2015 Statement

Patent aggregation and its impact on competition and innovation policy

EPO Economic and Scientific Advisory Board
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In 2011, the President of the European Patent Office created the Economic and Scientific Advisory Board (ESAB) to address important economic and social issues relating to the patent system and to support the EPO with evidence-based policymaking. At its third annual meeting on 11 February 2014, the Board decided to address the topic on patent aggregation and its impact on competition and innovation policy. To that end the Board carried out a survey amongst patent aggregators, academics and industry experts, and organised a workshop on 25 November 2014 with over 40 international patent experts and practitioners in this area, which has led to a detailed workshop report on the topic. The current statement has been prepared by the ESAB, taking into account the workshop report and the survey.

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Patent aggregation and its impact on competition and innovation policy

The Economic and Scientific Advisory Board (ESAB) of the European Patent Office (EPO) chose the topic “Patent aggregation and its impact on competition and innovation policy” as part of its 2014 programme. In order to gather background information and collect views from experts and players in this area, ESAB carried out a survey in the summer of 2014 and organised a workshop on 25 November of 2014. Both the survey summary and the workshop report are available as separate documents on EPO’s website. This statement presents the advice of ESAB to the EPO regarding patent aggregation and its impact on competition and innovation policy.

Definition and typology

ESAB uses the following definition of patent aggregation:

“Patent aggregation describes any activity where patents initially obtained by different parties, are brought under the control of a single actor or entity. Control essentially means the right to decide which party gets access to the patents and under what terms.”

This statement pertains only to patent aggregation in the narrow sense, excluding patent intermediaries that facilitate transfers of individual patents or patent portfolios from one party to another. Entities that are actively aggregating patents include: patent pools, practising entities and non-practising entities (with private or public funding and with an assertive or non-assertive strategy). ESAB is aware that there are non-practising entities that do not aggregate patents from different parties, but that assert patents from one source only. Also, some of the entities mentioned may also carry out intermediary services, such as facilitating the transfer of patent portfolios from one company to another company. However, this statement only takes these entities into account to the extent that they aggregate patents, that is bring patents initially obtained by different parties under their control.

Although various types can be identified, it is more difficult – and probably not meaningful – to make a clear-cut typology of patent aggregators. In reality there exist a variety of different business models that are closely related to the operational essence and know-how of each aggregator. Most companies follow different business strategies in parallel or change their business models over time.

Emergence of patent aggregation

Recent developments, especially in the past decade, have enabled the emergence of patent aggregation. Among them are patent markets, offering new ways of monetising and exploiting intangible assets. The convergence of technologies, the recent rise in open innovation practices and the increasing complexity of products have made more exchange of patents between invention generators and users necessary.

These developments have been accompanied by the emergence, primarily in the United States, of new entities whose business model relies strongly on aggregating patents. As far as Europe is concerned, evidence and data on patent aggregating activities is scarce. It appears that many types of patent aggregators are increasingly present in Europe, although they are not as widespread as in the United States.

Patent market issues

Patent markets are complex and feature shortcomings which may cause illiquidity¹ and inefficiencies.

First, the presence of information asymmetry between buyers and sellers regarding the value and quality (validity) of patents can prevent otherwise beneficial transactions. Complexity and fragmentation of patent rights related to “combinatorial innovations” cause high search costs. Producers may find it difficult or expensive to identify all patents necessary to achieve the freedom to operate. Mirroring this, patent owners may also face serious difficulties identifying users that are possibly infringing their patents.

¹ Market liquidity here means the ease and speed with which a patent transaction can be performed.
Second, fragmented ownership might cause patent hold-up, hold-out and royalty stacking. Patent hold-up might occur when a patent holder is able and has an incentive to claim royalties that far exceed the economic value of the protected invention. Royalty stacking might arise when multiple patents read on the same product and the producing company has to negotiate licences with several patent owners individually. Moreover, rather than a patent hold-up, patent hold-out (also called "reverse hold-up") might also arise. Patent hold-outs occur when companies routinely ignore existing patents and resist taking the necessary licences from patent owners. This is particularly likely to happen when the (presumed) infringer can expect that a financially weak party will not enter into litigation or in jurisdictions where the legal system does not support patent owners in enforcing their patents in an efficient and effective manner.

Finally, in high-technology markets firms often invest in building patent portfolios to improve their bargaining position vis-à-vis other market participants. For firms lacking the necessary resources, such as many small and medium-sized companies, this might pose an insuperable hurdle for entry (in addition to other possible barriers).

Potential benefits of patent aggregation

Patent aggregators may be able to deal with the aforementioned market issues but there is a risk that they may create some new problems as well.

First, aggregators may be able to combine patents pertaining to one technology and thus help solving the coordination problem for technologies with fragmented patent ownership and facilitating the creation of standards. Aggregation may provide a one-stop shop with lower transaction costs. By making licences available at reasonable prices from a single source, they might help to overcome any possible royalty stacking problems.

Second, many patent aggregators specialise in assisting inventors and producing companies to help avoiding inefficient litigation by acquiring control over these patents and facilitating direct licensing agreements. In addition, aggregators may reimburse companies upfront for their inventions, thus possibly creating additional financial leeway for cash-restrained SMEs and start-ups.

Next, patent aggregators may be able to decrease the lack of transparency and asymmetry present on patent markets, by information on and valuation of patent portfolios. They may also ensure the freedom to operate for producers by clearing the market from patents which might be used to hold them up in order to extract excessive royalties.

Potential costs of patent aggregation

On the other hand, potential market power by aggregators may create costs for patent owners. If there are only few aggregators in the market for purchasing or licensing patents in a specific area, aggregators may have a considerable degree of monopsony power (market power on the demand-side). This would have a detrimental effect on patent owners seeking to sell their patents to aggregators. To the extent that the patent would still have been monetised without an aggregator, the revenues of these patent owners innovators may be lower as a result.

In addition to the purchasing or licensing-in market, if there are only few aggregators to license from, there may be negative effects due to a high degree of monopoly power for the users of patents to whom aggregators sell or license out. In the case of considerable market power, aggregators may charge too high fees for their services, causing losses for society as a whole.

Aggregators might also be able to exploit hold-up situations and thus extract a level of royalties from their customers which they could not have done without their strategic hold-up advantage. Furthermore, there may be a risk that assertive non-practising entities can be very aggressive when enforcing their patents, because there is less at stake for them in absence of downstream activities. Such behaviour can considerably increase the level of litigation in technology markets.

Finally, aggregators may be able to assert low quality patents hiding within a portfolio. Because low-quality and high-quality patents come in a packaged bundle, operating companies may in fact be paying excessive pricing for low-components as part of the package.

Moreover, aggregators may also be able to assert low-quality patents by leveraging on the high litigation costs for defendants of invalidating these patents. Related to this is a free-riding problem that defendants may face, which is that invalidation benefits all
potential defendants but the litigation costs is incurred by only one of them. This discourages individual defendants to start invalidation procedures.

Finally, patent aggregators may obtain patents on substitutable technologies, thus limiting the level of competition and choice in the technology market.

**Impact of patent aggregation on innovation and competition**

A general distinction between “good” and “bad” patent aggregators cannot be made on the basis of existing evidence. Aggregation should rather be regarded as a practice that can be used in two ways: in a way that might be beneficial and in a way that might be costly to society. Patent aggregation may be beneficial for innovation but there may be social costs and even innovation-impeding effects involved as well.

On the one hand, patent aggregators might help to establish a functioning market for patents, which is liquid, transparent and efficient. Facilitating trade in patents can have two major positive effects on innovation. First, it may help to reward inventors. This should increase the general incentives to innovate and to invest in innovation. Second, patent transactions and licences may facilitate the dissemination of innovations and increase access to patented technologies. Increased access to technology should then also encourage follow-on innovations. These effects should have a positive impact on dynamic competition.

On the other hand, aggregation might result in anti-competitive behaviour which could impede innovation and reduce welfare. For example, patent aggregation can reduce the incentive to screen for invalid patents within a portfolio. If patent aggregation implies that a bundle of patents needs to be purchased or licensed, without the possibility of excluding a selection of patents from that bundle, then a potential buyer or licenee has less incentive to investigate the validity of all patents in the bundle.

However, to avoid undermining the beneficial effects of patent aggregation on innovation, no particular form of patent aggregation should be considered as *per se* anti-competitive. In fact, the prior should be that patent aggregation is beneficial unless there are clear signals to the contrary. Potential misconduct of individual aggregators should rather be evaluated on a case-by-case basis, based on the facts and circumstances of each single case. For such a case-by-case approach, the relevant questions are how aggregators build their patent portfolio and set their licence terms, and whether they create or use any market power to impose restrictions and reduce competition on the technology market. A particularly important lever to restrict abusive practices is to improve transparency regarding ownership of patents. Users of the patent system should clearly know who owns which patents and technologies, and which patent transactions have taken place between whom.

Competition policy and competition authorities already have legislation in force and instruments at hand to deal with anti-competitive behaviour. Nevertheless, it is advisable that competition agencies improve patent-system related knowledge and the assessment of the technological issues involved. What might help achieving this is to involve patent offices and use their expertise to advise competition authorities on technical aspects of patents and technology specific matters.

In general, however, the main role of patent policy remains: to ensure that only patents of high quality are granted; to clearly delineate patents; to provide maximum transparency regarding patent ownership; and to ensure a well-functioning and efficient court system. The Board also notes that the design and governance of the litigation system can reduce the potential for abusive behaviour by some types of patent aggregators. Abusive litigation would allow some types of patent aggregators to enforce patent rights which under close scrutiny turn out to be erroneously granted and should therefore be held invalid. In general, a court system with the following characteristics would be able to minimise such abusive behaviour: (1) a basic procedural rule that the loser pays the other side's legal costs (attorneys and expert fees); (2) anyone should be allowed to challenge the validity of a patent at any time; rules for withholding a final injunction should be specified; and (3) a compensation trial should only be possible after and if the patent is found valid and infringed.