires "something more", such as an improvement to the functioning of the computer itself or an improvement to another technology.

Alice thus significantly curtailed what software-related inventions remained available for patent protection. However, it provided no specific guidance for determining the bounds of what software-related innovations remained patent eligible. This left IP professionals in sectors which rely heavily on software – including the financial industry – with a great deal of uncertainty. Courts have likewise grappled with the proper application of *Alice*. As a result, concerns about patent-eligibility now shape how IP professionals in the financial industry approach fintech protection.

Alice significantly affected the patent portfolios of financial institutions. Besides casting a dark cloud over a substantial portion of their issued patents, it means that IP leaders now face an uphill battle when it comes to obtaining new patents. The US Patent and Trademark Office (USPTO) responded to *Alice* with guidelines that were not favourable to business methods or software for financial-related innovations. Allowance rates plummeted for many of the USPTO's examination units, particularly those tasked with examining applications involving software technologies in the financial space. Thus, many of the pending applications in their patent portfolios stood little chance of being granted. Much of this uncertainty and doubt continues today.

Most IP professionals in the financial industry have now accepted that many of those applications should be abandoned without a fight, unless they have disclosures that allow for presenting new post-*Alice* claims. While they continue to press on for better positioned applications, even here there is frustratingly progress.

When the USPTO assigns an application to an examiner fundamentally disinclined against software technologies in the financial space post-*Alice*, no amount of argument or amendment seems to make a difference. In such cases, IP professionals often choose to appeal to the USPTO's Patent Trial and Appeal Board rather than go round for round with patent examiners. They are only now beginning to see the fruits of those appeal efforts.

So how are IP professionals in the financial industry best able to protect newly developed technology? While some show a marked preference for trade secret protection for innovations which involve less hard technology, others consider this ineffective in practice. The financial industry experiences too much cross-pollination in its C-suites for trade secrets to remain

Alex Greenberg
Barclays

"It was informative to get insights on the commercial approach to intellectual property at different institutions, including how budgets for patent portfolios get funded. There are competing incentives for leaving the patent budget with the business versus having centralised control of the patent budget with the innovation or IP function. Seeing how these incentives play out in real life in each scenario is very valuable"

Tracey Thomas
The IP Zone

"It was an excellent roundtable event. Hearing perspectives on how peers use and value intellectual property in corporate settings is always helpful. Particularly interesting, though, was how big banks are looking to integrate IP consciousness in their investment and acquisition strategies pertaining to tech start-ups"

truly effective for long. Leading IP professionals in the financial space have therefore adjusted their efforts to try to obtain patents for fintech inventions.

For newly developed technologies, invention harvesting has become more focused on the technical implementation of the financial service offering, rather than the service offering itself. IP professionals must also ensure that patent applications are drafted differently compared to before *Alice*. Post-*Alice*, applications must provide significant details on the technical advancements made, rather than on the end product or service which inventors often consider their innovation.

Patent drafting strategies have also shifted towards those employed by patent counsel from other jurisdictions that do not favour software (eg, Europe, where foreign counsel have long drafted applications with an exhaustive description of the technical problems to be solved, along with detail on the technical solutions addressing those specific problems). Once considered too limiting by US patent practitioners, such techniques are now being found helpful when it comes to obtaining patents in the post-*Alice* era.

Generating patent value for shareholders

As the financial industry continues to evolve its patent strategies, IP professionals are still searching for ways to better demonstrate the value of patent programmes to their shareholders. While NPEs can quantify patents in terms of revenue generated from licences and judgments, the financial industry typically builds patent portfolios for defensive purposes, which means that there is a much less tangible expression of value. For example, IP professionals in the financial industry often justify the expense of patent programmes by pointing to instances where the company used patents as leverage during negotiations in large business deals.

IP professionals also cite examples where the company successfully cross licensed its patents with another company, heading off a threat of patent infringement by the other side. Further, if another company with comparable patents has entered into a publicly described deal, this may provide a benchmark for patent valuation at other companies. Qualitatively, a robust patent portfolio also supports the goal of many fintech companies to identify themselves as industry leaders and top innovators. However, in most cases the precise value provided by patents remains hard to quantify for numbers-focused shareholders. Thus, IP professionals continue to seek value indicators which are more clearly attributable to the patents themselves.

Some operating companies – particularly those in the pharmaceutical industry – can identify a direct correlation between company share prices and the addition of a particular patent or patent family to their portfolios. However, that does not often occur in the financial industry. Other companies look to objective statistics, such as the number of forward citations associated with a given patent (ie, the number of public documents citing the patent) to measure its significance. However, such statistics typically fail to provide a reliable picture. Forward citations, for example, build over time and typically favour older patents over the actual significance of patent scope and coverage.

Thus, to the extent that fintech companies choose to measure patent quality by corroborative means, they often employ internal metrics. However, 'quality' is notoriously difficult to rate and requires that the personnel assigning metrics to the patents have a mix of technical understanding and business perspective. One approach increasingly taken involves scoring a patent's alignment to the company's core technologies – this tends to be easier to implement than other qualitative metrics. Anyone with the requisite business understanding can assign the company's technologies into categories based on current and future business plans. Once this is done, anyone with the necessary technical understanding can conduct the scoring from that point forward.

Perhaps the greater benefit of this method is that it allows IP professionals to present patent value to shareholders in a new way. Rather than having to present patent value solely on a return on investment basis, scoring patent alignment allows IP professionals to convey value in terms of a risk-versus-protection trade-off. The latter approach in particular can be used to associate patent value with the success of the company's core technologies, framing patents as an insurance policy necessary to protect those key areas. Should competitors attempt to enter or otherwise threaten the company's important markets, the company will need patents covering its core technologies to defend those markets.

David Cunningham
The Hartford

*"While the practical indicators of patentability post-*Alice *are slowly being clarified by an evolving line of Federal Circuit decisions, it may also be necessary for Congress to weigh in to provide more definitive guidance in order to mitigate uncertainty"*

Moshe Malina
Citi Ventures

"An effective IP programme and strategy requires a long-term view that looks beyond immediate trends, and provides for ongoing development and protection of IP assets"

In this way, the more successful the company's core technologies become, the more important and valuable the patents protecting those technologies become – a straightforward message to convey to shareholders.

Overcoming internal disconnects between intellectual property and business strategy

Intellectual property remains a key asset for financial services companies as the industry continues to expand its digital service offerings, with company-wide support for an IP programme essential to its success. IP professionals must therefore continually mange expectations around intellectual property in order to successfully communicate its value internally. However, before they can cultivate a supportive patent culture within their company, they must successfully convey the value of an IP programme to the C-suite – and not just at the outset but also over the following years that it takes to develop a patent programme which produces results. This is easier said than done, especially in the post-*Alice* era.

In this regard, IP professionals must know their audience. Given the difficulty in expressing patent value in terms of a return on investment analysis, IP professionals regularly face executives who are generally uninterested in patents. From their perspectives, the bottom line does not support investing in a patent programme. This attitude may result not just in apathy, but in outright hostility towards IP programmes. *Alice* affected the patent portfolios of many financial service providers almost overnight. Mindful of this still-recent experience, more than a few executives remain sceptical of investing in a robust patent programme in the financial services industry. IP professionals must therefore convince these executives that the cost of not patenting in fintech during these fast-developing times will have far more of a detrimental effect on the company than investing too much (or at all) in IP protection.

Providing the C-suite with data analytics on a programme's status and progress, while important, only goes so far – comparative analytics tend to garner more respect. Reporting that the company has only five patents covering a given core technology has much more of an impact when further analytics demonstrate that a competitor has 50 patents in the same technology area.

Similarly, when it comes to emerging technology areas, leading IP professionals should explain that a lack of active patenting will allow competitors to more easily enter the marketplace or, worse, to obtain patents that will allow them to pushing the company out. Exclusivity speaks volumes. Experience has also shown that pointing to trends in the market landscape, risk profile and so on as they relate to the company's patent portfolio can have a positive impact on executive opinions. Executives already feel comfortable accounting for these issues as they relate to other business issues and that experience translates to greater engagement.

In a similar vein, while scoring systems relay valuable information with regard to a portfolio's strengths and weakness, they do so only for those equipped to interpret the data. What becomes important to promoting a programme is how the data is conveyed to decision makers. For this reason, IP professionals often call on people other than technologists to relay the value of the IP programme to business leaders. While IP professionals and technical personnel within the company have a better understanding of the technology, they often lack the business perspective so important to executives. Thus, an increasing number of fintech companies enlist general counsel or someone with an MBA background to relay the value of the IP programme at the enterprise level.

Of course, once a patent programme has C-suite support, it becomes just as important to create a culture of innovation across the rest of the company. IP programmes require sustained interest to have a chance at success. A patent programme which is fiercely supported at launch will nonetheless fail if interest dissipates over the next year or two, while the programme remains in its infancy. Even for mature patent programmes, lack of funding or interest can quickly produce holes in patent coverage for the business. Thus, IP professionals must create a supportive patent culture to ensure continued interest in their IP programme.

IP professionals find incentive programmes essential to achieve this end. Whether the incentives involve payments for contributing to the patent programme or lunch with the CEO on meeting some milestone, money and recognition do encourage participation. Not only do such programmes increase the number

Bob Rutherford
Carneros Bay

"In the face of the headwinds in the patent space, firms have obviously doubled down on the innovation, partnership and start-up side of the house. Perhaps this is for the best as it gets us back to deriving value from the direct growth/ defence of the top line rather than the growth of intangibles"

Colm Dobbyn
Mastercard

"The roundtable confirmed that companies involved in financial services are increasingly focusing on external innovations from fintech and other technology providers. Innovation is no longer seen as entirely driven by internal teams"

Action plan

To meet the myriad challenges they and the institutions in which they work face, senior IP professionals operating in the financial services sector must focus on developing strategies which include the following:

- Engagement in start-up accelerator programmes to collaborate with smaller, fast-moving innovators from start-up companies in order to gain an extra tool for technology development, potentially increase revenue and foster an entrepreneurial spirit internally.
- Minimising the long-term impact of *Alice* on ongoing prosecution by identifying pre-*Alice* applications assigned to examination units at the US Patent and Trademark Office with especially low allowance rates (ie, examination units for software technologies in the financial space).
- Focusing invention harvesting efforts on the technical implementation of a financial service offering, rather than the service offering itself, and drafting applications with an exhaustive description of the technical problems experienced by the industry before detailing the technical solutions addressing those specific problems.
- Aligning patent portfolios with the company's core technologies to more easily describe patent value on a risk-versus-protection basis instead of the more typical return-on-investment analysis. Doing so allows IP leaders to frame patents as an insurance policy needed to protect key assets, thereby associating patent value with the success of the company's core technologies in a manner more easily conveyed to shareholders.
- Gaining executive support for patent programmes by accounting for decision-maker biases and relaying patent value to the C-suite in language they understand. A supportive patent culture can be cultivated within the company by leveraging incentive programmes and ongoing education sessions to create sustained interest. Equipping management and project counsel with the ability to identify important technology will ensure that the patent programme remains a crucial driver of a company's ongoing technology development.

of innovation disclosures submitted, but innovators remain more willing to devote time and resources to the ongoing development of the patent application, thus improving patent quality.

However, in order for companies to develop intellectual property in the right areas, IP professionals must ensure that their patent programmes equip innovators with the ability to recognise important technology. To this end, successful programmes often use ongoing education sessions of varying depth, depending on the recipients' experience. Such continuous training not only accounts for employee turnover, but also keeps employees engaged in the programme. Interestingly, top IP leaders have found in-person training far more productive than remote training, despite the higher costs.

Companies with successful patent programmes also have a habit of hosting regular brainstorming sessions with technical personnel. These allow them to pose a series of technical problems faced by one or more of their departments or project teams and invite technical personnel to produce as many potential solutions as they can over a 24-hour period. All such ideas are then funnelled through the patent programme as potential innovations.

Of course, patents do not come evenly from all departments. Consequently, IP leaders have found it particularly useful to train project counsel within the company on the merits and importance of the patent programme. Once on board, project counsel can act as IP counsel's eyes and ears for the programme throughout the company at large. This is crucial as business goals change regularly to meet market trends and patent programmes must be constantly realigned if they are to remain a driver for a company's technology development. iam

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Sean Reilly
The Clearing House

"It was particularly interesting to hear more about how convergence is affecting fintech and to pick up on best practices for partnering with new entrants"

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