



'The devil is in the detail' – the Qualcomm take on patent licensing

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Qualcomm has maintained a leadership position in technological innovation in mobile communications for 30-plus years as competition increases by doing decades of foundational activities in wireless and computing technology, investing its resources and budget into being an R&D centre for the industry and then ultimately sharing that through the standardisation process so everyone else can review it.

But John Han, general manager and senior vice president of Qualcomm Technology Licensing (QTL), is under no illusions about the intensity of human effort that is required to drive the business and cautions against tools that may appear to offer shortcuts in essentiality checking or cutting corners in valuing patent portfolios.

In an exclusive interview with IAM, Han delved into the Qualcomm licensing perspective. "We actually believe that we have a very unique role in the telecom ecosystem," Han says. "We've been doing this for so long that we've been recognised as a leader and we have a lot of credibility built up."

Han, originally from South Korea, focused his US university studies on computer science before working on patents at Ericsson. In 2016, he joined Qualcomm in San Diego. He has negotiated and resolved disputes with Apple and Huawei, and navigated regulatory and related litigation including an FTC case where a higher court then validated Qualcomm's licensing model. The company also announced its 5G programme and has successfully negotiated and executed licence agreements with "just about everybody out there in the handset industry".

Qualcomm's business model is split between QCT, the product business, and QTL, the licensing business. Its licensing model encourages and enables innovation by providing any device maker access to its patented technology under non-exclusive licences regardless of whether the client uses Qualcomm's QCT chipset or not - "chip-agnostic", as Han calls it.

There are about one and a half billion handsets sold globally every year, and about six billion handsets being operated at any time. In its licence agreements, the company uses portfolio-based, global licensing, as neither patent-by-patent nor country-by-country licensing is feasible for a company with 140,000 computer and telecommunications patents worldwide and new ones issued every day. Model-by-model licensing also does not work with large companies, so Qualcomm negotiates licensed product definitions in agreements.

QTL is also active in non-handset licensing, for instance operating an automotive programme at the supplier level (here, Han points to auto supplier Continental's now dead [case](#) against Avanci which had sought to compel the platform to license at supplier level. "When we talk about all these Continental lawsuits and how the patent holders are not licensing it at the supply level, that is actually not true at Qualcomm. We have been licensing at the supplier level in the auto industry for the past 20 years"). Other areas include laptops, watches, dongles, CTEs and fixed wireless access platforms.

The company charges 3.25% of net selling price, or fair market value of the phone that's being sold by licensees but with a per-device cap. The rate for automobiles is \$5 per vehicle. It has a different pricing valuation structure for other items such as watches, laptops, and IoT modules.

The sheer scale of the operation means that Qualcomm has to be savvy about where and how to spend its resources. While any tool which assists negotiating parties in a proper portfolio evaluation and therefore entering into a mutually acceptable licence agreement "in and of itself is a good thing", Han says the "devil is in the details".

"We shouldn't be in a mode to hastily accept any shortcuts, or flawed proxies, hoping that there will eventually lead somehow to better information and getting the parties to a more amicable licensing agreement. I'm actually afraid that you will hinder by providing an inaccurate and misleading information that will just do the opposite," Han reflects.

For large patent holders such as Qualcomm, it's not possible to evaluate each and every patent, so Qualcomm uses representative claim charts and sometimes hundreds of those to "try to satisfy and give a real good proxy to the overall portfolio strengths".

Han also cautions against a disregard for evaluation in the face of essentiality "as if the essentiality aspect will somehow give a value or consideration to the value of the portfolio". At any rate, he says there is yet no replacement for human endeavour when it comes to checking essentiality.

"I've seen a spot checking of some of the patents by junior engineers spending 15 minutes to see if it's thumbs down or thumbs up, and I can tell you when we do a claim chart internally to see if a particular patent is standard essential or not, we don't spend 15 minutes. We spent hours trying to do it, hours. I can't imagine some junior engineers doing this in 15 minutes and we do it with patent attorneys who understand how the legal claim constructions are done, working together with technical experts who are embedded in standards to give us their guidance and their opinion. I saw once before some junior engineer spending 15 minutes to do an essentiality check, that doesn't seem very accurate to me."

And spot checking via AI has not won his confidence. "All that means is patent matching or word matching to see if something is standard essential or not. I don't really think that is valid." The "flawed methodologies" are then used to "jump over" the valuation aspect, Han says.

However, Han emphasises that these things don't play a major role in good faith negotiations.

And the approach seems to be working as Qualcomm notches up successes, including already having licensed its 5G cellular SEPs to over 150 licensees, by far the most in the industry. Over 90% of handset makers are licensed.

Han also elaborated on comments he made at a [recent IAM event](#) on patent pool potential for the handset market.

"A patent pool works if this is a relatively new market for both licensees and licensors because they're both trying to establish a licensing programme," he says. However he can't see such potential in the handset industry where companies have had bilateral agreements with the major patent holders for 20 to 30 years.

"They know what they are doing. Why would they give all that up on both sides when they have a tailored agreement?" he asks. This is especially true when licensing on fair, reasonable and non-discriminatory (FRAND) terms "has worked so well for the handset industry".

But he added: "Having said that, Avanci for 4G in the auto [sector] I think has been very successful in that regard". Qualcomm is in talks with Avanci for 5G in autos and reviewing its programme for balance and compatibility with the mobile company's licensing programme. As to timeline, he noted that while some 40-50% of phones in the US, China and western Europe are 5G-enabled, in autos it is "only ramping up" and will not reach meaningful volume until maybe 2024, he predicts, adding, "I think we have some time there".

But there are no current plans to join further multimedia pools following the company's withdrawal from Velos. It is - like so many things - "just a matter of prioritisation," he explains.

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