

## **From the Magazine: No Free or Easy Ride with Open Source Software Licensing**

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*"If I have seen further [than certain other men] it is by standing upon the shoulders of giants" -- Sir Isaac Newton (1642–1727), British physicist and mathematician referring to his dependency on Galileo's and Kepler's work in physics and astronomy.*

Purveyors of competitive and market-leading products and services in IT and telecom are highly reliant upon the technological innovations of many others. These offerings typically abound with technologies developed by many different organizations. Superlative technologies are by definition unique and characteristically without close substitutes. For example, leading smartphones need to employ many standard-essential patented technologies for LTE and video coding encoding, as well as non-SEP technology pinch-to-zoom, swipe-to-scroll on multi-touch displays and more.

Implementations require a sophisticated and highly interdependent mixture of hardware, firmware and software.

This brings with it a liability to pay dues to those who own the IP rights to the various technologies employed. That cannot simply be ignored or wished away by implementing algorithms in software or under open source licensing arrangements. This is illustrated by the recent licensing agreements by Google for the Android mobile operating system, the Chrome PC operating system and the VP8 video codec.

### **Open source and other infringements**

Open source software arrangements in which code is contributed, modified and used freely without royalty payments are very appealing to many developers and implementers; but this does not absolve parties, who voluntarily agreed to such commitments, from de jure obligations externally.

While royalty payments seemingly challenge or even threaten the existence of open source business models, Google and implementers of its open source offerings—some of whom, including Samsung for example, have done exceedingly well with these programs—are agreeing to cough up.

Android and Chrome are Google-controlled operating systems with open source software development and licensing. According to Microsoft, the two operating systems employ technologies it has patented. Smartphone vendor ZTE and contract manufacturer Foxconn have recently joined Samsung, HTC and Acer in signing up to Microsoft's patent licensing program. ZTE's agreement, for example, provides access to patents covering phones, tablets, computers and other devices running Google's Android and Chrome operating systems. Microsoft has forged licensing deals with nearly all of the world's largest Android smartphone vendors and manufacturers. Also according to the company, 80 percent of Android smartphones sold in the U.S. and a majority of those sold worldwide are covered under agreements with Microsoft.

Microsoft has filed lawsuits for patent infringement against various Android device makers including Google-owned Motorola Mobility. Tit-for-tat litigation with Motorola asserting H.264 video and 802.11 WiFi patents against Microsoft's Xbox360 and Windows PCs has been extensive and prominent.

On the basis of a decision announced April 25, 2013 by U.S. District Judge James Robart in Seattle, Microsoft should pay Motorola about a half-cent per unit for video-decoding technology and 3.5 cents for wireless technology in compensation for Motorola's relatively small share of the many SEPs to these standards. According to Microsoft, that equals about \$1.8 million a year—much less than the 2.25 percent of the retail price Motorola Mobility initially demanded which would have instead cost billions of dollars. Microsoft, who, in press reports, supposedly negotiated royalties for Android with HTC and Samsung in the \$5-\$15 range, is clearly heartened by such differences. However, one should note that unofficial figures such as the latter should be treated with great caution: all terms and conditions (e.g., netting off charges with cross-licensing) were not revealed and these figures might not reflect final agreements.

Android has also flourished despite Apple's resistance. Apple's deceased founder and former CEO, Steve Jobs, was quoted in his authorized biography as saying: "I will spend my last dying breath if I need to, and I will spend every penny of Apple's \$40 billion in the bank, to right this wrong. I'm going to destroy Android, because it's a stolen product. I'm willing to go thermonuclear war on this". While Apple's cash pile has multiplied since then, Android has also gone from strength to strength—despite litigation and licensing payments—to take 70% of the 700 million unit smartphone market in 2012.

### **State-of-the-art video isn't easy**

Absent indemnities to implementers, the WebM project web site has misleadingly

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stated for several years that the codecs WebM supports (VP8 video and Vorbis audio) require no royalty payments of any kind. In addition, the project's web site states "you can do whatever you want with the WebM code without owing money to anybody". High-performance video codecs employ many and various state-of-the-art technologies. These are developed in an intellectual community comprising scores of companies and universities, including thousands of technologists. Most of these organizations are clearly unwilling to contribute their patented technologies on a royalty-free basis. Leading open standards in this field include H.264 which is substantially licensed with an aggregate royalty of up to 20 cents per device through a patent pool administered by MPEG LA with 29 licensors, 2,600 SEPs and 1,200 licensees. These licensors tend to be content with this fairly low royalty rate because they are also predominantly downstream licensees including manufacturers and service providers.

It was unsurprising that several of these patent owners concluded the competing VP8 codec was infringing their patents given the development environment described above. Google initially attempted to thwart MPEG LA's attempts, announced March 2011, to formulate a VP8 patent pool with an antitrust action. But the antitrust authorities were having none of it. There is no reason in antitrust or patent law why these patent owners should not seek to assert their rights bilaterally or through a pool. Instead, in March 2013 Google agreed to license 11 patent owners for VP8 through administrator MPEG LA, who said that as part of this licensing agreement with Google, it would cease seeking to create a VP8 pool.

The patent peace did not last long. Within a couple of weeks, Nokia said publicly it believed VP8 infringed some of its patents. It also described the codec as a "proprietary technology" that offers "no advantages" over H.264 and that Google is "attempting to force" it on others as part of its WebM project. Nokia said it is unwilling to license its patents for use with this codec. It is quite entitled to block a standard in this way if its patents are valid and infringed. Whereas participants to standard-setting organizations are typically required to commit to offer licenses under (Fair) Reasonable and Non-Discriminatory terms, no such obligation would apply to non-participants such as Nokia. With nothing like the level of demand Android commands, VP8 will continue to struggle significantly with such impediments.

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