United States Court of Appeals for the Federal Circuit

MIRROR WORLDS, LLC,
Plaintiff-Appellant,

v.

APPLE INC.,
Defendant-Appellee.

2011-1392

Appeal from the United States District Court for the Eastern District of Texas in Case No. 08-CV-0088, Judge Leonard Davis.

Decided: September 4, 2012

DAVID BOIES, Boies, Schiller & Flexner, LLP, of Armonk, New York, argued for plaintiff-appellant. With him on the brief were WILLIAM D. MARSILLO; and PHILIP C. KOROLOGOS, of New York, New York. Of counsel on the brief were DONALD R. DUNNER, ALLEN M. SOKAL and MOLLY R. SILFEN, Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, of Washington, DC; and JOSEPH DIAMANTE, KENNETH L. STEIN, IAN G. DIBERNARDO and ALEXANDER SOLO, Stroock & Stroock & Lavan LLP, of New York, New York.

WILLIAM F. LEE, Wilmer Cutler Pickering Hale and Dorr LLP, of Boston, Massachusetts, argued for defendant-appellee. With him on the brief were MARK C. FLEMING, LAUREN B. FLETCHER and NATHAN R. SPEED. Of counsel on the brief were WILLIAM G. MCELWAIN and THOMAS G. SAUNDERS, of Washington, DC; GEORGE RILEY, O'Melveny & Meyers LLP, of San Francisco, California; ALLAN M. SOOBERT, Paul Hastings LLP, of Washington, DC, and JEFFREY G. RANDALL, Paul Hastings LLP, of Palo Alto, California.

Before NEWMAN, LOURIE, and PROST, *Circuit Judges.*

Opinion for the court filed by *Circuit Judge* LOURIE.
Opinion dissenting in part filed by *Circuit Judge* PROST.

LOURIE, *Circuit Judge.*

This is an appeal from an infringement suit brought by Mirror Worlds, LLC ("Mirror Worlds"), against Apple, Inc. ("Apple"), to enforce various claims of three patents: U.S. Patent 6,006,227 ("'227 patent"); U.S. Patent 6,638,313 ("'313 patent"); and U.S. Patent 6,725,427 ("'427 patent"). The jury returned a verdict in favor of Mirror Worlds and awarded $208.5 million in damages. In separate rulings—one at the end of Mirror Worlds' case in chief and another after the jury verdict—the district court entered judgment as a matter of law in Apple's favor, finding that Apple was not liable as a matter of law for infringement of any of the asserted patent claims and vacating the damages verdict. *See Mirror Worlds, LLC v. Apple, Inc.*, 784 F. Supp. 2d 703 (E.D. Tex. 2011). Because we conclude that the district court did not err in entering judgment as a matter of law, we affirm.

BACKGROUND

Mirror Worlds brought suit against Apple, alleging direct and induced infringement of twelve claims of the three patents in suit. At the conclusion of Mirror Worlds' case in chief, the district court granted Apple's oral motion for judgment as a matter of law that Apple did not induce infringement of any of the patents because Mirror Worlds did not offer any evidence of actual performance of the patented method by third parties. *See Mirror Worlds*, 784 F. Supp. 2d at 710 n.7. The issue of direct infringement by Apple was submitted to the jury, which found Apple liable for willfully infringing all three asserted patents and awarded $208.5 million in damages.

After the trial, the district court granted Apple's motion for judgment as a matter of law, vacated the jury verdict, and concluded that Mirror Worlds failed to present substantial evidence of direct infringement and damages. *Id.* at 720, 727. In particular, the district court concluded that Mirror Worlds did not establish infringement of the asserted claims of the '313 and '427 patents under the doctrine of equivalents—its only infringement theory for those patents—because the accused products did not have an equivalent of a "cursor or pointer." *Id.* at 716–20. The district court also concluded that Mirror Worlds failed to offer substantial evidence that Apple performed each step of the claimed methods of the '227 patent and that the evidence presented at trial was not sufficient to support the damages award. *Id.* at 713–15, 724–27. Mirror Worlds appeals, arguing that we should reverse each of the district court's rulings. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

I. The Invention and the Claims

The patents in suit share a common written description and are generally directed to searching, displaying,

and archiving computer files. The specification discloses a "document streaming" operating system that, unlike traditional operating systems, identifies documents with a time stamp instead of a file name and maintains them in chronologically ordered "streams." "Every document created and every document sen[t] to a person or entity is stored in a main stream." '313 patent col. 4 ll. 11–13. The documents in the stream "can contain any type of data" including "pictures, correspondence, bills, movies, voice-mail and software programs." *Id.* col. 4 ll. 19–21. By constantly keeping track of all the documents on the computer in these chronologically ordered streams and making the location and nature of file storage transparent to the user, the invention purportedly improves filing operations and enhances the quality of the user's experience. The patents describe displaying the stream as stacked images that appear to be receding and foreshortened, as illustrated in Figure 1:
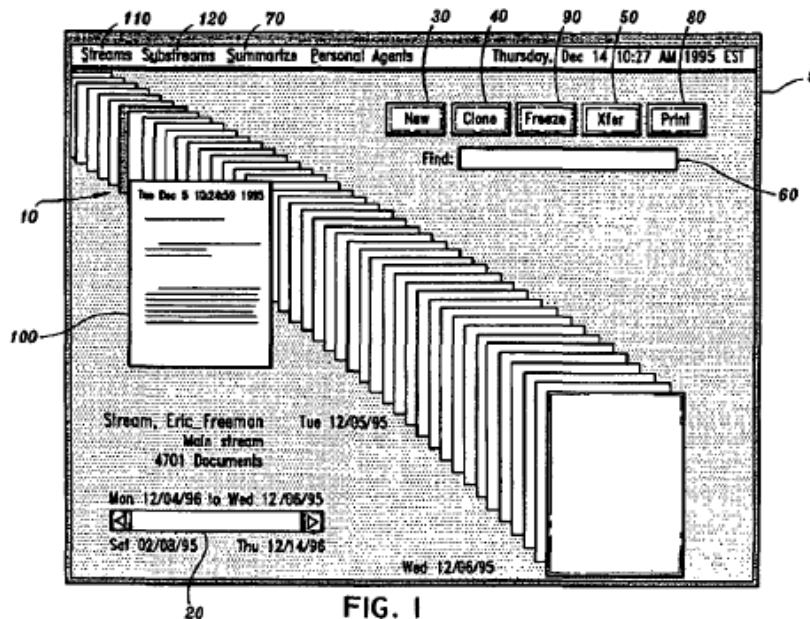

FIG. 1

Id. Fig.1. By sliding the cursor over any item within the stack, the user may see a preview of the document, also known as a "glance view." *See id.* col. 15 ll. 21–22, col. 16 ll. 35–36. The documents within the stream are marked with a time stamp, and are automatically updated and continuously archived in chronological order.

The asserted claims of the '227 patent (claims 13 and 22) and '313 patent (claims 1, 2, 3, 9, and 11) are method claims; the asserted claims of the '427 patent (claims 1, 8, 16, 18, and 25) are system claims. All of the asserted claims of the '313 and '427 patents include a limitation for a sliding "cursor or pointer" that relates to the glance view. Claim 1 of the '313 patent is exemplary of the asserted '313 and '427 claims:

> 1. A method of utilizing a document stream operating system that in turn utilizes subsystems from at least one other operating system, comprising:
>
> receiving documents from diverse applications in formats that are specific to the respective applications and differ as between at least some of said applications;
>
> automatically associating time-based indicators with the documents received in the receiving step from the diverse applications;
>
> automatically archiving the received documents;
>
> automatically creating glance views that are abbreviated versions of respective ones of said documents;
>
> selectively displaying at least some of said documents as a receding, foreshortened stack of partly overlapping documents so that only a part of each of said documents in the displayed

stack, after the first document in the stack, is visible to the user;

said displaying further including displaying a cursor or pointer and responding to a user sliding the cursor or pointer over said displayed stack to display the glance view of the document in the stack that is currently touched by the cursor or pointer, without requiring clicking on the document; and

utilizing, in said document stream operating system, subsystems from said at least one other operating system for operations including writing documents to storage media, interrupt handling and input/output.

'313 patent col. 16 ll. 14–26.

The asserted claims of the '227 patent (independent claim 13 and dependent claim 22) do not contain the "cursor or pointer" limitation. Claim 13 recites a method for organizing documents as they are generated in and received by the computer:

13. A method which organizes each data unit received by or generated by a computer system, comprising the steps of:

generating a main stream of data units and at least one substream, the main stream for receiving each data unit received by or generated by the computer system, and each substream for containing data units only from the main stream;

receiving data units from other computer systems;

generating data units in the computer system;

selecting a timestamp to identify each data unit;

> associating each data unit with at least one chronological indicator having the respective timestamp;
>
> including each data unit according to the timestamp in the respective chronological indicator in at least the main stream; and
>
> maintaining at least the main stream and the substreams as persistent streams.

'227 patent col. 16 ll. 9–25. Claim 22, which depends from claim 13, recites an additional limitation for "archiving data units having timestamps older than a specified time point." *Id.* col. 16 ll. 61–64.
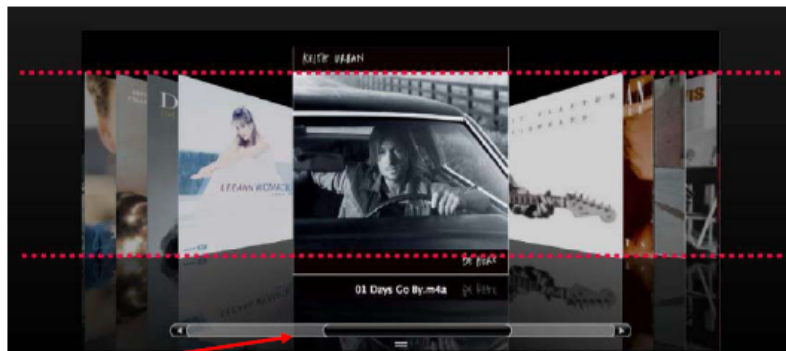
II. The Accused Products

Mirror Worlds accused all Apple computers and servers that run the Mac OS X operating system versions 10.4 ("Tiger"), 10.5 ("Leopard"), and 10.6 ("Snow Leopard") of infringement. Mirror Worlds also accused Apple's mobile devices that run the iOS operating system, which is based on Mac OS X. Mirror Worlds accused, in various combinations, three specific features embedded in the accused operating systems of infringing the patents: Spotlight, Cover Flow, and Time Machine.

Spotlight, which Apple introduced for the first time in its Tiger operating system, is a search and indexing application. Spotlight continuously tracks all files that are generated in or received by the computer and collects certain information about their content. The information collected is used to compile both an index of all computer data and a database of metadata information about the content and form of each document such as the time and date of creation, author, or the location where the document is stored. By continuously maintaining and updating both the index and the metadata database, Spotlight

enables the user to easily search and view, through a single interface, all of the computer's contents (including, for example, the content of attachments to received e-mails). The user may also organize the search results based on various criteria, including the time that the documents within the search results were last modified.

Cover Flow, first introduced with Leopard, is a graphical user interface that allows a user to flip through a stack of documents on the computer. Files viewed in Cover Flow are displayed as a deck of album covers. A representative preview of each file is displayed, one at a time, in the center of the view with the rest of the files only partially displayed (in two side stacks) to the left and right. Unlike the patented interface, sliding a cursor over the documents in the side stacks will not result in a preview of the file being displayed. Rather, in Apple computers, the user must manipulate a horizontal scroll bar at the bottom of the application screen in order to browse through the files. In Apple's mobile devices, which are equipped with a touch screen, the user may look through the documents by swiping a finger across the screen. A screen-shot of Cover Flow is reproduced below.

Time Machine, also first introduced with Leopard, is an automatic backup and archiving application. When an

external hard drive is connected to an Apple computer, Time Machine will prompt the user to select whether that device should be used to store a system backup. If a user answers yes, Time Machine will automatically archive and backup the user's files. Time Machine will also allow the user to restore and recover past versions of the files that have been previously backed up on the external hard drive.

DISCUSSION

We review the grant or denial of a motion for judgment as a matter of law under the law of the regional circuit. *Summit Tech., Inc. v. Nidek Co.*, 363 F.3d 1219, 1223 (Fed. Cir. 2004). The Fifth Circuit reviews the grant or denial of judgment as a matter of law *de novo*. *Med. Care Am., Inc. v. Nat'l Union Fire Ins. Co.*, 341 F.3d 415, 420 (5th Cir. 2003). "If there is substantial evidence opposed to [judgment as a matter of law] ... [it] should be denied." *Id.* (citation omitted). We have interpreted the Fifth Circuit's standard to mean that the jury's determination must be supported by substantial evidence. *ACCO Brands, Inc. v. ABA Locks Mfrs. Co.*, 501 F.3d 1307, 1312 (Fed. Cir. 2007). The jury's determination of infringement is a question of fact, which we review for substantial evidence. *z4 Techs., Inc. v. Microsoft Corp.*, 507 F.3d 1340, 1347 (Fed. Cir. 2007).

We agree with the district court that Mirror Worlds' infringement theory for all of the asserted claims of the '313 and '427 patents must fail because Mirror Worlds did not provide substantial evidence to show that the accused products have an equivalent for the "cursor or pointer" limitation. We also agree with the district court that Mirror Worlds failed to introduce substantial evidence to show that Apple itself directly infringed or induced its customers to infringe the '227 method claims. In view of

the fact that we are affirming the district court's grant of judgment as a matter of law of non-infringement, we have no need to review its judgment on damages.

I. The '313 and '427 Patents

The asserted claims of the '313 and '427 patents require a "cursor or pointer" to generate a glance view of a particular document in the file stack. Conceding on appeal that Cover Flow does not literally meet the "cursor or pointer" limitation, Mirror Worlds' theory of infringement of the '313 and '427 patents relies on the doctrine of equivalents. We agree with the district court, however, that Mirror Worlds failed to present substantial evidence to the jury to support its infringement theory.

Under the doctrine of equivalents, "a product or process that does not literally infringe . . . the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997). A patent is infringed under the doctrine of equivalents if any difference between a given limitation in the asserted claim and the corresponding element in the accused device is insubstantial. *Voda v. Cordis Corp.*, 536 F.3d 1311, 1326 (Fed. Cir. 2008). Alternatively, "an element in the accused device is equivalent to a claim limitation if it performs substantially the same function in substantially the same way to obtain substantially the same result." *Id.* (citation omitted). Regardless how the equivalence test is articulated, "the doctrine of equivalents must be applied to individual limitations of the claim, not to the invention as a whole." *Warner-Jenkinson*, 520 U.S. at 29.

Here, Mirror Worlds failed to present substantial evidence to the jury to establish equivalence under either

test. The cursor or pointer limitation may be parsed into two components: 1) "a cursor or pointer" and 2) "responding to a user sliding the cursor or pointer over said displayed stack to display the glance view of the document . . . without requiring clicking on the document." In other words, the claims require a cursor *and* a system that responds to the sliding (without clicking) of the cursor over the stack by generating a glance view of the document. Mirror Worlds has failed to show equivalence of the first component; thus, we need not consider the second component.

Mirror Worlds argued at trial that the "default" area at the center of Cover Flow was equivalent to the "cursor or pointer." In support of its argument on appeal, Mirror Worlds relies exclusively on the testimony of its expert, Dr. John Levy. Dr. Levy's testimony, however, is insufficient as it does not establish that Cover Flow has the equivalent of a cursor or a pointer. In pertinent part, Dr. Levy stated:

> [Cover Flow] does not display a literal pointer, but I believe it has the equivalent, because the user always is looking at the center where the glance view is going to pop up, and that is where the cursor or pointer is by default.

J.A. 1588. That testimony is inadequate. Dr. Levy does not explain why the mere fact that users look at the center of the display, where glance views are shown, should mean that a cursor exists there by default. Nor does he explain what it means for a cursor to be present "by default" in the first place. Such an assertion amounts to an argument that the absence of a feature is equivalent to its presence, which is a negation of the doctrine of equivalents. Dr. Levy's conclusory statement is thus insufficient to allow a reasonable juror to find that Mirror

Worlds has met its burden of proof in showing that Cover Flow has the equivalent of a cursor or pointer.

Reading the "cursor or pointer" limitation out of the claim improperly vitiates claim language by allowing the exact opposite of what is required. *See Warner-Jenkinson*, 520 U.S. at 39 n.8 ("[I]f a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court."). We therefore agree with the district court that the evidence was insufficient to support the jury's finding of infringement for all of the asserted claims of the '313 and '427 patents.

II. The '227 Patent

The '227 patent is drawn to a method of organizing documents in a computer. To infringe a method claim, all steps of the claimed method must be performed. *See Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1317 (Fed. Cir. 2009); *see also* 35 U.S.C. § 271. Infringement of claim 13 of the '227 patent requires, at a minimum: searching in Spotlight, receiving data units from other computer systems (such as receiving e-mail), generating data units (sending an e-mail or creating a document), and generating a substream ("time-ordered" search results). '227 patent col. 16 ll. 9–25; *see also* J.A. 7530–37 (Mirror Worlds' claim chart). While Mirror Worlds also asserted claim 22 of the '227 patent in the district court, Mirror Worlds' opening brief on appeal hardly mentions claim 22 apart from a passing reference in a footnote that claim 22 is also infringed. Mirror Worlds Br. 21, 48 n.18. That does not sufficiently preserve the issue for appeal; thus we will focus on the only other asserted claim: claim 13. *See Otsuka Pharm. Co. v. Sandoz, Inc.*, 678 F.3d 1280, 1294 (Fed. Cir. 2012) (holding that issues raised only in a footnote may be deemed waived).

A. Direct Infringement

As stated above, the use of Spotlight to search for documents on a computer that has sent and received documents (via e-mail, for example) and generates time-ordered search results infringes claim 13. The district court found that Mirror Worlds failed to offer any evidence that showed Apple itself infringed claim 13 of the '227 patent. We agree that Mirror Worlds has not offered substantial evidence that Apple directly infringed the '227 patent.

Direct infringement of a method claim can be based on even one instance of the claimed method being performed. *See Lucent*, 580 F.3d at 1317. A patentee need not always have direct evidence of infringement, as infringement may be established by circumstantial evidence. *Id.* However, Mirror Worlds, as the patentee here, has to show that Apple performed all of the steps in the claimed methods. *Id.* Mirror Worlds failed to meet that burden.

Mirror Worlds introduced a video of a January 2005 presentation by Apple's former CEO, Steve Jobs, during which he demonstrated use of Tiger's Spotlight to search for data on a computer. The searched data included thousands of photographs presumably received from another computer by e-mail. Mirror Worlds also introduced evidence that Apple tested the method by searching e-mails with Spotlight in 2004. But, as Mirror Worlds acknowledges, the cited demonstration and testing both occurred before Tiger, the earliest accused version of the operating system, was released to the public. Mirror Worlds Reply Br. 13. Mirror Worlds nonetheless argues that the jury could have reasonably inferred from that evidence that Apple possessed an infringing copy of Tiger before it released it to the public.

Mirror Worlds' damages expert, Walter Bratic, provided testimony that belies that position. Bratic testified that "the only evidence of an infringing product is the product that was released to the public in April 2005." J.A. 1813. Indeed, Bratic specifically stated that an incomplete version of Tiger that was used in another demonstration by Jobs in 2004 was not an infringing version. J.A. 1812–13. Mirror Worlds points to no other evidence or testimony in the record that would justify an assumption by the jury that the Tiger version used in Jobs' January 2005 presentation or Apple's internal testing was indeed an infringing version of the operating system.

Mirror Worlds also relies on the testimony of Bertland Serlet, an Apple executive, as evidence of direct infringement. Mirror Worlds Reply Br. 13. Serlet opined that "Spotlight works well, works fast, has a nice user interface" and is "especially useful in mail." J.A. 1455–56. That statement is at best circumstantial evidence that Serlet knew that Spotlight could be used to search e-mails. It says nothing, however, about whether Serlet or anybody else at Apple used an infringing version of the accused products to search for e-mails. Thus, Serlet's testimony does not provide a reasonable jury adequate ground on which to find direct infringement by Apple.

Finally, Mirror Worlds argues that Brian Croll, another Apple executive, infringed the method claims by presenting Spotlight to the jury during the trial. But demonstration to a jury during trial does not constitute evidence of infringement on which a claim of infringement can be based. Furthermore, Apple notes, and Mirror Worlds does not dispute, that this argument was not raised below. In view of that fact, we decline to consider it here. *See Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1260 (Fed. Cir. 2010).

In sum, the district court correctly found that Mirror Worlds failed to provide substantial evidence to the jury to support a verdict of direct infringement by Apple of claim 13 of the '227 patent.

B. Induced Infringement

In addition to alleging direct infringement by Apple, Mirror Worlds also alleges that Apple induced its customers to infringe claim 13. The Patent Act provides that a party who "actively induces infringement of a patent shall be liable as an infringer." 35 U.S.C. § 271(b). Inducement of infringement requires that there be a showing of an underlying act of direct infringement. *See Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1326 (Fed. Cir. 2004).

After the close of evidence for Mirror Worlds, the district court granted judgment as a matter of law that Apple did not induce infringement, later clarifying that Mirror Worlds did not offer any evidence of actual performance of the patented method by third parties:

Mirror Worlds did not offer any evidence that anyone, Apple's customers or otherwise, actually performed the patented steps. While Mirror Worlds' expert, Dr. Levy, testified about the attributes and capabilities of the accused Spotlight, Cover Flow, and Time Machine features, he did not testify that anyone else performed all of the steps in the asserted method claims. Nor did Dr. Levy testify that he actually performed the claimed steps. Likewise, Mirror Worlds offered no documentary evidence (e.g., instructions, manuals, or user guides) that instructed others to practice the patented steps. Mirror Worlds also failed to provide any corresponding testimony tying any documentation to the method steps or explanation

of how Apple instructed users to perform each of the claim limitations. As such, no reasonable jury could conclude Apple was liable for indirect infringement. Accordingly, the Court ruled that, as a matter of law, Mirror Worlds had not proven that Apple induced or contributorily infringed any claims.

Mirror Worlds, 784 F. Supp. 2d at 710 n.7 (citations omitted).

As previously stated, infringement of the '227 patent requires at a minimum: searching in Spotlight, receiving data units from other computer systems (such as receiving e-mail), generating data units (sending an e-mail or creating a document), and generating a substream ("time-ordered" search results). '227 patent col. 16 ll. 9–25. Mirror Worlds relies on user manuals describing the various accused features, software reviews allegedly showing a customer performing each step of the asserted method claims, and Apple surveys listing Spotlight as the "most beneficial feature" of Tiger. However, Mirror Worlds cites no trial testimony of customers actually using each step of the method claims or tying together the various manuals, reviews, and surveys as evidence of actual use of the claimed method.

It is well settled that excerpts from user manuals as evidence of underlying direct infringement by third parties of products that can be used in a non-infringing manner are by themselves insufficient to show the predicate acts necessary for inducement of infringement. *E-Pass Techs., Inc. v. 3Com Corp.*, 473 F.3d 1213 (Fed. Cir. 2007). When manuals only teach "customers each step of the claimed method in isolation," but not "all the steps of the claimed method together," the manuals alone cannot support infringement. *Id.* at 1222. Such a manual does

not show that all of the steps were performed together. Here, the operating systems, laptops, and accused features such as Spotlight, can be indisputably used in a non-infringing manner. The manual entries cited by Mirror Worlds do not directly instruct a user how to infringe. Instead, the manuals suggest searching Mail using Spotlight, but do not at the same time instruct a user to receive an e-mail (receive data units), send an e-mail or create a word document (generate data units), and display time-ordered search results (generating a sub-stream). Such instruction is found only elsewhere in the manuals, and separately. The manuals teach customers each step of the claimed method only in isolation and thus do not suffice under *E-Pass* for showing inducement of infringement.

As noted in *Lucent*, instruction manuals, extensive sales, and testimony by an expert that the claimed method was used by him, his wife, and likely others was "barely sufficient" in that case to permit a jury to find underlying direct infringement. 580 F.3d at 1317–18. But here, unlike in *Lucent*, there was no similar testimony of total use of the claimed method from Mirror Worlds' infringement expert, Dr. Levy. *Mirror Worlds*, 784 F. Supp. 2d at 710 n.7 (Dr. Levy "did not testify that anyone else performed all of the steps in the asserted method claims. Nor did Dr. Levy testify that he actually performed the claimed steps."); J.A. 2373:13–16 (THE COURT: "I granted the JMOL with regard to the indirect infringement, because there was no expert testimony that I recall tying up or -- or expressing an opinion about [indirect infringement]."). Instead, Dr. Levy's testimony was focused on capability, not actual use, with no discussion of inducement of infringement. It is not disputed that the Apple products *could* infringe. However, such testimony alone is not sufficient to find inducement of

infringement of a method patent. Evidence of actual use of each limitation is required.

In response, Mirror Worlds contends that the software review articles it submitted showed use of all three accused features and e-mail, thus infringing the claims. But a close review of those articles shows that, just like the manuals, they do not present the accused features together in an infringing manner. For example, the passage cited by Mirror Worlds from a macworld.com article states: "the improved speed of Spotlight, which makes searching for messages within Mail much less painful." J.A. 6425. At best, that means the reviewer searched his Mail to test the speed. But it does not stand to reason that that search was done in a manner that infringes the claims—again, sending and receiving data units (e-mail) and displaying results in time order. For example, the reviewer might have only searched his existing mail, without sending any new mail.

Each of the reviewers' articles cited by Mirror Worlds suffers from the same defect. Indeed, the reviewers' articles are as minimally descriptive of actual use of the product as the previously discussed testimony of Serlet, an Apple executive, that "Spotlight works well" and is "especially useful in mail" that we find inadequate to support direct infringement. Much like the user manuals in *E-Pass*, one cannot selectively piece together disparate parts of an article to show an underlying act of infringement of a method claim. A method claim is only infringed if all of its parts are performed.

Mirror Worlds points to the statement by the district court that it "defies logic" that not one user has used Spotlight and Tiger in an infringing manner as supporting its induced infringement theory. But the district court did not hold that a user had used Spotlight and

Tiger in an infringing way. The district court, after hearing that evidence, actually stated: "I recall enough circumstantial evidence, I think, in the case, although not rising to the level of inducement or contributory [infringement], that it sort of defies logic to me that the users did not turn on these features." J.A. 2380:22–2381:3. What the court meant by its statement is clear: although people may "turn on" these features (Spotlight, Cover Flow, Time Machine), that does not mean that the features were used to practice the claims, and thus cannot serve as the basis for induced infringement. Indeed, Mirror Worlds' claims are not passive; they require additional user action beyond just turning on the tools, such as sending and receiving e-mail and using Spotlight. Logic in this case was defied for lack of evidence.

In short, the dispute comes down to the following observation made by the district court in relation to the lack of evidence of direct infringement:

> If it was inconceivable to Mirror Worlds that the accused features were not practiced . . . , it should have no difficulty in meeting its burden of proof and introducing testimony. *See E-Pass*, 473 F.3d at 1222–23. Mirror Worlds simply failed to present sufficient evidence from which a reasonable jury could find that Apple, or anyone else, practiced each and every step of the claimed methods by using the Spotlight, Cover Flow, and Time Machine features in the accused Mac OS X 10.4–6. While it is important to persuade a jury, it is imperative to present a "legally sufficient evidentiary basis" to support that persuasion.

Mirror Worlds, 784 F. Supp. 2d at 715. That same reasoning applies here to inducement of infringement. There was a lack of substantial evidence on which a jury could

render a verdict for inducement of infringement. We therefore affirm the district court's grant of judgment as a matter of law that Apple did not induce infringement of the '227 method patent.

CONCLUSION

The necessary evidence was not put before the jury to support the verdict of infringement or damages. We therefore affirm the district court's decisions in entering judgment of non-infringement.

AFFIRMED

United States Court of Appeals
for the Federal Circuit

MIRROR WORLDS, LLC,

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PROST, *Circuit Judge*, dissenting in part.

Without justification, the majority reads two new limitations into claim 13—one of which is not even urged by either party—and then holds that Mirror Worlds' evidence does not show that those limitations are met. I cannot agree. I believe that under the correct reading of the claim Mirror Worlds adduced sufficient evidence to allow a reasonable jury to conclude that Apple's customers infringed (and continue to infringe) claim 13 of the '227 patent. Thus, with respect, I dissent from the majority's conclusion that the district court did not err in granting judgment as a matter of law that Apple did not induce infringement of the '227 method patent.

I

There is no dispute that the use of Spotlight would infringe claim 13 if four things occur: 1) a search, 2) receiving data units from other computer systems, 3) generating data units, and 4) generating a substream. What the majority fails to note, however, is that for the most part, these four steps are performed automatically and without any need for user interaction. The first step (searching) occurs even when the user is not using Spotlight. Indeed, that is precisely what enables Spotlight to return search results quickly. Spotlight continuously combs through every file or document that exists on the computer and collects certain information from the file such as creation time, content, and owner. This information is then immediately incorporated into an all-inclusive index akin to a look up table. By having this comprehensive look up table ready at hand, Spotlight is able to return search results almost immediately upon request. As Mirror Worlds' expert explained, this constant monitoring of computer data reduces the search operation to a simple filtering of the already organized data based on the user's search query. In sum, Spotlight's search engine never sleeps.

The next two steps (generating and receiving data units) are so common to any computer operation that is hard to imagine one can do anything with a computer without also performing these steps. The user "generates data" every time she creates a file or document, such as a letter, a drawing, a photograph, a calendar entry, a shopping list, or anything of that sort. The computer "receives data" whenever the user receives an e-mail, an online instant message, or even a file while visiting a webpage. Simply put, chances are much better than 50/50 that

every time an Apple computer has been used, data have been generated and received.

That leaves creating a substream. Under the district court's undisputed claim construction, a substream is "a subset of data units, or documents, yielded by a filter on a stream." J.A. 103. A "main stream" is on the other hand "inclusive of every data unit, or document, received by or generated by the computer system." *Id.* at 102. In plain English, a substream is generated whenever the user runs a search query in Spotlight, which query is then used to filter the main stream (encompassing all the data) and generate a sub-stream (the search result).

Putting it all together, claim 13 simply requires that a search query be run in Spotlight on a computer (that at least contains one file and also that at some point has received one e-mail or other type of file from another computer), and that Spotlight filter its organized database based on the inputted query (return search results).

That's it.

II

Mirror Worlds introduced ample evidence to allow a reasonable jury to determine that the required steps were performed. This court has consistently held that circumstantial evidence suffices to prove infringement. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1317 (Fed. Cir. 2009); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1272 (Fed. Cir. 1986). If that is true, then Mirror Worlds' evidence should have sufficed. The evidence includes Apple brochures and manuals that encouraged users to use Spotlight to search through their files, including their e-mails. For example, one manual

states that "Mail [(Apple's e-mail interface)] uses the power of Spotlight for faster, more accurate searching." J.A. 5449. Even more specifically mirroring the claim language, Apple taught its customers to use Spotlight to search through data that are both generated in and received by the computer. For example, one document explained that Spotlight could "search e-mail archives;" another taught users to use Spotlight to search their "entire system from anywhere to find *documents, email, contacts, calendars, music, movies, photos, bookmarks, and applications*." J.A. 5461 (emphasis added). But the evidence of infringement is not limited to manuals and brochures. Mirror Worlds also introduced a macworld.com review article that states, "the improved speed of Spotlight, which makes searching for messages within Mail much less painful." J.A. 6425. This evidence strongly suggests that at least one individual ran a search in Spotlight on a computer that had received data (e-mails). Surely, it would not have been unreasonable for a jury to also assume that the author of the article had at some point saved a single file on his computer too, so that the data generation requirement would be satisfied. Based on all this evidence, the jury could have reasonably found that at least one Apple customer, more likely than not, infringed claim 13—indeed, one would think it unlikely that the jury would arrive at the opposite conclusion.

But the majority is not satisfied. It casually brushes the manuals and the review article aside, reasoning that they do not show that the Spotlight search was performed in a manner that would infringe claim 13. The majority's objection to the evidence appears to be based on two erroneous assumptions about what claim 13 requires: 1) that the search results be displayed in chronological order, and 2) that data be generated and received either

while the user performs the search or at some point in time sufficiently close to the search. Neither assumption finds any support in the claim language, the district court's claim construction, or anywhere else in the record.

Take the macworld.com article as an example. The majority first complains that the article does not show that the search results were displayed chronologically. Majority Op. 17. Where does that requirement come from? Citing the claim language, the majority notes that the claim requires "'time-ordered' search results." *Id.* at 11 (citing '227 patent col.16 ll.9–25). From that, the majority simply assumes that the search results should be *displayed* chronologically. But the claim language and the district court's claim construction (or anything else in the record for that matter) do not justify this logical leap. To begin with, claim 13 does not even include the word "display." That sets it apart from other claims involved in this litigation that do expressly address how search results should be displayed. *See* J.A. 116. And, although claim 13 requires that data units be both associated with a "chronological indicator" and accordingly included in the main stream, *see* '227 patent col.16 ll.19-23, it never recites a similar requirement for a substream. Moreover, there is no reason to believe that bearing a chronological indicator or being "time-ordered" is the same thing as being displayed chronologically. Nor is there anything in the district court's claim construction that supports the majority's theory. The only requirement set by the district court is that the data units within the main stream bear a time-stamp, not that they be ordered chronologically. Indeed, the district court did not even address whether the search results should be displayed chronologically; it only addressed (and rejected) Apple's argument that the main stream data units should be chronologically *stored*. *See* J.A. 103. And, Apple does not

even whole-heartedly press the chronological display argument on appeal, apart from making two passing remarks neither one of which bears a helpful citation to the record. *See* Appellee's Br. 8, 30 (citing J.A. 101, 6420). In similar conclusory fashion, the majority has endorsed Apple's unsupportable argument.

The majority's second reason for disregarding the macworld.com review article is even more fragile than the first. The objection is that "the reviewer might have only searched his existing mail, without sending any new mail." Majority Op. 17. To try to understand this objection is to undermine it. It is not clear what the majority means by existing e-mail. If existing means "already searched," then infringement has already occurred. If it means "unread," then the majority's reasoning has no basis in the claim language at all. At any rate, claim 13 does not have a temporal limitation; there is no requirement that the generated and received data be fresh. As long as the user at some point has created and received some data on her computer, the pertinent claim limitation is satisfied. And, as already explained, it goes without saying that any computer user has at some point generated and received data on her computer. After all, all computer data are either generated or received, and there would be nothing to search on a computer without data. Finally, and perhaps most remarkably, Apple has not even urged us to read a temporal requirement into claim 13.

In sum, it does not take much user interaction to infringe claim 13 with Spotlight; Mirror Worlds has offered sufficient evidence to allow a reasonable jury to find that Apple's customers used Spotlight to infringe claim 13; and the majority's reasons for discounting Mirror Worlds' evidence are wholly unconvincing. I respectfully dissent.