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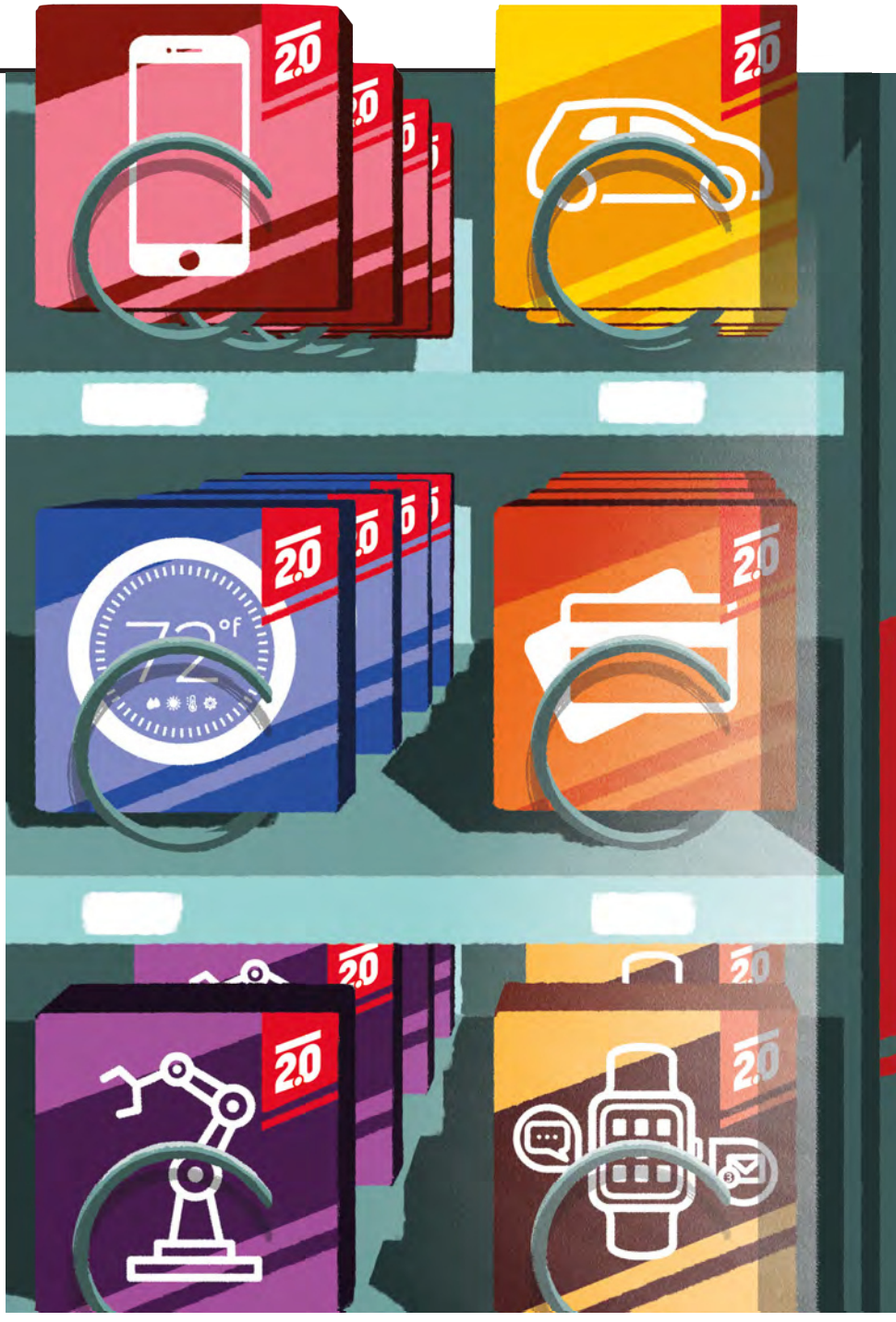
LICENSING 2.0

Why a balanced approach to deal making is crucial in a tech revolution

Licensing 2.0 – licensing platforms for the knowledge economy

As patented technology becomes more ubiquitous, a re-envisaged strategy is needed for industries taking an ecosystem approach to building platforms, rather than digging trenches

By Gustav Brismark and Bowman Heiden



While knowledge is certainly the critical resource in the modern economy, the creation of markets for the transaction of knowledge in general, and technology in particular, has proven challenging. In place of interactive technology markets, we have primarily built trenches, particularly in the case of patented technology. Today almost anyone who wants to license their technology is labelled a 'troll', while implementing firms are portrayed as 'efficient infringers'. Trust and collaboration are virtually non-existent within technology markets, where win-lose is the model *du jour* if not *de jure*.

Therefore, time is of the essence to create new holistic licensing solutions as more and more industries become digitalised and move into a knowledge-driven economy, whether it be fintech in banking, automated factories or connected vehicles. We have an excellent opportunity to move away from the trench warfare of the past and build new collaborative norms among convergent industries without historical baggage. What is required in this world of ubiquitous, complex products are platforms that clear patent rights in a way to incentivise participation by both technology providers and technology users, facilitating efficient transactions instead of *ad hoc* offensive and defensive measures. We must move beyond monetisation on the one side and mitigation on the other. This is what we call 'licensing 2.0'.

Technological development has enabled widespread digitalisation, ushering in globalisation and convergence. With the explosion of digital services and multi-technology products across all sectors, the associated patent exposure has increased dramatically. This will become even more apparent with the expansion of the Internet of Things (IoT). For patent owners, this development creates significant transaction costs in the licensing process, and increases operating risk significantly for implementing firms.

For many decades licensing rights connected to specific digital standards have been a natural part of the market adoption, either through bilateral licensing or through patent pools created by patent owners for increased efficiency in the licensing process (eg, video codecs). Looking at the broader technological perspective, however, one consequence of this increased complexity has been that a growing number of operating companies have chosen to divest their patent portfolios to licensing specialists (ie, patent assertion entities or PAEs) in order to generate a return on investment

(ROI), sometimes as a complement to licensing selected patent portfolios in their own name (ie, a monetisation focus). RPX estimates that more than 75% of PAE litigation between 2013 and 2020 involved assertions of patents previously owned by operating companies. In response, numerous solutions, including RPX, have been created with a primary focus on managing the patent risk for implementing firms (ie, a mitigation focus).

However, for a real win-win solution, a more efficient transaction of technologies is needed. Licensing 2.0 is a new licensing platform approach that aims to benefit both licensees and licensors. Its starting point is to establish an ecosystem that incentivises further innovation while also facilitating technology access and use sustainably. With a broader application that addresses the lion's share of the patent exposure of a particular industry, such platforms can provide the transactional efficiency needed to facilitate technology convergence in new sectors undergoing digitalisation. That trend includes, for example, the convergence of connectivity in new IoT solutions such as connected vehicles and remote sensors and the convergence of IT into banking and other financial services.

With this new licensing platform approach offering an efficient way to create a reasonable ROI in innovation and R&D, the incentive for operating companies to divest large parts of their patent portfolios to licensing specialists may diminish to the benefit of all technology markets and society in general. Establishing efficient and sustainable licensing platforms is the best way to build a technology market and will be much more effective than legislative and regulatory solutions that seem only to redistribute the burden – as we saw in the early years of the PTAB in the United States.

Past problems and future needs

The growth of multi-technology products and convergence of information and communications technology (ICT) into most industries has created challenges for both IP owners and implementers. Efficient markets for technology have been slow to evolve despite the large number of patents associated with state-of-the-art products or services. For example, a smartphone has been calculated to contain thousands of patented inventions while over-the-top services use both smartphones and equally infringing infrastructure to provide their content to consumers. In the absence of efficient technology markets, patent owners are incentivised to deploy agents in an *ad hoc* manner to recover a return on their R&D investments, while downstream firms face uncertain liability as more and more components, products and services lack the necessary patent clearance and have limited indemnification protection.

As this IP risk has not reduced the production and sale of products or services, more and more downstream firms will inevitably receive a knock on the door from patent owners whose rights have been traded without permission or compensation. When this happens, the past practice of involving suppliers of components or products will have little impact, as the clearing of rights is largely unresolved throughout the value chain and limited indemnity obligations will leave most of the exposure unresolved for a downstream player. This can be seen clearly in the ongoing disputes between Nokia and Avanci, and Daimler and Continental in the connected vehicle market. This trend of concentrating exposure downstream is further accelerated by development initiatives aimed at commoditising the hardware and software of technology-rich products (eg, the Open Compute Project focusing on IT infrastructure). As an example, Microsoft has acknowledged that end users of IT infrastructure are subject to an increased exposure to IP risk with its IP Advantage Programme for Azure cloud customers. This is an attempt by Microsoft to mitigate such risks, but at the same time signals that the IP exposure that derives from the use of the company's cloud services is the responsibility of the respective end user.

Thus, without a systemic solution, technology markets will continue to operate in an *ad hoc* manner, producing more heat than light in the form of higher operating risks and transaction costs and obstructing the formation of a division of innovative labour in the economy.

Existing solutions to manage IP licensing challenges

One of the main results of an inefficient technology market has been the creation of a group of specialist PAEs that seek to acquire and monetise patent assets on behalf of patent owners that cannot or choose not to do so themselves. These offensive aggregators perform the role of agents or brokers in the technology market that similar actors play in numerous other financial, product and service markets. Therefore, whether you agree or disagree with their business model, they are a rational, natural consequence of inefficient markets. Offensive aggregators typically employ a transactional IP strategy on behalf of their shareholders or a group of patent owners focused on monetisation, as indicated in the bottom right quadrant of Figure 1. Examples include Intellectual Ventures (private) and Acacia Research (public).

In response to the increase in offensive aggregators in the technology market, specialist entities have been created that seek to mitigate the risk and cost of patent assertions. These defensive aggregators and networks typically have many members with common goals, which could be described as single-sided platforms when all members work together to defend against external threats (eg, AST, RPX and Unified Patents) or multi-sided platforms when the members seek to benefit from one another (eg, LOT Network and Open Invention Network). These mitigative activities at different levels of ecosystem integration are indicated on the left-hand side of Figure 1.

The upper right-hand quadrant is characterised by having established efficient transactions to secure ROI for the innovators from the users of the technology and thereby creating a growing ecosystem around this innovation. Due to the systemic, multi-sided nature of this approach, open standardisation in the field of ICT inherently resides in the upper right quadrant. This model has proven to efficiently provide ROI for the innovators in some standards – the most notable being 3GPP-developed standards for wireless communication. The fact that we see frequent litigation in the field of 3GPP technologies should not be considered as a market failure but as a consequence of the market success of the mobile ecosystem and as a natural attempt to adjust price

in the technology market. Further, several successful licensing entities with broad participation have been created to facilitate transactions of SEPs among patent owners and users in an efficient way, including patent pools (eg, the MPEG LA pool for MPEG2 video and the One-Blue pool for Blu-ray discs).

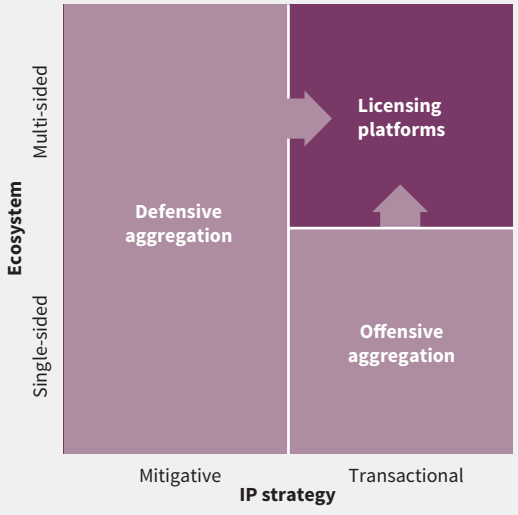
Today, we see multiple new initiatives with platforms that seek to build a revenue model to incentivise multi-sided participation, including Aliante (recently founded with the participation of Hewlett Packard Enterprise and Nokia) for financial services, Avanci for automotive and VideoLabs for video – similar approaches include syndication efforts such as the recent licensing of WiFi SEPs between RPX and Sisvel. When these efforts succeed in attracting broad support from both sides, they enhance innovation and mitigate risk systemically through the alignment of incentives. We identify them as licensing platforms in the upper right quadrant of Figure 1.

As can be seen from these examples, successful licensing platforms have historically dealt primarily with SEPs. To fully solve an industry's needs, however, licensing platforms that also cover technology products and services outside the scope of SEPs under FRAND commitments are required. The example of banking is provided at the end of this article.

The need for a balanced approach – licensing 2.0

The goal of licensing 2.0 is to move from *ad hoc* offensive and defensive aggregation solutions to holistic, sustainable licensing platforms as a ubiquitous business activity that supports the growth of a knowledge economy (ie, the efficient transformation of knowledge into wealth and welfare). This requires creating licensing platforms that clear significant patent rights while incentivising participation by both technology providers and users. Benefits for both sides can only be achieved when the initiative reaches large-scale participation. When successful, the platform will be multi-sided and transaction-oriented and will thereby support an ecosystem with continuous development to satisfy future downstream needs while providing a reasonable ROI in R&D for innovators. This platform model will generate sufficient return for patent owners, reduce risks for patent users and reduce transaction costs for both parties. Figure 2 shows the balance required to incentivise both patent owners and users.

FIGURE 1. Typology of patent licensing entities



"What is required in this world of ubiquitous, complex products are platforms that clear patent rights in a way to incentivise participation by both technology providers and technology users, facilitating efficient transactions instead of ad hoc *offensive and defensive measures"*

Before having an established platform, however, some challenges need to be overcome. For instance, starting with relevant patent owners will enable the definition of the scope of technology, followed by an intended field of use that defines the relevant users. Trust must be established between both sides of the platform, which requires value-based arguments that make sense in both the short and long term. In this regard, entrepreneurial

FIGURE 2. Licensing platforms as a mechanism to balance the needs of patent owners and users

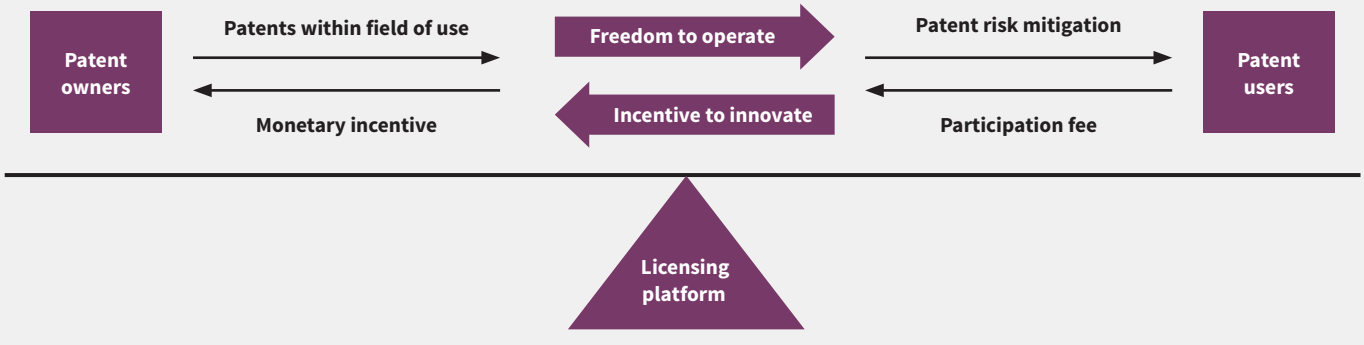
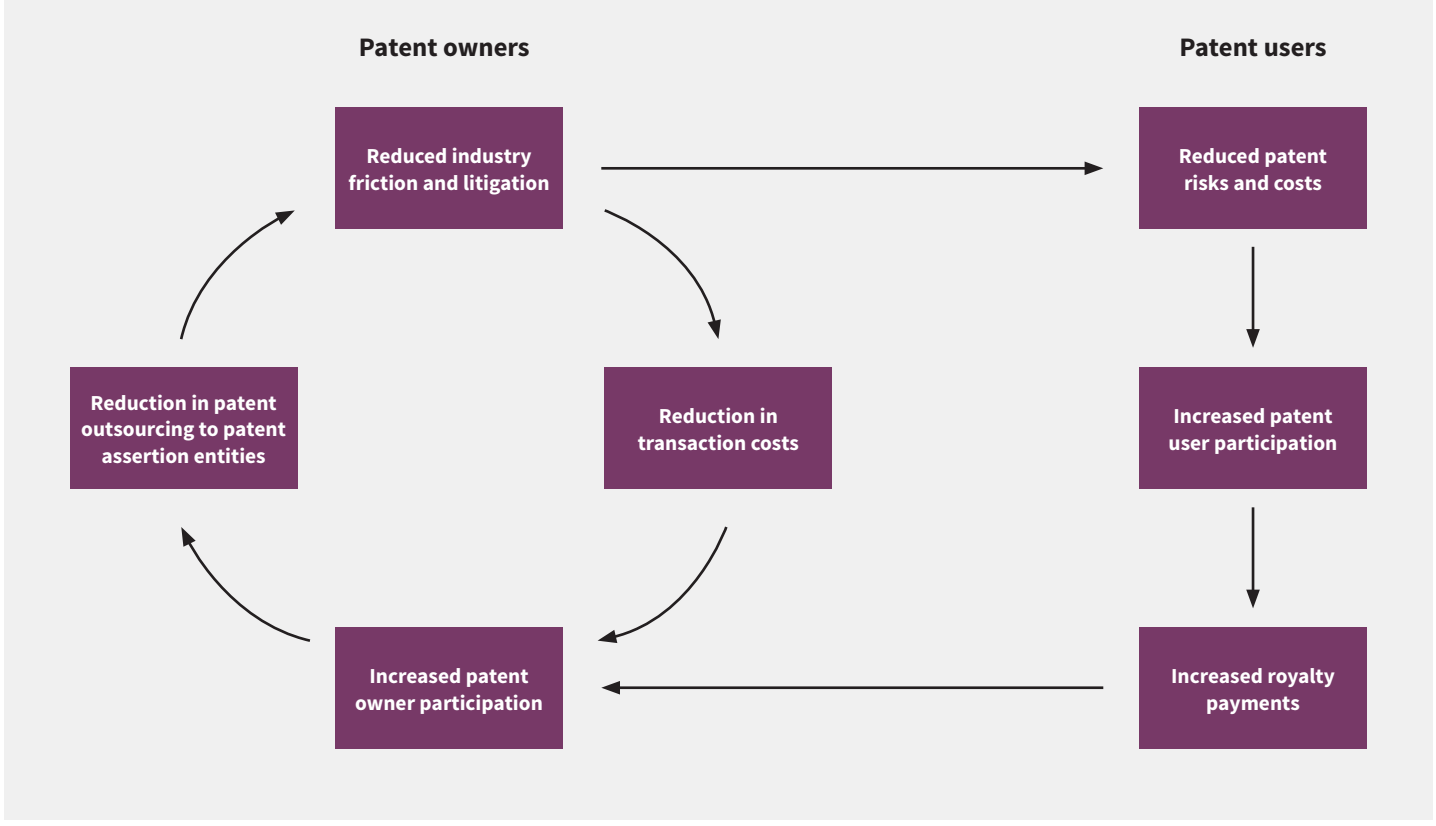


FIGURE 3. Double-sided network effects in licensing platforms



"One of the main results of an inefficient technology market has been the creation of a group of specialist PAEs that seek to acquire and monetise patent assets on behalf of patent owners that cannot or choose not to do so themselves"

leadership is key to establishing trust among all stakeholders in the ecosystem in order to build a successful platform.

One example based on first-hand experience is Avanci, where the first steps to establish licence agreements for communication technology within the automotive industry were taken by Ericsson almost 10 years ago. After years of bilateral negotiations without meaningful progress and based on feedback that it had received, in 2015 Ericsson decided to facilitate the creation of a separate entity with the aim of attracting the whole technology owner side in order to offer the automotive industry a complete solution. Since its formation in 2016, Avanci has shown significant industry leadership to reach the position that it is in today, with 14 brands licensed to the 38 patent owners that have joined the platform. Although the model is still being challenged, it has all the components in place to become a long-term successful solution.

As discussed earlier, the sweet spot and starting point for licensing 2.0 will be markets undergoing technology convergence where the patent landscape is vast and complex and where we already see, or anticipate, increasing divestments of patent portfolios from operating companies to licensing specialists, followed by high-stakes litigation (eg, in the banking industry). Thus, a clear understanding of the value of collective action is necessary. If one side believes that it can do better by acting independently, or if there is a lack of trust from one or both sides of the platform, then the critical mass required to generate the necessary network effects is unlikely to be reached. Figure 3 describes the positive feedback loops from both the patent owner and user perspectives that reinforce and strengthen the network effects that drive multi-sided adoption.

Successful platforms require scale, but first they must get off the ground. Thus, one of the primary platform challenges is creating momentum simultaneously across both sides – what is known as overcoming the chicken-and-egg problem. For licensing platforms, this means engaging both patent owners and users. For example, if the price is too low, patent owners will not participate, but if the price is too high or if the patent portfolio is too small, users will not participate (ie, scale is required to justify a lower price and a low price is necessary to generate scale). Gathering a sufficient number of significant patent owners, which would otherwise divest, and a couple of major users in the industry, which have experienced being targets of earlier assertions, will satisfy short-term benefits for both sides. Complementing this is a design that, when scaling, continues to be perceived by both sides as fair, will ensure long-term trust and support, as shown in Figure 3.

Similar to Spotify, the music platform that needed to start with a song catalogue to attract subscribers, licensing platforms will likely need to gather initiative commitments from patent owners to incentivise participation by users. Specific mechanisms can be used to support adoption from both sides of the platform, including:

- early-bird incentives or late-adopter disincentives;
- fixed participation fees with agreed-upon natural adjustments, depending on portfolio size; and
- an annual membership option with the possibility for termination.

While the overall goal of licensing platforms is to reduce litigation, the prospect of litigation may be necessary at the beginning of platform development to overcome inertia and after scale-up to create a level playing field, which benefits all parties. Once the platform attracts a critical mass of patent owners and users, it may set a *de facto* market price, which creates a form of herd immunity by incentivising participation over litigation. While antitrust issues are always present when firms coordinate market activities, the licensing solutions discussed earlier have broken much ground.

The need for licensing platforms in financial services

An excellent example of the potential need for licensing platforms is found in the emerging fintech field, where the banking and financial services industry is subject to technology convergence due to digitalisation. Given the critical role of IT to deliver core banking services that define customer experience and retention, it is easy to understand why technology is the new battleground for the industry. In 2019 alone it was estimated that the banking industry spent $67 billion on IT.

Consequently, the banking industry's dependence on external patent rights has become significant. Many financial institutions are at a competitive disadvantage to both traditional banks and new convergent actors from the IT industry, which have long managed patents as strategic assets. This means that the banking industry is becoming increasingly exposed to patents underpinning core IT and banking solutions from other verticals with established IP rationales. A Cipher study from 2018 showed that Bank of America led the banking industry with 2,535 patents – five times as many as JP Morgan, which was in second place. However, to put this into perspective, IBM had 23,864 fintech patents – five times as many as the entire banking industry.

Increased litigation has also started to appear in new IT areas such as cloud computing, which is deployed across numerous sectors, including banking. According to an IPlytics study, cloud computing litigation increased by over 700% between 2012 and 2016 and in a follow-up study a continuous increase of cases was reported, identifying the financial industry as the second most targeted industry of cloud-related litigation cases between 2013 and 2018. PAEs drove most of this litigation, but two high-profile cases involving two financial services companies, USAA and Wells Fargo, were recently found in favour of the patent owner (USAA) for its mobile deposit technology to the amount of $200 million in 2019 and $102.8 million in 2020. The patented technology in this case is also used by 6,500 other financial institutions, which provides some perspective on the exposure of the industry from just one technology. As patenting in the banking industry grows, so does the likelihood of litigation – as has been demonstrated in other IT-intensive industries.

While patent exposure is a challenge for the hardware side of IT infrastructure, it is the combination of hardware and software that is delivering value through new services. Capital investment in IT is a significant expense but leveraging the capacity of digital services (eg, the mobile deposit technology discussed earlier) drives value and scale. This means that successful banking platforms need to address the IT convergence from both a hardware and software perspective.

Aliante is an example of a new licensing platform that seeks to bring together both patent owners and patent users in banking's IT space in order to provide an efficient patent clearing mechanism at a reasonable price that generates adequate licensing revenue, reduces direct user risk and disincentivises the sale of patent assets to PAEs. The platform has already attracted support from patent owners and is now looking for adoption in the financial industry to generate the scale that brings systemic benefits to both sides. Once proof of concept has been achieved, platforms such as Aliante could be expanded to cover broad IT areas within banking, as well as additional industries that are undergoing IT convergence.

Technology markets need to be efficient to unleash wealth and welfare in the knowledge economy. Cooperation is the key to overcoming the prisoner's dilemma in today's market. There is a window of opportunity now in the financial industry – all that is required to get the ball rolling is leadership, a little trust and, of course, a lot of hard work. iam

Action plan

The current approach to licensing in many cases increases costs and inefficiencies for patent owners and implementers alike. As such, a new approach – licensing 2.0 – is called for.

- The first principle of this new approach is to have an ecosystem in place that incentivises further innovation while also facilitating technology access and use sustainably.
- To satisfy an industry's licensing needs, platforms encompassing more than just SEPs are needed.
- Any platform requires scale and should work with patents owners and users to encourage early participation.
- There is a real opportunity in some sectors (eg, fintech) for this new approach to take hold.

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