

## SMARTPHONES

The stories of Apple and RIM provide examples of the benefits of a smart intellectual property strategy as well as the litigious nature of the smartphone industry. An increasingly crowded smartphone market is also raising the attractiveness of the patent-licensing business model employed by firms like Qualcomm and InterDigital.

### **Apple and RIM Enter the Smartphone Market**

In 2007, Apple, Inc. entered the competitive mobile phone market with the launch of its iPhone.<sup>1</sup> Apple's CEO Steve Jobs predicted that the iPhone would "change everything" in the same way that the iPod did after its release in 2001. Once again, Jobs was more right than wrong.<sup>2</sup> The iPhone was wildly successful. Apple sold a million units within the first seventy-four days.<sup>3</sup>

Like any company interested in entering the mobile phone market, Apple first had to navigate a complex "patent thicket." Before the release of the original iPhone and its subsequent, more advanced versions, Apple pursued an intellectual property strategy that allowed it to release its smartphones relatively free of the complex and costly litigation that often characterizes the smartphone industry.

RIM is the company responsible for introducing the BlackBerry, a landmark device combining a personal organizer, phone, Web browser, email client, and pager. The BlackBerry was released in 1999, and became so popular that by 2007 it had acquired more than eight million users.<sup>4</sup> As with Apple, RIM's entry into the smartphone market required it to develop an intellectual property strategy, and like Apple, RIM has been relatively successful.

Both Apple and RIM negotiated patent-licensing agreements with a company called InterDigital before releasing their smartphones.<sup>5</sup> InterDigital develops technology that allows mobile phones to connect with cellular networks, with a current focus on the technology standards that apply to the faster third-generation networks.<sup>6</sup> Apple's agreement, completed in 2007, was worth twenty million dollars, and covered the current iPhone and its 3G successor.<sup>7</sup> The patent-licensing agreement was only a small part of Apple's patent portfolio, which according to Jobs, contains two hundred patents related to the iPhone.<sup>8</sup> RIM also negotiated a patent-license agreement with InterDigital that covered the BlackBerry's original release, and recently extended the license agreement through 2012 and broadened its scope to cover 3G products.<sup>9</sup>

Apple and RIM's stories contrast sharply with that of Samsung's, another high-tech company that attempted to launch a smartphone to compete with those offered by Apple and RIM.<sup>10</sup> Unlike Apple and RIM, however, Sam-

sung either neglected or decided not to negotiate a patent-licensing agreement with InterDigital. Instead, Samsung found itself on the defensive when InterDigital filed a patent lawsuit against Samsung as well as a complaint before the US International Trade Commission. Samsung and InterDigital eventually settled their dispute, but the costs to Samsung were estimated at four to five hundred million dollars for a five-year agreement.<sup>11</sup>

Despite Apple and RIM's successful patent-licensing agreements with InterDigital, the two companies have still faced litigation over the intellectual property behind the iPhone and BlackBerry. In 2000, NTP, a patent-holding company whose business plan involves seeking royalties through licensing rather than through the development of its patents, sent a letter to RIM alleging patent infringement and requesting that the two companies negotiate an agreement to license NTP's technology. After RIM ignored the letter, NTP filed a lawsuit, eventually winning a \$53 million jury verdict.<sup>12</sup> RIM fought the decision for several years and in several different courts before reaching a \$612.5 million settlement with NTP, although at one time the shutdown of all BlackBerry devices appeared so imminent that the US Department of Justice begged the presiding judge to halt the stoppage because it would interfere with the ability of federal employees to do their jobs.<sup>13</sup> Apple has faced similar legal disputes regarding the patents involved in its iPhones. In 2009, Nokia filed a lawsuit

alleging that Apple had infringed on ten patents in areas such as wireless data transfer. Apple reported that twenty-seven patent infringement suits had been filed against it in 2009.<sup>14</sup>

Apple and RIM are not unique in having to litigate patent disputes related to their smartphones. The entire smartphone industry is becoming increasingly characterized by costly litigation. This turn toward litigation is in part a function of the industry's size—smartphone revenues grew to sixty-one billion dollars in 2009—and the increasing complexity of the devices themselves. The wireless communications capabilities of a 3G phone, for example, may touch on as many as eight thousand patents and the interests of forty-one patent-holding companies.<sup>15</sup> Some litigation is aimed at extracting payments for the use of the patent holder's technology. Other firms, though, wish to keep competitors out of the market altogether. For instance, in response to Nokia's lawsuit, Apple filed a complaint with the US International Trade Commission to block the importation of Nokia phones.<sup>16</sup> According to Stanford law professor Mark Lemley, "Apple would like to prevent competitors from making phones that are iPhone-like."<sup>17</sup>

The crowded and competitive smartphone market has resulted in the proliferation of mobile phone operating systems. Currently, RIM, Apple, and Microsoft each have developed operating systems, and there are several open-

source systems such as Android, Symbian, and Maemo. Analysts predict that open-source operating systems will dominate the market by 2012, with 62 percent of new smartphones using them. Thus, handset manufacturers will be able to participate directly in the development process, leading to more rapid innovation. Open-source platforms will also be free of licensing fees and royalties, thereby diminishing the commercial value of mobile operating systems.<sup>18</sup>

### **The iPad and Its Competitors**

The competition between RIM and Apple is not limited to smartphones. In 2010, RIM announced plans to enter the tablet market in the near future with a device called the “blackpad,” which was designed to compete with the iPad during the holiday season.<sup>19</sup> Soon after RIM’s announcement, Samsung followed suit by stating that it too would be releasing an iPad competitor called the Galaxy Tab. With analysts predicting that nearly sixty million tablet computers will be sold by 2015, and that they will outnumber e-readers and notebooks by 2012, the previous forays into the tablet market are understandable.<sup>20</sup>

## InterDigital, Qualcomm, and Patent Licensing

The rise in patent litigation related to smartphones, combined with increased licensing payments and a crowded marketplace, has made the position of patent-licensing firms more attractive. Rather than attempting to manufacture their own phones, patent-licensing firms either develop and patent their own technology, or purchase patents from others. This strategy allows firms to avoid both the manufacturing and inventory costs associated with producing smartphones as well as the competition of the smartphone marketplace.

InterDigital, a relatively small publicly traded company, has had success pursuing a business plan centered on patent licensing. In 2009, the company reported revenues of almost three hundred million dollars, or a 30 per cent increase over 2008.<sup>21</sup>

Qualcomm is an even-larger success story. A major part of the company's business model consists of supplying technology to other companies by either providing semiconductor chips or licensing its technology. Indeed, Qualcomm possesses an enormous patent portfolio—approximately 11,600 US and 54,100 international patents and patent applications.<sup>22</sup> This wealth of intellectual property allows the company to collect nearly a billion dollars in royalty revenues per quarter.<sup>23</sup> In fact, over one-third of the company's revenues come from technology licensing

fees.<sup>24</sup> As smartphone technology results in the proliferation of patents, even small firms are noticing opportunities. Earlier this year, MobileMedia Ideas, a newly formed company, purchased 122 patents from Nokia and Sony, and then proceeded to file lawsuits against Apple, RIM, and HTC.<sup>25</sup>

Firms that take advantage of patent licensing risk being branded as patent trolls—as described earlier, entities that do not practice their patents but rather obtain revenue primarily from licensing their patent portfolio.<sup>26</sup> Indeed, in 2007, the Korean Intellectual Property Office stated that InterDigital was a patent troll for the way it “seemed to target the Korean hi tech players.”<sup>27</sup> InterDigital touts its “technology leadership” and notes on its corporate Web site that today, “building on the company’s legacy of innovation, we continue to make contributions to the leading standards bodies that define tomorrow’s wireless networks.” Qualcomm has also shown sensitivity to the pejorative term, insisting, after being sued by Nokia, that it was not a “grubby little patent troll,” and stressing instead the innovations for which the company has become known in the industry that gave rise to its formidable patent portfolio.<sup>28</sup>





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By: John Palfrey

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