

An insider's guide to patent pools

The governance structures and inner workings of patent pools vary – as do the dilemmas faced by these collective licensing programmes

By Harry Rijnen

Over the last decade, patent pools have occasionally attracted bad press. Some, for example, have been criticised for anti-competitive behaviour. After all, patent pools are formed by companies which bundle their product offering (ie, licences to patents) and sell it at a fixed price. To paraphrase Winston Churchill's famous comment about democracy, one could say that patent pools are the worst way to license standard-essential patents (SEPs) – except for all the other ones.

Pools make life easier for licensors and licensees alike by dramatically reducing the cost and time needed to invest in the licensing process. They are a useful tool for bringing technology to market more quickly, efficiently and fairly, and generally at a better overall price for licensees. Sometimes the dealings and inner workings of pools may seem obscure. However, compared to the often murky battles of individual companies over SEP licensing – think Qualcomm and Apple, for example – they are beacons of transparency.

Patent pools are not in the limelight very often. Over the past few years, the headlines on the licensing of SEPs on fair, reasonable and non-discriminatory (FRAND) conditions have involved other issues, such as:

- fierce resistance from some large licensors to new FRAND rules introduced by the Institute of Electrical and Electronics Engineers (IEEE), a standard-setting organisation;
- litigation over SEP licensing between important licensors and licensees, especially in the telecommunications sector; and
- legal and administrative actions in the United States, China and Korea against alleged abuse of market positions by SEP licensors.

However, patent pools are here to stay and their role looks set to expand over the next decade. As interconnectivity and interoperability become increasingly important in sectors from automotive to energy and healthcare, so too will standards and SEPs. Licensing these SEPs to a range of players in various sectors will in turn bring about initiatives for new patent pools. A clear case in point is Ericsson's involvement in the creation of Avanci, a new patent pool manager which aims to start licensing programmes for cellular SEPs for applications in the Internet of Things (IoT) sector.

There is thus good reason to look more closely at the way that pools have been organised and governed over the last couple of decades. While they are important,

little is known about their inner workings. Who owns them? What is the role of licensors in a pool's decision-making process? How do initiators, managers and licensors of pools deal with the various dilemmas they face on issues such as enforcement action, setting royalty rates, outsourcing (or not) the complex back-office administration and avoiding conflicts of interest? This article examines these questions, and discusses how patent pools old and new deal with them and how this might affect their future role as collective licensors of SEPs.

When it comes to answers, the consumer electronics (CE) sector is a good place to start. "In CE, we faced the challenges of interoperability on a global scale earlier than in any other tech sector," explains Ruud Peters, former chief IP officer (CIPO) of Philips. "Worldwide standards – for example, for video coding, audio coding and optical discs – in combination with the sheer number of licensors and prospective licensees forced us to think about the best way to license the related SEPs. Patent pools were the answer."

It is no coincidence, therefore, that so many pool managers started out in CE. Indeed, CE is still the major domain of all major pool managers and administrators. On the contrary – and despite the proliferation of international standards for wireless connectivity over the last few decades – pools for telecoms applications of cellular SEPs (eg, mobile handsets) have not been successful.

Patent pools and their managers

To understand patent pools, it is necessary to distinguish between an individual patent pool or collective licensing programme on the one hand and the organisation managing it on the other. Sometimes a pool is managed by one of the licensors. Philips, for example, acted as manager of one of the DVD pools; while according to the website of the Premier BD Blu-ray optical disc pool, "the members of Premier BD have authorised Toshiba to grant portfolio licences on their behalf". However, this model has clear disadvantages. The managing company has access to confidential sales figures belonging to other licensors – often its competitors. Despite so-called 'Chinese walls' erected within the managing company to restrict access to this information, such access often leaves licensors in the pool feeling uncomfortable. In addition, the managing company itself is often the target of retribution from alleged infringers hit by the pool's assertion or enforcement actions.

For these reasons, most pools are run by separate organisations. MPEG LA was set up as a limited liability company two decades ago to manage the collective licensing programme for the MPEG-2 video-coding standard. Since then it has managed various other collective licensing programmes, each relating to a specific standard. Currently, it manages 12 separate collective licensing programmes or patent pools. The same is true for Sisvel and Via Licensing, where one company manages various patent pools. HEVC Advance, on the other hand, manages only one patent pool. It was set up in 2015 to license out SEPs for High-Efficiency Video Coding (HEVC), the latest standard in video coding. One-Blue was set up in 2009 to manage a pool for Blu-ray – with 17 licensors and far more unique patents, it is much larger than the other Blu-ray pool, Premier BD (six licensors). One-Blue takes a different approach from that of most other pools, as its licensing programme is product based rather than standard based.

In general, the pool management company gets a non-exclusive licence to the relevant SEPs of each individual licensor which joins the pool. Subsequently, it is given sub-licensing rights to all these patents so that it can license them out to individual licensees. The pool's management company normally receives a percentage of royalties collected to compensate it for the costs of running the pool. In the case of One-Blue, this income is determined on a cost-plus basis: budgeted costs plus a small percentage of these costs.

Shareholders

In the case of One-Blue and HEVC Advance, the core group of licensors which decided to set up the pool invested in the management company and are now its owners. One-Blue's shareholders include Cyberlink, Hitachi, Panasonic, Philips, Samsung and Sony. As licensors, these six companies have been joined by 11 other licensors, although only the original six are shareholders.

The situation for MPEG LA is similar, but with one significant difference. In addition to 10 corporate owners – most of which have regularly participated in its pools – it has a group of natural persons as shareholders. CEO of MPEG LA Larry Horn, a veteran of the company and a shareholder himself, explains: “These individuals were instrumental in setting up MPEG LA and managing it. They have no voting rights and are not represented on the board, but they do share in

distributed profits according to a pre-agreed formula.” Horn is on MPEG LA's board in his capacity as CEO, not as shareholder.

At pool management companies where shareholders are drawn mainly or exclusively from licensors participating in the pool, it is the success of the pool which is the main focus, rather than a direct financial return in the form of distributed profits. A successful pool will not only help to generate licensing income for all the licensors, but also develop the market for the product technology covered by the pool's SEPs. That said, the agreements regarding distribution of royalties in a pool may include some extra benefits for the initial licensors.

Via Licensing is not owned by a group of licensors; it is a fully owned subsidiary of one company, Dolby. While Via is managed independently, Dolby does participate as a licensor in several of Via's licensing programmes.

Sisvel has a different history and ownership. When Indesit divested its television-related patents in 1982, they were bought by Roberto Dini with the support of various other Italian companies. Originally an IP tool for protecting Italian companies from competitors in the Far East, Sisvel started to license out its own patents and those of others in the 1990s. In the same decade, it started to manage its first patent pool. Currently, according to its website, Sisvel is “a privately owned company that has no shareholders active in any businesses related to its licensing activities”.

As for Avanci, the company was initiated within Ericsson and most of its first-hour managers transferred from there to the new company: before he became Avanci's CEO, Kasim Alfalahi was CIPO at Ericsson. However, Gustav Brismark, Ericsson's current CIPO, insists that Avanci is now “a separate entity, not owned by Ericsson”. Avanci has no information regarding its owners on its website; according to recent press statements, it is owned by Inception Holdings, which in turn is owned by private investors and an equity fund.

For governance purposes, the importance of share ownership of a pool is minimised by the three pool management companies interviewed for this article: MPEG LA, One-Blue and HEVC Advance (three other pools – Avanci, Sisvel and Via Licensing – were approached for comment, but were unavailable). Instead, pool managers stress the importance of the administrative committee, on which the licensors of each pool are represented. The committee normally

Consumer electronics – the cradle of modern patent pools

MPEG LA was formed in the 1990s to manage a patent pool for the SEPs of the MPEG-2 video-coding standard. Managing collective licensing programmes for subsequent video-coding standards is still MPEG LA's core business. Sisvel did not start out as a patent pool manager, but also entered this space in the 1990s as manager of the MPEG audio pool. Via Licensing is the manager of choice for patent pools dealing with audio compression standards. In the field of optical discs (ie, CDs, DVDs and Blu-ray), Philips was traditionally the most prominent manager of collective licensing programmes. However, the advent of Blu-ray led to a new management company – One-Blue – which runs a pool

offering all the relevant optical standards of its licensors on a product licensing basis. A small group of licensors decided not to join One-Blue, but to set up their own Blu-ray pool, Premier BD, with Toshiba granting licences on its behalf. Also in the field of video coding, a few companies which had traditionally joined MPEG LA's patent pools decided not to join its pool for the latest standard – High-Efficiency Video Coding – but to set up a separate pool, HEVC Advance, with its own pool manager. Finally, whereas traditionally pool managers have taken care of their own back-office administration, One-Blue, One-Red and HEVC Advance have all outsourced this to an independent specialist, Adminius.

decides on essential issues such as (changes in) the royalty rates charged.

According to MPEG LA's Horn: "We have always gone out of our way to maintain a firewall between our shareholders and our individual licensing programmes. Eight of our 10 corporate shareholders are represented on the board. The board is responsible for the financial control of the company; it has to approve the annual budget. However, important questions that individual MPEG LA patent pools have to decide – for example, regarding royalties and enforcement actions – are decided by MPEG LA's pool management and by the licensors of that specific pool. MPEG LA's board is not involved in this at all."

At HEVC Advance and One-Blue, the situation with respect to the role of shareholders is similar to that at MPEG LA. "Management of our licensing programme is independent from shareholders," insists Peter Moller, CEO of HEVC Advance. "Through the board, the shareholders decide on the budget for the management company and they contract key employees such as the CEO. Our shareholders have no influence on the management of our licensing programme as such; they only have influence as licensors represented on the

administrative committee, just like any other licensor."

The separation between shareholders and individual licensing programmes is illustrated by the fact that GE, Mitsubishi and Philips – all shareholders of MPEG LA – decided not to join its patent pool for HEVC-related SEPs and instead to support a competing pool, HEVC Advance. "The fact that we are a shareholder of MPEG LA doesn't mean that we always have to join its individual pools," comments Brian Hinman, CIPO at Philips. "Philips simply chose a different direction for monetising our HEVC patent portfolio".

Even the fact that Via Licensing is fully owned by Dolby is not perceived as a problem. "I would prefer the more distributed ownership you see in MPEG LA, HEVC Advance and One-Blue; I would feel more comfortable with it," admits one licensor who participates in some of its programmes. "That said, I could not give you examples where Dolby or Via has acted improperly in relation to Dolby's ownership."

Licensors and administrative committees

Given the administrative committee's prominent decision-making role in a patent pool, voting rights are a crucial issue. The traditional route is one licensor, one

Pools and telecommunications – a difficult marriage

Bowman Heiden, deputy director at the Centre for Intellectual Property in Sweden and a well-known expert on standardisation and patent pools, explains why pools in the telecommunications sector have been unsuccessful so far. "Large licensors in wireless have always preferred to go it alone in mobile telecom," he says. "In that sector, the concentration among the implementers of the standard, your prospective licensees, is currently very high. In the handset market, if you license Apple, Samsung and Huawei, you have got a big chunk of the potential total licensing income covered. Big licensors in this space, such as Ericsson, Qualcomm and Nokia, prefer to handle these implementers on their own. CE is different: many, often small implementers. That increases the effort a licensor has to dedicate to bilateral deals with licensees, making a pool a much more attractive alternative."

Gustav Brismark, Ericsson's chief IP officer, adds another layer to Heiden's argument: "We have complex bilateral IP relationships with the major implementers in wireless telecoms, including cross-licensing contracts," he points out. "This would have made the formation of pools more complicated and we preferred to establish individual licensing relationships with implementers."

"In CE, a majority of the big licensors are also implementers that want to make money out of the business of making CE products," Heiden adds. "Important licensors are also important licensees. In that context, a pool almost becomes a necessity. In cellular wireless technologies, various important licensors, including Qualcomm, have a strong focus on licensing income in relation to making money from implementing the standard. In that case, a pool might still be an option – as proven by the Avanci initiative – but not a necessity."

Toshimoto Mitomo, corporate executive at Sony in charge of intellectual property, makes the same point for his own

company: "The main interest of Sony in becoming part of a pool is always the development of the market by facilitating access to technology for implementers, including ourselves. Income from licensing out is nice, of course, but it is not our first objective."

The lack of success of pools in the telecoms sector is illustrated by the very modest take-up by licensees of pools for SEPs relating to Long-Term Evolution (LTE), the latest standard of 4G in wireless communications. MPEG LA, Sisvel and Via Licensing all explored the possibility of setting up a pool for these SEPs. After several meetings with patent holders, MPEG LA decided to go no further, as various important licensors (including Ericsson, Interdigital, Nokia and Qualcomm) were not going to join any pool. Sisvel and Via both set up pools in 2012. While Via's pool includes some important licensors (eg, Google, NTT Docomo and ZTE), neither has so far managed to attract major prospective licensees beyond the licensors themselves.

In the case of the Internet of Things (IoT) sector, things are different. "Many of the companies needing cellular licences in this space do not have the intention of becoming players in our business, telecommunications," points out Ericsson's Brismark. "At the same time, we have no intention of entering their space of, say, car manufacturing. So in our relationship with all these companies, we are exclusively licensing out, not licensing in, and the same holds true for various other important licensors of cellular patents. In that context, a pool makes sense. Moreover, for many of the prospective licensees, the whole world of licensing in cellular patents is new. A pool can facilitate the process; it can take these companies on an educational journey as well as increase efficiency by offering a licence to multiple patent portfolios in one transaction. That is why we took the initiative for the formation of Avanci."

vote, regardless of the number of patents that a licensor has contributed to the pool. An alternative approach is one patent, one vote, linking licensors' voting rights directly to the weight of their patents in the pool. In practice, it often ends up being a mix.

"You don't want to give small licensors the feeling that they are always outvoted by two or three large ones," explains Peters, who chairs One-Blue's administrative committee. "On the other hand, you don't want to give a group of small licensors the power to outvote a smaller group of large licensors which have contributed many more patents to the pool. At One-Blue, we have solved this by defining three layers of voting rights. Each licensor has one, two or three votes, depending on the number of patents in the pool. The system is designed in such a way that, as a group, the licensors with three votes have no majority."

At HEVC Advance, these risks are mitigated by the use of a double voting system which is based on a combination of the two approaches. "Decisions on the administrative committee need to meet two thresholds," Moller elaborates. "A majority of licensors must be in favour and also a majority, sometimes qualified, of licensors representing a certain percentage of revenues obtained from the pool. These revenues are related, of course, to the number of patents in the pool."

"If you are a member of a club, you should be there in good times and bad ... You must be able to count on each other when the going gets tough. If implementers know that only three of the 17 licensors of a pool are actually willing to take enforcement action, that weakens the pool"

Conflicts of interest

More than ownership of the management companies, activities beyond managing licensing programmes for third parties raise eyebrows among some licensors, because of perceived conflicts of interest. Due to its long and atypical history, Sisvel not only manages patent pools, but also develops new technologies in collaboration with third parties, buys patents, acts as a licensing agent for individual patent owners and sometimes introduces its own patents in a pool managed by itself. According to Peters, this last issue in particular is a recipe for conflicts of interest: "The management company of a pool must be neutral. Its main interest must be to find a compromise between the different licensors, each of which has its own interests when it comes to tricky questions such as royalty rates or enforcement actions. If the management company introduces its own patents in the pool and becomes another licensor with its own specific interests, this neutrality is gone."

As mentioned, Sisvel has no shareholders active in any businesses related to its licensing activities, including downstream markets. In practice, this peculiar form of independence aligns Sisvel with other non-

practising entities (NPEs) in the world of patent licensing – certainly, it shares their more aggressive approach towards prospective licensees, listing a "positive track record in litigation" prominently among its key advantages. In the case of Avanci, the fact that owner Inception Holdings also owns an NPE – PanOptis – may also raise questions regarding possible conflicts of interest.

In its efforts to diversify beyond managing patent pools in the CE sector, MPEG LA has also acquired and co-developed some patents itself for licensing out – although not nearly to the same extent as Sisvel. "This work does not conflict with our work as manager of the pools," says Horn. "Nowadays, we are a licensing company, not just a manager of patent pools. We have expertise in marketing patents and we can also put this expertise to work when we see interesting patents that someone wants to sell. It is just another way of providing convenience to the market. Acquiring patents and adding them to a pool, for example, can benefit both licensees and licensors, as it makes the pool's coverage more inclusive."

Enforcement action

One of the most sensitive issues in a pool is enforcement action. When an implementer does not want to take out a licence, is enforcement action the appropriate response? For legal reasons, enforcement action must normally be brought by an individual licensor or patent owner, even if the infringed patents have been pooled in a collective licensing programme. However, individual licensors in a pool are not always keen to volunteer for enforcement action, as it can expose them to retribution from the infringer. So what is the procedure to decide which licensor(s) should step up to the plate?

The decision at MPEG LA is left up to licensors – individually and independently. "In the event of serious infringement, MPEG LA may suggest enforcement action," Horn explains. "Then, however, it is up to each individual licensor to decide whether it is willing to enforce its patents and, in consultation with counsel, which ones. It is not something that the administrative committee deals with. The administrative committee has no role in the decision-making process."

At One-Blue, explains Peters, "based on information provided by management – usually regarding failed talks with an unlicensed company – the administrative committee takes a decision on enforcement action against a specific company. One-Blue's management then asks all licensors with patents in the country where the enforcement action is planned to make these patents available for the enforcement action. If an individual licensor refuses to do this, it will not share in the benefits that the enforcement action may bring – whether payment of damages for past infringement or future licensing income. From among the patents made available, outside counsel in consultation with One-Blue's management decides which patents are best placed to be used and individual licensors abide by this decision. According to a pre-agreed distribution key, the financial benefits of the enforcement action are shared between the companies whose patents were actually used in the legal action and those whose patents were made available, but were not chosen to be used."

Peters admits that some licensors found this system of penalising companies that do not want to make their patents available difficult to accept when One-Blue was set up. HEVC Advantage's Moller confirms this reticence. "When we were setting up our pool, we also discussed mandating licensor participation in enforcement actions," he recalls. "But many prospective licensors advised us that such a provision could conflict with their corporate or university policies, and could preclude their participation in the pool, so we reluctantly decided to drop it." However, the rationale behind One-Blue's system is not difficult to see. "If you are a member of a club, you should be there in good times and bad," argues Peters. "You must be able to count on each other when the going gets tough. If implementers know that only three of the 17 licensors of a pool are actually willing to take enforcement action, that weakens the pool."

Back-office administration

One of the dilemmas that patent pool managers face is outsourcing: what should be handled in-house and what should be left to third parties? Sometimes outsourcing is driven primarily by reasons relating to governance and external oversight. Pools are closely observed by competition authorities, which prohibit the addition of non-essential patents to the SEPs for which a pool was formed. Whether a patent is in fact essential or non-essential to a standard is not always straightforward and is decided not by the pool's management, but by one or more independent external evaluators. Auditing

the sales figures which licensees report is also routinely outsourced to independent auditors, although Horn stresses that MPEG LA also has its own research department which studies the markets where it has licensing programmes. Just like other pool managers such as One-Blue, MPEG LA also engages external market research firms. "This allows us to see whether the figures reported by licensees are in line with MPEG LA's expectations based on these internal and external studies," Horn explains.

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Back-office administration and an IT system which supports the licensing programme are inconspicuous but vital aspects of a patent pool. Handling all the transactions – collecting royalties from sometimes hundreds or even thousands of licensees and redistributing them among 10, 20 or 30 licensors – is more often than not an extremely complicated task. While bilateral cross-licensing agreements have an impact on the royalties that are payable and must be acknowledged, the royalty distribution rules agreed

Product-based pools versus standard-based pools

Most programmes in the area of video coding, audio coding and audio compression are standard-based pools. Optical disc pool One-Blue, on the contrary, is product based. Traditionally, a pool just offers a licence to a standard or a family of standards in one technological area. This means that companies entering the field as implementers, and therefore prospective licensees, would normally have to deal with various pools. This is because, in general, various generations of standards remain relevant to a specific application, even after a new, more advanced standard is introduced. Each of these standards has its own SEPs and patent pools.

In the case of One-Blue and Blu-ray, a different approach was chosen. One-Blue offers a licence for all relevant optical disc SEPs of its licensors, including relevant CD and DVD SEPs. One-Blue does offer different licensing programmes. However, the distinction between different programmes is not standard based, but product based: one programme for Blu-ray players, another for Blu-ray recorders and yet another for Blu-ray recordable discs. In the words of Ruud Peters, one of the founding fathers of One-Blue: "As licensors, we have to learn to not think 'bottom-up' from the perspective of how a technology and a standard has developed, but 'top-down' from the perspective of the implementers. Implementers just want to license as many patents as possible for a specific application or product in one go."

Toshimoto Mitomo from Sony, another co-founder of One-Blue, concurs: "There are no less than 16 optical standards

involved when you make a Blu-ray recorder. Therefore, you make life much easier for a licensee if you offer a product licence covering all these optical standards."

Ideally, a product-based pool offers a licence not just for one technological area, but for all relevant areas. "If a company wants to produce, for example, a Blu-ray recorder, One-Blue solves most of a licensee's needs in the area of optical discs," Peters explains. "But it will still have to take out licences for patents to do with other technological aspects of the recorder – for example, video coding. In practice, however, trying to integrate different technological areas in product-based pools turned out to be a bridge too far at that point in time; but it is well worth considering this option in the future for new product areas."

Avanci – the pool for IoT applications of cellular wireless patents – also takes a product approach, with the stated intention of licensing out relevant generations of the cellular SEPs of its licensors in each product-related programme. Gustav Brismark of Ericsson, the initiator of Avanci, explains: "We had a clear idea that offering licences to different IoT products efficiently and with fixed per unit royalties will facilitate adoption of our technology in this space. Technologies defined by 2G, 3G and 4G standards are now ubiquitous. Users' applications of the standardised technologies vary enormously. The best way to deal with that is by product-based licensing, adapting the royalty rate in each case to the specific use made of the technologies covered by the SEPs."

upon among licensors tend to be extremely complex. As withholding tax normally applies to royalty income, tax legislation in scores of jurisdictions must be taken into account when funnelling transactions from licensees to the pool and from the pool to individual licensors.

Established pool managers have their own infrastructure for back-office tasks. "At MPEG LA, we see it as an important extension of a seamless and trusted relationship with our customers – both licensees and licensors," says Horn. However, younger pools One-Blue and HEVC Advance have both outsourced these complex tasks to Adminius, an independent service provider whose sole focus is the administration of licensing programmes – including setting up IT systems – for third parties, whether patent pools or

individual entities. Moller insists that it made a lot of sense for HEVC Advance to contract the services of Adminius: "Maybe we could have set up our back-office activities ourselves, but at a very steep price in costs and management attention. Adminius has saved us time and money."

Future of patent pools

While the growing importance of connectivity standards may increase the need for patent pools, forming them is not getting any easier. In sectors such as CE and cellular communications, the number of SEPs has grown exponentially with each new standard, with a corresponding increase in the number of owners of these SEPs. "When I helped to set up the MPEG-2

New pools for Blu-ray and HEVC

Experienced managers of patent pools such as MPEG LA do not always get all relevant licensors on board to form a new pool. Sometimes, some or most of them decide to go their own way. During 2006 and 2007, MPEG LA talked with a large group of licensors about forming a pool for Blu-ray, the latest standard in optical discs. However, these talks were unsuccessful and a separate pool with its own new pool manager, One-Blue, was formed by a group of licensors. One-Blue was eventually joined by almost all licensors that MPEG LA had talked to.

According to Toshimoto Mitomo of Sony, one of the backers of One-Blue, MPEG LA simply invited too many licensors to the table for discussions. "Each licensor has its own interests which are sometimes difficult to reconcile with those of others," he explains. "There were just too many licensors discussing the Blu-ray pool with MPEG LA. This made agreements nearly impossible. When we decided to set up One-Blue instead, we discussed and decided the basic workings of the pool among three or four companies and then invited others to join. That was complicated enough."

Ruud Peters from Philips, the driving force behind One-Blue, agrees: "Some of the licensors, including Philips, were eager to introduce innovations in the way the pool was set up and run," he points out. "And we felt that this would be more easily realised with a new patent pool management company. That is when we decided to go it alone and set up One-Blue."

MPEG LA's failure to keep everybody on board for its High-Efficiency Video Coding (HEVC) pool was more remarkable. After all, it started out in 1997 as the pool manager for MPEG-2, the first pool for a video-coding standard. Since then, MPEG LA had always been the pool manager of choice for various generations of video-coding standards. When MPEG LA formed the pool for the latest video-coding standard, HEVC, a few companies decided to break away and form a separate pool, HEVC Advance.

Currently, Dolby, GE, Mediatek, Mitsubishi

Electric, Philips and Warner Bros are licensors in the HEVC Advance pool. The MPEG LA pool for HEVC has many more licensors (34); but according to insiders, most of them have only modest patent portfolios in this field, with some notable exceptions, such as Samsung. Peter Moller, currently CEO of HEVC Advance and previously GE's representative at MPEG LA, explains the differences: "We found that the MPEG LA royalty structure did not achieve the right balance between the interests of patent owners and users. For many product categories and geographic regions, royalty rates were clearly too low. A \$0.20 royalty rate may be appropriate for a HEVC-enabled mobile phone sold in China, but it is not for a HEVC-enabled \$4,000 television sold in the United States. We also believe that content distributors which benefit substantially from HEVC technology should pay royalties too, not just device manufacturers. And while we were not keen on adding caps to our structure, we did so after the market clearly told us that caps were necessary to drive adoption. Caps have to balance the interests of large and small companies and patent owners, taking market realities into account. We believe our cap structure gets it right."

"Negotiations about the royalties are always difficult," Jako Eleveld, head of IP licensing at Philips, acknowledges. "Potential licensors that are also big implementers, such as Apple and Samsung, have an obvious interest in low royalties: their costs of licensing in will be much more important than their income from licensing out via the pool. Our position and that of other companies was different, in the sense that we wanted to have a fair value for licensing our patents out to the market. The tricky part of these pool discussions is that you are negotiating without knowing whether big implementers will join the pool and, therefore, really going to commit to the royalty rates as agreed. We felt that, in this particular pool of MPEG LA, we had to make too many concessions."

Eleveld is not overly concerned about the

strong push back from prospective licensees against the royalties announced by HEVC Advance in 2015 – rates that the pool has since reduced. "See it this way," he says. "Normally, these discussions take place in closed sessions under the guidance of a patent pool manager. In this case, part of the discussions took place in the open, which is actually more transparent. HEVC Advance has reduced its rates based on market input; we think they are appropriate and will attract more licensees."

As a result of the competition between the two pools, some important licensors which usually join patent pools have not decided yet which to join, including Panasonic and Sony. "We might join a pool in the future," comments Sony's Mitomo. "But first it must become clear which is more successful. If you are a licensee and you commit to paying royalties to a pool, you want comfort regarding 70% of all relevant SEPs out there, not 10% or 30%. In due course, I expect the two pools to merge, as has happened before with two competing pools." Eleveld both agrees and disagrees: "Of course, one pool with all important licensors is ideal. But two pools is better than one pool plus a bunch of individual licensors licensing on their own."

Larry Horn, MPEG LA's CEO, is not upset about the HEVC Advance breakaway or its failure to form a Blu-ray pool. "As a pool manager, we cannot disclose information regarding these talks; they are confidential," he says. "But sometimes you just have to accept that, however eager you are, it is not going to work and a pool is not viable for whatever reasons. Obviously, in the case of HEVC Advance, it is clear that the companies which formed it were not satisfied with the terms and conditions to which a substantial majority of HEVC patent holders had agreed. The fact that some of the founders of One-Blue and HEVC Advance are shareholders of MPEG LA confirms that, in their role as shareholders, companies have no influence on the terms and conditions of our licensing programmes."

pool in the 1990s, there were maybe 150 SEPs,” recalls Toshimoto Mitomo, corporate executive at Sony in charge of intellectual property. “When you look at LTE (Long Term Evolution, the latest 4G mobile communications standard), you are talking about more than 10,000 patents owned by scores of companies, each one with its own peculiar interests. Obviously, that doesn’t make pool contracts among licensors and between licensors and licensees more simple.”

Not only has the number of relevant actors increased; so has the diversity of their interests. For one, there has

been a rise in a new breed of licensor – NPEs. Among practising entities, some licensors in a pool are licensees at the same time, while others are not. For some, licensing income is of paramount importance; while for others – such as Sony, according to Mitomo – the development of the market is their prime motivation for setting up or joining a pool.

Other factors complicating the formation of pools include historical factors and differences in business culture. In CE and telecoms, most major licensors have known each other for many years and grievances over

Outsourcing back-office administration

Ruud Peters knows what he is talking about when he explains the importance and complexity of a patent pool’s back office. During his tenure as Philips’ chief IP officer, the company was the licensing agent for the largest DVD licensing pool and he was subsequently the driving force behind the formation of the One-Blue pool for Blu-ray products. “People tend to underestimate how complex these calculations are,” he comments. “Different patents apply to different sub-programmes. There are many bilateral licensing agreements you have to integrate into the equations. The number of patents in the pool changes constantly. Some expire; others are added to the pool after it has started. Moreover, the list of countries where products are manufactured and sold also changes all the time. Licensors have a different number of patents in each country, so these changes, too, constantly modify the allocation rights of each individual licensor. Imagine how complex it gets if you have to allocate damages due for an infringement committed in a period between three and six years ago and in various countries, according to the allocation keys applicable in that period. It really is not that simple.”

HEVC Advance CEO Peter Moller expands on Peters’ argument. “There is a trade-off in patent pools between perfection and manageability,” he points out. “For example, perfection might entail setting different rates for every different product category in every different country, or attempting to value each and every patent individually. But back-office complexity can become unmanageable if one isn’t careful. When we were defining all the terms and conditions for HEVC Advance, my great worry was how we were going to implement this; how we were going to deal with this in practice in the back office.”

For Larry Horn at MPEG LA, it is important that the managing company takes care of these complicated back-office tasks itself. “I see it as part of our confidential relationship with licensors and licensees,” he maintains. “And in our case it is supported by the numbers. By taking care of our own back office, we contribute to the accuracy and compliance of our programmes, without the appearance or risk of conflicting commitments.”

HEVC Advance, on the other hand, decided to outsource its back office to Adminius. “Because of the complexity of the back office, when Adminius came into the picture, that was a very good day for us!” says Moller. “We are very glad to have engaged Adminius; they are doing a great job for us and our licensors and licensees. Future pool management companies – and individual companies which start complex licensing

programmes, for that matter – will have to take a very hard look to see whether they want to build up a back office from scratch or whether they want to outsource this task. Do you really want to spend the time, money and management resources trying to duplicate capacity that is already there?”

Dan Berman, One-Blue’s chief financial officer, concurs. In a back-office administrator, he values a combination of “solid IT systems with the flexibility to adapt to the needs of individual licensing programmes. Adminius brings us that combination”.

The three partners who founded Adminius in 2009 had already acquired a great deal of experience through administering patent pools, of which Philips had been the licensing agent. When Philips relinquished this task, the three set up Adminius to carry out back-office functions for One-Blue and One-Red. “From day one, it was clear to us that we had to sever all links with Philips to be truly independent,” explains managing partner Koos Wiersma. “Philips has no financial interest in our company. We do not use its IT systems; we even moved our offices away from the former Philips High Tech Campus to Veldhoven, in the suburbs of Eindhoven.” Apart from independence, expertise and experience, Wiersma stresses the importance of the fact that Adminius’s managers come from financial administration. “Of course, we understand the legal IP issues, but our angle is the effective and efficient financial administration of licensing programmes, including tax efficiency. With that mindset, we also advise pool managers and licensors on the language in the contracts, to avoid future misunderstandings”

Some licensors do not seem too fussed about back-office administration. According to Peters, “various companies still tend to see licensing income as a kind of bonus, an extra; not as the financial return on an intangible asset, a return that needs to be maximised. Therefore, they do not try to optimise things like the back-office administration of the pool. They leave money on the table.”

“Normally, the heart of pool managers is more in the marketing of the licensing programme than in the back office,” agrees Wiersma. “They like to talk to prospective licensees; try to find common ground among licensors with different interests; ponder and discuss the pros and cons of enforcement action against an infringer. They may find the back office is boring. Well, as a certified service provider, we can take over that boring, but so important part of their work, allowing management to do what they know and like best. In the process, we will improve the financial return for the pool and its licensors.”

Action plan



Do you want to start a new patent pool management company, set up a new patent pool or become a licensor or licensee of a pool? Make sure you have a clear idea of the governance, organisation and dilemmas of the management company and its pool(s).

Management companies

- Who are the owners and what are their rights and objectives?
- Are there any possible conflicts of interest due to ownership structure or additional activities beyond

managing patent pools?

- Is the back-office administration of its patent pool(s) carried out in-house or outsourced to specialised experts?

Patent pools

- Is the licensing programme standard based or product based?
- What is the decision-making process regarding enforcement action and royalty rates?
- What are the rules determining the pool's royalty distribution among licensors?

another company's behaviour in an IP-related issue may linger long after the controversy has become irrelevant. As an example of differences in business culture, Japanese companies are generally considered to take a more restrained approach to enforcement action than US or European companies.

Despite all these difficulties, there are always new initiatives to form pools. In the words of Bowman Heiden, deputy director at the Centre for Intellectual Property in Sweden: "The situation around standards, FRAND and licensing of SEPs is very complicated at the moment and rather adversarial. The way licensing is dealt with in the IoT space may reset the situation. Hopefully, the main parties involved can find common ground; patent pools may become a way to accomplish this."

When new patent pools are formed – whether managed by existing pool management companies or new ones – much attention is paid to their attitude towards royalty rates and the way that these are structured. Other issues that tend to attract scrutiny include:

- the ownership structure;
- the back-office administration – whether this is outsourced or developed in-house;
- whether the pool will be standard or product based;
- the decision-making process regarding enforcement action and royalty rates;
- how voting rights in the administrative committee are allocated;
- how the rules for royalty distribution among licensors are determined (eg, is distribution fixed or per patent?); and
- whether all patents are treated the same way with regard to the patent count of each licensor (eg, what is the maximum value of divisionals compared to the original patent?).

Attention is also paid to whether the pool will apply pre-netting (ie, are payments to and revenues from the pool net of all pre-existing financial rights and obligations, such as cross-licensing agreements, among licensors and between licensors and licensees?). Pre-netting complicates the back office and may make it more difficult to market the pool to licensees, but it generally lowers licensors' withholding tax burden as well as the fee they may have to pay to the management company.

Does the pool give out a licence for all products sold

during the term of the agreement with the licensee (eg, five years), or does it apply per batch licensing (ie, a series of licences, each limited to a specific shipment of products)? Per batch licensing adds to the red tape of the licensing programme, but reduces the risk of underreporting and non-payment of royalties by licensees and allows (a pool of) licensors to act fast against non-compliant licensees by halting the issuance of licences for new product shipments.

When dealing with all these issues, time is of the essence. One-Blue is generally considered a pool with various innovative features, but both Sony's Mitomo and Philips' Peters agree that it took too long to form. "Ideally, you want a pool to get going just when the standard is approved or shortly afterwards," Peters comments. "In the case of One-Blue, it took years, because a completely new approach was chosen for the set-up of a licensing programme. These years were lost for the development of the Blu-ray market."

As some of the most successful pools in CE approach their natural end due to patent expirations, existing pool management companies such as MPEG LA and Sisvel are trying to diversify into other areas beyond CE, such as healthcare, biotech and energy – so far with limited success. With the IoT sector, Avanci is a new patent pool management company whose goal is to license cellular wireless patents in various sectors through product-based licensing programmes, starting with the automobile sector and smart meters. Obviously, its success will be determined mainly by the number of licensors it can attract – these currently include Ericsson, Interdigital, KPN, Qualcomm, Sony and ZTE – and by the number and size of the companies it can convince to take out a licence for its different programmes. While setting the right royalty rates will be a crucial factor, the success of Avanci and its future pools will also be influenced by the way in which they are governed and organised – an area where Avanci leaves many questions unanswered in its public communications, including its website. New pool management companies and patent pools will face various stark choices when it comes to governance and organisation. No doubt, prospective licensors and licensees of patent pools will closely watch this space. *iam*

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