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Note: The authors represented Complete Genomics in the patent infringement litigations discussed in this article.

Patent Litigation In The United States: What Chinese Companies Need To Know

When BGI-Shenzhen, a leading international genomics organization based in Shenzhen, China, acquired US-based Complete Genomics, Inc. in March 2013, it also acquired two pending patent infringement lawsuits filed against Complete Genomics by Illumina, Inc.

Illumina had filed two patent infringement lawsuits against Complete Genomics:

- *Illumina, Inc. and Solexa, Inc. v. Complete Genomics, Inc.*, Case No. 10-cv-05542 EDL, filed in the US District Court for the Northern District of California in 2010, alleged infringement of US Patent Nos. 7,232,656, 7,598,035, and 6,306,597.
- *Illumina, Inc. and Illumina Cambridge Ltd. v. Complete Genomics, Inc.*, Case No. 12-cv-01465 BEN BGS, filed in the US District Court for the Southern District of California in 2012, alleged infringement of US Patent No. 8,192,930.

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At the time of BGI's acquisition, Complete Genomics already had secured two key victories in the first litigation. In May 2011, Complete Genomics obtained a dismissal without prejudice of '656 and '035 patents, leaving only the '597 patent to be litigated.¹ At the time of the lawsuit's filing, all claims of both the '656 and '035 patents stood rejected in reexamination in the United States Patent and Trademark Office (USPTO).

In October 2012, Complete Genomics won summary judgment of invalidity, on two independent grounds, of all the asserted sequencing method claims of the '597 patent.² The Court found that claims 1, 9, 10, and 14-19 of the '597 were invalid over two separate prior art references, Southern and Whiteley. Complete Genomics had argued that Southern qualified as prior art. Illumina, however, attempted to antedate or "swear behind" the Southern reference and disqualify it as prior art. Southern's patent priority date was February 9, 1995, approximately two months before the inventor of the '597 patent, Dr. Stephen Macevicz, submitted his application to the USPTO on April 17, 1995. But because Dr. Macevicz conceived of his invention earlier, in

July 1994, the patent laws allowed him to antedate Southern if he could show diligence in pursuing his patent application between February 9, 1995 and April 17, 1995. The Court found that Dr. Macevicz was not diligent in pursuing his patent application, and therefore, the '597 patent did not antedate Southern, and Southern qualified as prior art. The Court proceeded to find that both Southern and Whiteley, independently, invalidated claims 1, 9, 10, and 14-19 of the '597 patent.

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Only weeks after completion of the BGI acquisition, Complete Genomics achieved a total victory on all claims asserted by Illumina in the first litigation. The Court denied Illumina’s request to reconsider the October invalidity judgment, reissued its summary judgment order, and granted summary judgment of non-infringement of the remaining asserted “kit” claims.³ The Court found that because Complete Genomics did not use probes in subsets based on different annealing temperatures, Complete Genomics did not infringe the kit claims—claims 2, 4, and 5—of the '597 patent.

Months later, the parties agreed to settle both litigations, dismissing all claims with prejudice. Under this agreement, Complete Genomics made no payment to Illumina and took no license to any of the four patents asserted in these two lawsuits.

This settlement enabled Complete Genomics and BGI to shift their attention away from patent litigation and focus on developing their proprietary whole human genome sequencing technology. But many other Chinese companies, previously unfamiliar with American litigation, are confronting similar patent challenges in the United States. What do these companies need to know about American patent litigation?

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The Courts

Patents are governed by federal law. There are three tiers to the court system.

First, the federal district courts, along with the International Trade Commission (ITC), have original jurisdiction of patent infringement cases. There are ninety-four district courts in the fifty states, Puerto Rico, the Virgin Islands, the District of Columbia, Guam, and the Northern Mariana Islands. A patent owner can file a complaint in a district court of a state that has jurisdiction over the accused infringer,

which typically requires that the accused infringer either reside or have conducted business in that particular state. By contrast, a patent owner can initiate an investigation in the ITC as long as the accused infringer imports allegedly infringing goods into the United States.

Second, the US Court of Appeals for the Federal Circuit (Federal Circuit) hears appeals from the district courts and the ITC. The Federal Circuit handles several hundred appeals every year, with 471 appeals in 2012 originating from patent infringement cases in the district court.⁴

Third, the US Supreme Court has discretion to hear appeals from the Federal Circuit. Few patent cases reach the Supreme Court. In fact, from 2000 to 2011, the Supreme Court agreed to hear appeals in only nineteen patent cases.

Case Duration

Seventy percent of district court patent cases reach trial within three years of the complaint's filing.⁵ The average time-to-trial is approximately 2.5 years. However, certain jurisdictions, often known as "rocket dockets," historically have brought cases to trial much more quickly. For example, the US District Court for the Eastern District of Virginia offers the shortest time-to-trial, at a median of less than one year. In addition, ITC investigations typically conclude in a shorter timeframe of approximately 12-18 months.

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Pre-Trial Discovery

Discovery in patent litigation is broad. Under Federal Rule of Civil Procedure 26, parties may obtain discovery regarding "any nonprivileged matter that is relevant to any party's claim or defense." Information is relevant if "reasonably calculated to lead to the discovery of admissible evidence."

Parties may seek written discovery and depositions. Written discovery includes requests for production of documents, interrogatories, and requests for admissions. Depositions include questioning witnesses in their personal capacities or as designated corporate representatives.

There are limits on discovery, such as protection of attorney-client privileged communications. However, in the United States, parties routinely produce potentially sensitive internal information, such as technical documents describing the operation or function of the accused product or service, financial and sales records, and competitive or market analyses.

In addition to setting the discovery schedule, the court will hear discovery disputes that cannot be resolved by the parties. Common disputes include motions to compel production of documents and motions for protective orders to place limits on the disclosure of sensitive company information.

Patent cases often involve high discovery expenses. These costs have increased with the growth of electronically stored information (ESI), such as email. In recent years, courts have tried to curb the costs associated with electronic discovery in patent cases. For example, the Federal Circuit Advisory Committee published a Model Order proposing guidelines on the exchange of ESI by limiting search terms and document custodians.⁶

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Claim Construction

Claim construction is a critical point in a patent case. Claim construction is a matter of law to be determined exclusively by the court. The court holds a Markman hearing to establish the scope and limits of the asserted claims. The court primarily considers “intrinsic” evidence to construe the claims: the claims themselves, the specification, and the prosecution history. But a court may, in its discretion, consider “extrinsic” evidence external to the patent, such as expert and inventor testimony, dictionaries, and treatises.

Infringement, Invalidity, and Unenforceability Standards

To prove infringement, a patent owner must show by a preponderance of the evidence that the accused infringer practices every element of a patent claim, either literally or by equivalents. Infringement can be direct or indirect.

An accused infringer faces a higher standard of proof when trying to invalidate a patent. Because a patent issued by the USPTO is presumptively valid, an accused infringer must show invalidity by clear and convincing evidence. A patent can be invalidated on multiple grounds, including: anticipation by prior art; obviousness in view of prior art; and failure to comply with the written description, enablement, or best mode disclosure requirements.

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An accused infringer can render the entire patent unenforceable by proving, by clear and convincing evidence, inequitable conduct in procuring the patent. Inequitable conduct requires a showing that the patent applicant misrepresented or omitted information material to patentability, that the USPTO would not have allowed the claim but for this misrepresentation or omission, and that a specific intent to deceive is the single most reasonable inference to be drawn from the evidence.

Trial

In the United States, patent cases are not decided by technical specialists. The patent owner can try its case before either a jury or a judge. In the last decade, driven by higher success rates and greater damages awards from juries, patent owners increasingly have opted for jury trials. For example, while 14.4% of patent cases were tried to a jury in the 1980s⁷, that number jumped to 55.2% in the 2000s. The median duration of a jury trial was eight days while the median duration of a bench trial was five days.⁸

Remedies

In the district court, a party whose patent is found valid and infringed may obtain damages. There are two primary damages options: lost profits or a reasonable royalty. A reasonable royalty is the minimum measure of damages, as the patent statute ensures that the prevailing patent owner is entitled to compensation “in no event less than a reasonable royalty.” However, a patent owner may obtain lost profits if it can show that but for the infringement, it would have made additional sales.

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In addition to damages, a prevailing patent owner may obtain an injunction to bar the infringing activity. In the ITC, the Commission may enter an exclusion order that directs the customs agency to stop infringing imports from entering the country.

As more Chinese companies invest in American businesses, the need for familiarity with American patent litigation never has been more critical. Understanding the American patent litigation system will present Chinese companies with the best chance for success in court.

¹*Illumina, Inc. and Solexa, Inc. v. Complete Genomics, Inc.*, Case No. 10-cv-05542-EDL (N.D. Cal.) (Dkt. No. 75).

²*Illumina, Inc. and Solexa, Inc. v. Complete Genomics, Inc.*, Case No. 10-cv-05542-EDL (N.D. Cal.) (Dkt. No. 197).

³*Illumina, Inc. and Solexa, Inc. v. Complete Genomics, Inc.*, Case No. 10-cv-05542-EDL (N.D. Cal.) (Dkt. Nos. 245, 246 & 247).

⁴United States Court of Appeals for the Federal Circuit, Filings of Patent Infringement Appeals from the U.S. District Courts, 2003-2012, available at http://www.cafc.uscourts.gov/images/stories/the-court/statistics/Caseload_Patent_Infringement_2003-2012.pdf (last visited September 16, 2013).

⁵Pricewaterhouse Coopers LLP, 2012 Patent Litigation Study, available at http://www.pwc.com/en_US/us/forensic-services/publications/assets/2012-patent-litigation-study.pdf.

⁶Federal Circuit Advisory Council, Model Order Regarding E-Discovery In Patent Cases (2011), available at http://www.cafc.uscourts.gov/images/stories/announcements/Ediscovery_Model_Order.pdf.

⁷Pricewaterhouse Coopers LLP, 2012 Patent Litigation Study.

⁸ Mark A Lemley, et al., "Rush to Judgment? Trial Length and Outcomes in Patent Cases," *AIPLA Quarterly Journal*, Vol. 41, No. 2, Spring 2013, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2217690.

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