NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

MIRROR WORLDS TECHNOLOGIES, LLC,
Plaintiff-Appellant

v.

FACEBOOK, INC.,
Defendant-Appellee

2018-2276

Appeal from the United States District Court for the Southern District of New York in No. 1:17-cv-03473-JGK, Judge John G. Koeltl.

Decided: January 23, 2020

MARC AARON FENSTER, Russ August & Kabat, Los Angeles, CA, argued for plaintiff-appellant. Also represented by BRIAN DAVID LEDAHL, JAMES S. TSUEI, BENJAMIN T. WANG; CHARLES R. MACEDO, Amster Rothstein & Ebenstein LLP, New York, NY.

HEIDI LYN KEEFE, Cooley LLP, Palo Alto, CA, argued for defendant-appellee. Also represented by DENA CHEN, LOWELL D. MEAD, MARK R. WEINSTEIN; PHILLIP EDWARD MORTON, Washington, DC.

Before PROST, *Chief Judge*, TARANTO and STOLL, *Circuit Judges*.

TARANTO, *Circuit Judge*.

Mirror Worlds Technologies, LLC owns U.S. Patent Nos. 6,006,227, 7,865,538, and 8,255,439, which describe and claim systems and methods for presenting and storing data in time-ordered streams on a computer system. Mirror Worlds brought the present action against Facebook, Inc., alleging that Facebook's making, selling, using, and other actions involving various Facebook systems infringed the '227, '538, and '439 patents. Facebook filed a motion for summary judgment of non-infringement before discovery ended, and the district court granted it. Mirror Worlds appeals.

We agree with Mirror Worlds that the district court's judgment must be reversed. The district court relied for its decision on an erroneous conclusion that there is no genuine dispute about certain facts. Facebook defends the summary judgment on alternative grounds. We will not affirm on those alternative grounds. We reverse the court's judgment and remand for further proceedings.

I

A

The '227 patent issued from an application filed in June 1996. The '538 and '439 patents are descendants of the '227 patent through a series of continuation applications, with an intervening continuation-in-part application. The '227 patent is representative for the purposes of this appeal.

The patent states that, as of its priority date, conventional computers used certain kinds of hierarchical directories to store and organize data. '227 patent, col. 1, lines 21–30. Under the conventional system, a user created a

new document by naming the document and choosing a storage location. *Id.* According to the patent, requiring such operations has disadvantages: specifically, the operations involve needless overhead; file names are often meaningless to a user; and a user of such a system must remember not just the file name but where the document is stored. *Id.*, col. 1, lines 40–59. The '227 patent describes an alternative: storing documents in a chronologically ordered "stream." *Id.*, col. 1, lines 4–6.

A "stream" is "a time-ordered sequence of documents that functions as a diary of a person or an entity's electronic life. Every document created and every document sen[t] to a person or entity is stored in a main stream." *Id.*, col. 4, lines 6–10. Past documents are contained in the tail of the stream, *id.*, col. 4, lines 10–12, and new documents are added to the present time point in the stream, *id.*, col. 4, lines 35–43. Besides containing documents from the past and present, a stream may contain "documents allotted to future times and events, such as[] reminders, calendar items, and to-do lists." *Id.*, col. 4, lines 18–21. "A document can contain any type of data," including "pictures, correspondence, bills, movies, voice mail and software programs." *Id.*, col. 4, lines 16–18.

A user may create "substreams" by filtering the main stream. *Id.*, col. 4, lines 48–61. Describing preferred embodiments, the patent characterizes a substream as dynamic and persistent in the following sense: if a user filters for "all emails from Smith," a substream containing all emails from Smith will collect any such emails as they are added to the main stream, and the substream will continue to exist "until destroyed by the user." *Id.*, col. 4, line 62, through col. 5, line 13. A substream is a subset of the main stream, in that each substream document is in the main stream, though a particular document may be in multiple substreams. *Id.*, col. 5, lines 14–19.

Claim 13 of the '227 patent is representative for the issues on appeal:

> 13. A method which organizes each data unit received by or generated by a computer system, comprising the steps of:
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> 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
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> maintaining at least the main stream and the substreams as persistent streams.

Id., col. 16, lines 9–25. Each of the asserted claims contains a "main stream" or "main collection" limitation and a "substream" or "subcollection" limitation.

The parties agree that the "main stream" has two properties: *first*, it includes every data unit received or generated by the "computer system"; *second*, it is a time-ordered sequence of data units.[1] While Facebook contends that

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[1] The '538 and '439 patents use the term "documents" rather than "data units." Although the parties

"main stream"—used in the '227 and '538 patents—and "main collection"—used in the '439 patent—are synonymous, Mirror Worlds disagrees. Mirror Worlds admits, however, that any difference is immaterial to the resolution of Facebook's summary judgment motion.

B

Facebook provides a popular social networking service. Several features of Facebook's service are relevant to this appeal. According to Facebook's description in this case, the "News Feed" for a Facebook user displays a variety of items that Facebook has "deemed to be relevant" to that user. J.A. 1104. "Timeline," Facebook says, "focuse[s] on a particular Facebook user," showing "basic information about that user, as well as actions taken on Facebook by or directed toward that user." *Id.* And "Activity Log" provides "a list of activities that occurred on Facebook that pertain to a particular user." J.A. 1106.[2]

Generally, the content Facebook users see is an amalgamation of "objects" and "associations," which are two classes of data. Users, pictures, and comments are types of objects, while associations describe the relationship between objects. For example, if user "Alice" posts a comment on Facebook, an "authorship" association would connect Alice and the comment.

In providing content to users, both News Feed and Timeline rely on certain "front-end" hardware and software. The evidence—when understood most favorably to Mirror Worlds, as required when considering summary judgment—indicates that these front-end components

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disagree about whether those terms are synonymous, any difference is immaterial to our decision in this appeal.

[2] At least two of the three patents at issue here have expired. Nevertheless, following the parties' usage, we use the present tense in describing the accused services.

include a user's desktop computer, smartphone, or comparable device and its resident software, together with certain "web" technologies, including a PHP layer. *See*, *e.g.*, J.A. 1483–85, 1488, 1550, 2117–18, 2132, 2422, 2599. The two services also rely on certain "back-end" computing equipment and associated software to which the user's device is connected over a network such as the Internet. The back-end infrastructure for News Feed is called "Multifeed." The "Timeline back-end system" supports both the Timeline and Activity Log features. In the summary-judgment proceedings, Mirror Worlds asserted that those two back-end systems were the "computer system[s]" for purposes of the claims.

Multifeed has several components, of which three have been featured in this appeal: Leaves, Tailer, and Aggregator.[3] Facebook describes Leaves as a collection of databases of information about user actions and objects. Tailer, in turn, writes user actions and objects to Leaves. Aggregator retrieves information from Leaves and applies an aggregation algorithm to create a list of stories that may be shown on a particular user's News Feed.

The Timeline back-end system includes the TimelineDB database and an Aggregator. TimelineDB has a list of all actions performed by a user. Similar to the Multifeed Aggregator, the Timeline Aggregator serves as an intermediary between the front end and the database. When a user views Timeline, the front end passes parameters to the Timeline Aggregator, which then retrieves information

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[3] For simplicity, and to maintain parallelism with the other relevant components, we will refer to "Leaves" in the singular as a unit, though the evidence sometimes refers to "the Leaves" in the plural. The parties have not identified any way in which such treatment alters the analysis relevant to our decision.

from TimelineDB that is used to create (or render) the image on the user's screen.

Neither Multifeed nor the Timeline back-end system contains all the information necessary to produce the features they support. The News Feed and Timeline features rely in part on another Facebook system known as "TAO," which stands for "The Associations and Objects." Facebook describes TAO as a "data store that provides access to objects and their associations with other objects." J.A. 1111. Retrieving objects such as photographs or comments to display on a user's News Feed or Timeline uses, respectively, Multifeed Leaves or TimelineDB, but those back-end components contain pointers to the objects, not the objects themselves. It is TAO that is called on to deliver up-to-date versions of the objects to which Leaves and TimelineDB point. Those objects then become part of the News Feed or Timeline viewed by the user.

C

In May 2017, Mirror Worlds filed this action against Facebook in the District Court for the Southern District of New York, alleging that Facebook infringed the asserted patents by, *e.g.*, using its servers—including TAO—to provide features such as News Feed, Timeline, and Activity Log to Facebook users. In its first set of interrogatories, Facebook asked Mirror Worlds to identify what elements of the accused Facebook services that it was alleging meet the "main stream" and "substream" limitations. J.A. 2472–73. Facebook did not ask Mirror Worlds to identify what "computer system[s]" it was accusing. *Id.* Mirror Worlds responded in early December 2017. J.A. 2473. Mirror Worlds identified, as meeting the "main stream" limitation, "the user-related information in at least Facebook's Social Graph, MemCache, TAO, Multifeed Leaf Servers and Aggregators, Timeline Databases and Aggregators, Channel Servers and RTGW Messaging Bus, and servers, databases or aggregators from which Facebook's Events, Activity Log,

Graph Search, and search features obtain information for Facebook users." J.A. 2473. Mirror Worlds identified, as meeting the "substream" limitation, "the user-related information that appears in at least Facebook's Newsfeed, Timeline, Events, Activity Log, Graph Search, and search features." J.A. 2473.

Fact discovery was not due to close until September 2018. *See* J.A. 1045–46, 1057, 1061. But in April 2018, after completion of the briefing on claim construction—but before significant expert or other factual discovery had occurred—Facebook filed a letter with the court, asking permission to file a motion for summary judgment. J.A. 1015–17. At a status conference, Facebook argued that it had a simple, case-ending point to make, while Mirror Worlds asserted that contention interrogatories cannot be filed under local rules until the close of fact discovery, that it was not accusing Facebook as a whole but had identified the two back-end systems separately from TAO, and that the record did not even include expert disclosures or depositions. The court granted Facebook leave to file a motion for summary judgment and set out a schedule for responses, while allowing discovery to continue. J.A. 1065–66.

In its motion for summary judgment of non-infringement, Facebook made essentially just one point. *See* J.A. 1095–97. It contended that Mirror Worlds had failed to provide evidence that there was an accused Facebook "computer system" that contained a "main stream" in which all data created or received by the system is stored in a time-ordered sequence. In support of that contention, Facebook argued, simply, that Mirror Worlds had included TAO in the accused "computer system[s]," J.A. 1087–89, and that the evidence established that "TAO does not store

all of its data items in any kind of time-ordered sequence," J.A. 1095.[4]

In response, Mirror Worlds explained principally that Facebook's motion misunderstood what the accused "computer system[s]" were. Specifically, it argued that it is the News Feed back-end system, Multifeed, and the Timeline back-end system specifically that are the systems accused of coming within the asserted patent claims. *See*, *e.g.*, J.A. 1422 ("[t]he Multifeed and Timeline backend systems"), 1439 ("the Multifeed system"), 1440 ("the Timeline backend system"). Mirror Worlds contended that within the Multifeed system, Leaves meets the "main stream" limitation, and that within the Timeline system, TimelineDB meets the limitation. *See*, *e.g.*, J.A. 1421, 1438–40. According to Mirror Worlds, both Leaves and TimelineDB include every data unit received by their respective computer system and store those data units in a time-ordered sequence. J.A. 1438–40 (asserting inclusion of "every data unit"); *see* J.A. 1421, 1427, 1434, 1436, 1439, 1440 (asserting inclusion of every action and object in the respective systems, citing evidence). It does not matter how TAO stores its data, Mirror Worlds argued, because TAO is separate from Multifeed and the Timeline back-end system. J.A. 1421–22.

In reply, Facebook argued that Mirror Worlds had failed to identify the relevant "computer system[s]" to which Leaves and TimelineDB belong. J.A. 2508–09. Facebook emphasized that both Leaves and TimelineDB consist primarily of pointers used to find corresponding data in TAO and that News Feed and Timeline as seen by users

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[4] Facebook mentioned, as a descriptive matter, that the substream and sub-collection data must be drawn from the main stream and main collection, but it made no separate argument that evidence was missing as to the substream/sub-collection limitations. J.A. 1095–97.

include data from TAO. J.A. 2509–11. In a footnote, Facebook cited certain evidence as assertedly showing that, in the Multifeed system, the Aggregator "retrieve[s] data units from the non-accused TAO data store." J.A. 2508–09 n.4. On those bases, Facebook contended, Leaves and TimelineDB cannot meet the "main stream" limitation. J.A. 2511–12. Facebook did not dispute that Leaves and TimelineDB store their data units in a time-ordered manner.[5]

The court allowed Mirror Worlds to file a surreply. In that filing, Mirror Worlds reiterated its contentions that Multifeed and the Timeline back-end system were the relevant "computer system[s]," and Leaves and TimelineDB met the "every data unit" requirement for being "main streams" for those systems, even if information from other systems might be necessary to create the News Feed and Timeline features seen by users. J.A. 2675–77. It also asserted that, contrary to Facebook's footnote suggestion, the evidence showed that the Aggregators do not receive the TAO data at issue, which, rather, is obtained by the (unaccused) front-end PHP feature. J.A. 2676 n.4 (citing J.A. 2604, 2610 (also appearing at 2430)).

When it granted Mirror Worlds leave to file a surreply, the district court instructed Facebook that it should "resist the urge to file further papers in response to Mirror Worlds'[] sur reply brief." J.A. 2673. Instead, the court assured the parties that it would "consider all of the arguments raised . . . at oral argument." *Id.* At the oral argument, Facebook argued that Mirror Worlds still failed to show that the Facebook systems meet the "main stream" limitation. One of its arguments—the one originally suggested in its Reply footnote (discussed above)—was that

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[5] Facebook added a new argument about Mirror Worlds' failure to show that the "substream" and "sub-collection" limitations are met. J.A. 2512–13.

the Aggregators receive data from TAO, not just TimelineDB or Leaves. Facebook also argued that the Aggregators receive data from certain sources that Facebook had never mentioned until the oral argument. J.A. 60–61, 119–20.

The district court granted Facebook's motion for summary judgment on August 11, 2018. The court determined that the record established conclusively—so that there was no genuine issue of fact about the proposition—that neither TimelineDB nor Leaves (which Mirror Worlds identified as the accused main streams) contains all the data received or generated by their respective computer system. The court reasoned that the Aggregators are parts of the accused "computer system[s]" and concluded that it was beyond reasonable dispute on this record that the Aggregators (hence the systems) receive data from TAO that does not enter TimelineDB or Leaves. Because there is data received by the accused systems that is not included in TimelineDB or Leaves, the court held, TimelineDB and Leaves cannot be main streams. *Mirror Worlds Technologies, LLC v. Facebook, Inc.*, 320 F. Supp. 3d 538, 547 (S.D.N.Y. 2018).

The court entered judgment on August 16, 2018. Mirror Worlds timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

II

We review a "grant of summary judgment of non-infringement under the law of the relevant regional circuit." *Clare v. Chrysler Grp.*, 819 F.3d 1323, 1326 (Fed. Cir. 2016). The Second Circuit reviews a grant of summary judgment de novo. *Rojas v. Roman Catholic Diocese of Rochester*, 660 F.3d 98, 104 (2d Cir. 2011). "The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). "[S]ummary judgment will not lie if the dispute about a material fact is 'genuine,' that is, if the

evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986). When determining whether summary judgment is appropriate, a court must resolve all ambiguities and draw all reasonable inferences against the moving party. *Matsushita Electrical Industrial Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986).

A

The district court rested its summary-judgment ruling on a single basis—its determination that one fact could reasonably be found only in Facebook's favor. Mirror Worlds challenges that determination. Specifically, Mirror Worlds argues that the district court erred in concluding that the record would require a reasonable jury to find that the Aggregators in Multifeed and in the Timeline back-end system receive data from TAO—data that is not included within Leaves or TimelineDB. We agree that the district court erred in so concluding.

1

Regarding News Feed and its back-end system, Multifeed, the district court concluded that the record required a finding that the Aggregator "draws the actual content that is indexed by the 'Multifeed Leaves' from 'TAO,' and receives information from 'TAO.'" *Mirror Worlds*, 320 F. Supp. 3d at 546. The court relied on a declaration of Dr. Bronson, a Facebook engineer, and the testimony of Dr. Vickery, another Facebook engineer. *Id.* But that evidence does not establish that the Multifeed Aggregator receives content from TAO that is not in Leaves.

The Bronson declaration states that "when News Feed, Timeline, [and] Activity Log . . . seek to retrieve objects such as photos and comments from Facebook's data store, it is TAO that retrieves and delivers an up-to-date version of those objects *to those features*." J.A. 1111–12 (emphasis added). The quoted statement does not say that TAO

delivers content to the Multifeed Aggregator (in the back-end system). It states only that the content is delivered to the front-end features, including News Feed. The statement is consistent with Mirror Worlds' theory of the case, and it does not establish that the identified data from TAO is received by the accused "computer system" (the back-end system), which is the premise of the district court's determination that Leaves, in the back-end system, cannot be a main stream (because that TAO data is not included in Leaves).

A similar conclusion is required as to Dr. Vickery's testimony. Dr. Vickery said that "the aggregators combine together metadata that's received from the leaves into another list of metadata that has several steps such as querying TAO . . . to fetch additional information that is required to render someone's News Feed." J.A. 2595. Dr. Vickery also said that "one of the most important things in generating someone's News Feed is their list of friends and the pages that they follow. And that information is queried from TAO." J.A. 2599. Those statements, like Dr. Bronson's statement discussed above, do not establish that the referred-to data from TAO enters the Aggregator or, therefore, the only accused system for News Feed, *i.e.*, Multifeed.

In another statement, Dr. Vickery said that the "[a]ggregators combine together information from multifeed leaf servers *as well as other sources* in order for—as the next step in preparing someone's News Feed." J.A. 2595 (emphasis added). But that testimony does not clearly state that the Multifeed Aggregator retrieves the cited information from TAO. It is not enough to remove the issue from genuine dispute, especially in the face of evidence suggesting otherwise. *See*, *e.g.*, J.A. 2014 (Facebook's Dr. Bronson indicating it is the "application layer" that "queries TAO using [the] backend identifiers"), 2030 (Dr. Bronson discussing certain "trace" tests: "My recollection is that all the TAO queries that—that were initiated

as, like, directly in response to rendering my News Feed came from the—the PHP application layer.").

In fact, other testimony from Dr. Vickery suggests that TAO is queried by a part of the front-end system called the PHP layer (PHP being a scripting language). For example, Dr. Vickery testified that "the list of story identifiers that the aggregator returns back to PHP contains pointers which can be used, perhaps through a series of steps, to fetch the set of information that will be rendered in the final story" and the returned list of story identifiers "determines what queries to TAO will be run in order to generate those stories." J.A. 2604. Additional testimony of Dr. Vickery further suggests that the PHP layer, not the Aggregator, queries TAO. J.A. 2602–04.

We conclude that, on the current record evidence, the district court erred in concluding that a reasonable jury would have to find that the Multifeed Aggregator receives data from TAO that is not in Leaves. That erroneous conclusion was the sole basis for the grant of summary judgment as to News Feed.

2

Our conclusion regarding Timeline is similar to our conclusion regarding News Feed. The district court concluded that a reasonable jury would have to find that the Timeline Aggregator receives data from TAO that is not in TimelineDB. *Mirror Worlds*, 320 F. Supp. 3d at 546–47. The court cited the declaration of Dr. Bronson; Mirror Worlds' response to Facebook's statement of material facts; and the testimony of Jeffrey Huang, a Facebook engineer. *Id.* at 546. We conclude, to the contrary, that the record evidence, as presented to the district court and identified to us, does not compel a reasonable jury to find that the Timeline Aggregator receives the asserted data from TAO.

As for Dr. Bronson, the district court relied on the statement by Dr. Bronson we addressed above in

discussing the News Feed aspect of the case. As discussed, Dr. Bronson's statement does not show that the Timeline Aggregator receives the cited data from TAO.

Mirror Worlds' response to Facebook's statement of material facts also does not show, as Facebook contends, that the Timeline Aggregator receives the relevant data from TAO. In the paragraphs cited by the court, Mirror Worlds discussed only querying of the TimelineDB, not of TAO, by the Timeline Aggregator. J.A. 1464–67. Facebook has not pointed to anything in the Mirror Worlds' response that supports the district court's crucial determination about interaction between the Timeline Aggregator and TAO.

Mr. Huang's testimony is similarly insufficient. Mr. Huang testified that "[i]n order to actually show anything on Timeline, you need to take those IDs you get from the TimelineDB and go to TAO to actually fetch the content." J.A. 2587. Like Dr. Bronson's testimony, Mr. Huang's testimony does not show that the Timeline Aggregator is the element of Facebook's infrastructure that receives the referred-to content from TAO. Mr. Huang's testimony is consistent with the theory that front-end systems receive that content without the content having first gone through the accused (back-end) system. Indeed, other testimony by Mr. Huang suggests that the front-end web layer retrieves that content: Mr. Huang testified that "it's really the web tier that I consider the frontend that then, you know, needs to go to TAO to actually fetch any of the content." J.A. 1910–11. At least one internal Facebook document corroborates Mr. Huang's testimony that the front end, including PHP, queries TAO. J.A. 2430.

We conclude that, on the current record evidence, the district court erred in concluding that a reasonable jury would have to find that the Timeline Aggregator receives data from TAO that is not in TimelineDB. That erroneous

conclusion was the sole basis for the grant of summary judgment as to Timeline.

B

Facebook asks us to affirm on grounds other than the ones relied on by the district court. We find neither of its two arguments to be a sound basis for affirmance here.

First, citing *Celotex Corp. v. Catrett*, 477 U.S. 317 (1986), Facebook argues that it is entitled to summary judgment under Federal Rule of Civil Procedure 56 on the ground that Mirror Worlds failed to provide evidence that would permit a jury to find that Leaves or TimelineDB contains *every* data unit received or generated by, respectively, Multifeed or the Timeline back-end system. The Second Circuit has explained that "when a defendant moves for summary judgment, it is the *defendant* who must show entitlement to judgment, notwithstanding that, at trial, the plaintiff will have the burden of proving every element of its claim." *Nick's Garage, Inc. v. Progressive Casualty Ins. Co.*, 875 F.3d 107, 115 (2d Cir. 2017). "The mere assertion by a defendant moving for summary judgment that the plaintiff 'has not produced any evidence' to support an essential element of the plaintiff's claim does not satisfy the burden that Rule 56(a) imposes." *Id.* "[U]nless the moving defendant cites portions of the record that show its entitlement to judgment, an assertion by the defendant that the plaintiff 'has not produced any evidence,' without more, does not show that the plaintiff has insufficient evidence." *Id.* at 115–16.

Facebook, in its summary-judgment motion, did not show that Mirror Worlds "cannot produce admissible evidence to carry its burden" to show that Leaves or TimelineDB contains every data unit. Fed. R. Civ. P. 56(c) advisory committee's note to 2010 amendment. "A plaintiff is under no obligation to 'produce' its evidence prior to trial, unless such an obligation arose in response to a discovery demand (or a court order) requiring the plaintiff to set forth

the evidence supporting its claim." *Nick's Garage*, 875 F.3d at 115. As far as we have been shown, Facebook has not made a discovery demand that Mirror Worlds identify all its evidence for the "every data unit" limitation. Given that discovery is still open, Mirror Worlds may still muster evidence to prove its claim. Facebook has not otherwise shown that sufficient evidence *cannot* be produced.

When Facebook moved for summary judgment, having been allowed to file such a motion even before discovery closed, its attempt to "show" entitlement to summary judgment rested on one assertion: that TAO does not store information in a time-ordered sequence. J.A. 1095–97; J.A. 1092–94. Facebook did not assert that the record lacked evidence of infringement even if TAO is not part of the "computer system." Mirror Worlds, in arguing that the accused "computer system[s]" do not include TAO, met the ground asserted by Facebook, and the district court did not conclude otherwise. Mirror Worlds, in fact, went further. As recounted above, it identified the accused "systems," it described (with evidentiary support) how those systems work, and it asserted based on that description that Leaves and TimelineDB meet the "every data unit" requirement and hence are "main streams." Although the district court concluded that Mirror Worlds' response failed in one particular respect, that conclusion is erroneous, as already discussed. On this record, we are not required, and we do not think it appropriate, to declare on appeal that Mirror Worlds' opposition was categorically insufficient to withstand summary judgment.

Second, Facebook points to certain information that it argues is received by the two back-end systems that is not included in Leaves or TimelineDB: information from Adfinder and Ego for Multifeed; certain query criteria for the Timeline back-end system. But although Facebook mentioned these points at the oral argument before the district court, *see* J.A. 119–20, it did not present them in its motion or even its reply in the district court, leaving Mirror Worlds

without a fair opportunity to address them. And the district court did not address these points, which raise questions about, among other things, whether this information comes within the relevant claim terms, *e.g.*, "data units," under a proper construction.

In these circumstances, we will not adopt Facebook's alternative arguments for affirmance. Our ruling is without prejudice to otherwise-appropriate consideration of non-infringement contentions on remand, especially once the record is fully developed.

C

To the extent that the district court's construction of "main collection" and "subcollection" apply beyond Facebook's summary-judgment motion, Mirror Worlds asks us to vacate those constructions. We do not read the court's opinion as having construed the terms with any such effect. The district court stated that, despite the parties' dispute, the terms "main collection" and "subcollection" "present identical issues for purposes of this motion" as the terms "main stream" and "substream," respectively. *Mirror Worlds*, 320 F. Supp. 3d at 543–44. We understand that statement to go no further than indicating that any difference between those terms does not matter given the ground on which the court decided the case. We have reversed that ground for summary judgment. The claim-construction issue is open on remand.

III

For the foregoing reasons, we reverse the district court's summary judgment of non-infringement. We remand the case for further proceedings.

Costs awarded to Mirror Worlds.

REVERSED AND REMANDED