United States Court of Appeals for the Federal Circuit

STARHOME GMBH,
Plaintiff-Appellant,

v.

AT&T MOBILITY LLC, ROAMWARE, INC., AND T-MOBILE USA, INC.,
Defendants-Appellees.

2012-1694

Appeal from the United States District Court for the District of Delaware in No. 10-CV-0434, Chief Judge Gregory M. Sleet.

Decided: February 24, 2014

JOHN M. DIMATTEO, Willkie Farr & Gallagher, LLP, of New York, New York, argued for plaintiff-appellant. With him on the brief was ROBERT G. KOFSKY. Of counsel was JESENIA M. RUIZ DE LA TORRE.

MARK A. PERRY, Gibson Dunn & Crutcher, LLP, of Washington, DC, argued for defendants-appellees. On the brief were JOSH KREVITT, BENJAMIN HERSHKOWITZ, and R. SCOTT ROE, of New York, New York; and FREDERICK CHUNG, of Palo Alto, California.

Before MOORE, SCHALL, and REYNA, *Circuit Judges.*

SCHALL, *Circuit Judge.*

This is a patent infringement case. Starhome GmbH ("Starhome") sued AT&T Mobility LLC, Roamware, Inc., and T-Mobile USA, Inc. ("Defendants"), in the United States District Court for the District of Delaware for infringement of U.S. Patent No. 6,920,487 (the "'487 patent"). The '487 patent is titled "System and Methods for Global Access to Services for Mobile Telephone Subscribers." It relates generally to a way of improving the functionality of phone services for users in a roaming telephone network. To allow users in a roaming network to make calls as if in their home network, the '487 patent discloses the use of an "intelligent gateway."

Following a *Markman* hearing, the district court construed various terms of the '487 patent. Among them was the term "intelligent gateway," which the court construed to mean "a network element that transfers information to and from a mobile network and another network external to the mobile network." Relying upon that construction, Defendants moved for summary judgment of noninfringement. Starhome did not contest the motion, but instead stipulated to a judgment of noninfringement based upon the court's construction of "intelligent gateway." Following the district court's entry of the stipulated judgment on September 12, 2012, *Starhome GmbH v. AT&T Mobility LLC*, No. 1:10-cv-00434-GMS (D. Del. Sept. 12, 2012), Starhome appealed. We affirm.

BACKGROUND

I. STARHOME AND THE '487 PATENT

Starhome owns the '487 patent. The problem the patent aims to solve arises when mobile phone users are in a network other than their home network (e.g., roaming). In a home network, a mobile phone user might dial a

short code, such as "121," to access voice mail. But while roaming, the visiting network may not recognize the code, resulting in an error message. As another example, a user from Germany visiting the United States may want to call home to Germany, but if the user does not enter the correct international direct-dialing prefix and country code, the call will not connect.

The '487 patent's solution to this problem is the "intelligent gateway." Figure 1 of the '487 patent, shown below, demonstrates a system (10) providing roaming services and employing the intelligent gateway.

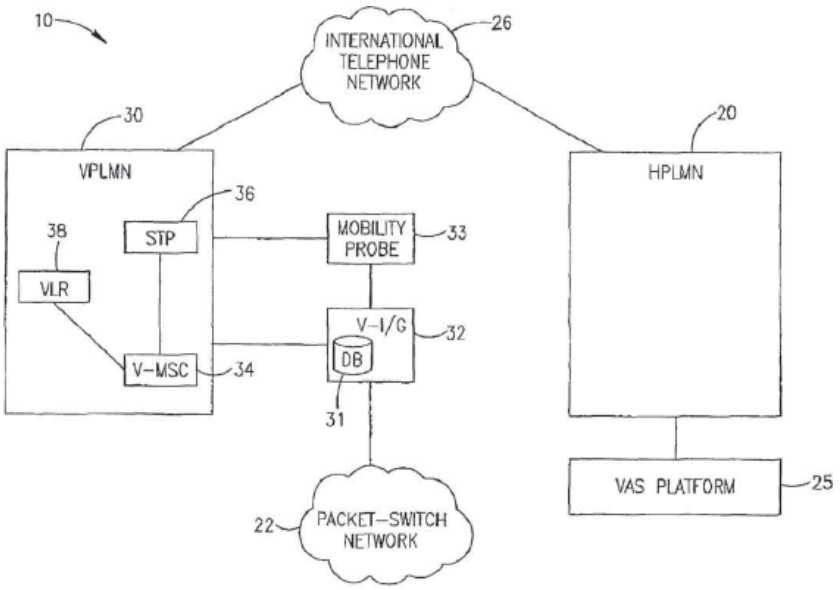

FIG.1

As shown in Figure 1, the intelligent gateway (V-I/G 32) has a database (DB 31) that contains information about multiple home networks, including short-code translation tables, subscriber profile data, and roaming patterns. '487 patent col. 2 ll. 33–41. The information in the database may be updated via a global packet-switch network (22). *Id.* col. 2 ll. 33–36, col. 4 ll. 33–36. Figure 2 of the '487 patent, shown below, demonstrates a call flow

of a short-coded call or erroneous full-number call in accordance with the system of Figure 1. *Id.* col. 1 ll. 43–44, col. 3 ll. 24–27. The specification explains that, "[i]n order to simplify the picture, the mobility probe and its Interfaces are not shown." *Id.* col. 3 ll. 27–29.

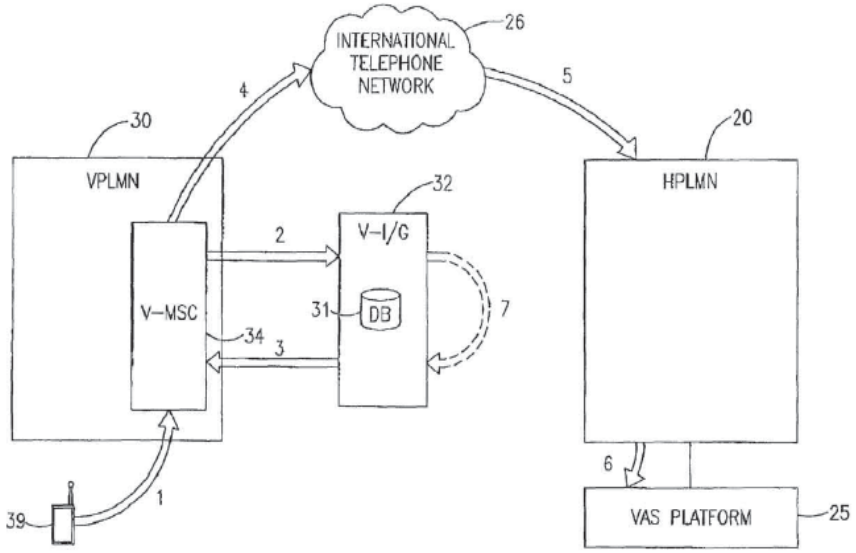

FIG.2

In Figure 2, the visited mobile network (VPLMN 30) has a switching center (V-MSC 34) supporting a roaming cell phone (39). If the roaming subscriber (39) dials a phone number that the switching center (34) cannot place (e.g., a voice mail short code like "121") (step 1), the call is routed to the intelligent gateway (V-I/G 32) (step 2). The intelligent gateway, which has knowledge of the home-network dialing format and short codes, translates the sequence into one the switch (34) will recognize and sends the corrected dialing sequence back to the switch (step 3). The call is then routed by the switch to the international telephone network (step 4), and the network sends the call to its intended destination (step 5). *Id.* col. 3 l. 30 – col. 4 l. 5.

Starhome sells its intelligent gateway solution as the IntelliGate™ and has installed it in over 130 mobile networks throughout the world.

II. DEFENDANTS AND THE ACCUSED PRODUCT

Defendant Roamware sells a network platform that runs Smart Call Assistant and Short Code applications. Those applications allow mobile-network operators to translate numbers dialed by roaming cell-phone users visiting their networks. Defendants AT&T and T-Mobile use the Roamware platforms in their networks. Notably, the Roamware platform does not connect to an external packet-switch network or other external network.

III. THE DISTRICT COURT PROCEEDINGS

Starhome filed its complaint against Defendants on May 25, 2010, asserting infringement of the '487 patent and U.S. Patent No. 7,231,431 (the "'431 patent"), which is a continuation of the '487 patent. The parties disputed multiple terms in the patents, one being the term "intelligent gateway." Starhome proposed that the term meant "a network element that uses knowledge implemented in databases or the like and application logic to perform its operations." Defendants argued that the term meant "a network element that transfers information to and from a mobile network and another network external to the mobile network."

After briefing and a *Markman* hearing, the district court issued its claim construction order. In that order, the court found that the word "gateway" had a well-known technical meaning in the telecommunications industry when the application for the asserted patents was filed. In support of its finding, the court relied on the Institute of Electrical and Electronics Engineers ("IEEE") dictionary, which describes a "gateway" as a device that connects two or more networks. Concluding that the

inventors did not clearly redefine the term, the court accepted Defendants' proposed construction.

Based on the claim construction order, the parties filed letter briefs requesting permission to move for summary judgment. Finding that Defendants set forth a compelling argument for non-infringement based on the construction of "intelligent gateway," the court granted Defendants' request. Rather than formally brief the issue, Starhome stipulated to the entry of judgment of noninfringement.

Starhome timely appealed as to the '487 patent. Starhome no longer asserts the '431 patent. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

I. STANDARD OF REVIEW

Where, as here, a plaintiff concedes noninfringement by stipulation, we need only address the district court's construction of the pertinent claims. *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1368 (Fed. Cir. 2003). Claim construction is a question of law that we review de novo. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1451 (Fed. Cir. 1998) (en banc).

II. THE PARTIES' CONTENTIONS

Starhome asserts independent claims 10 and 40 of the '487 patent. Claim 10 recites the following:

> 10. A system comprising:
>
> an intelligent gateway associated with a first mobile telephone network,
>
> said first mobile telephone network having connections to other mobile telephone networks,
>
> said intelligent gateway adapted to translate a dialing sequence when dialed by a roaming cellu-

> lar telephony device roaming in said first mobile network into a destination number,
>
> said roaming cellular telephony device having a home network which is other than said first mobile network;
>
> and a routing center in said first mobile telephone network,
>
> said routing center adapted to route said dialing sequence within said first mobile telephone network to said intelligent gateway for said translating.

Claim 40 recites the following:

> 40. An intelligent gateway associated with a first cellular telephony network,
>
> adapted to provide assistance to a cellular telephony device roaming in said first cellular telephony network to complete calls when a destination number dialed by said roaming cellular telephony device is erroneous,
>
> said roaming cellular telephony device being registered as a home device in a second cellular telephony network being distinct from said first cellular telephony network, and
>
> said intelligent gateway being adapted to obtain information for said call completion using knowledge of said second cellular telephony network.

On appeal, Starhome asserts the same construction of "intelligent gateway" that it urged in the district court ("a network element that uses knowledge implemented in databases or the like and application logic to perform its operations"). In support of that construction, Starhome argues that the specification does not require the gateway

to be connected to an external network. Rather, Starhome contends, the specification explains that the intelligent gateway has a local database of information it accesses to perform its functions. Some embodiments employ a single intelligent gateway associated with a single mobile network, Starhome argues, while others disclose multiple intelligent gateways associated with an external packet-switch network. The critical part of the specification, Starhome continues, is Figure 2, which shows the intelligent gateway connected solely to the internal network. Construing "intelligent gateway" to require the transfer of information to and from an external network, Starhome concludes, expressly excludes the embodiment of Figure 2.

Further, Starhome argues, claim differentiation supports its proposed construction. According to Starhome, claims 10 and 40 do not expressly or impliedly require the intelligent gateway to transfer information to and from an external network. By contrast, unasserted claims 1 and 47 recite a connection to an external packet-switch network. This substantive difference between the claims, Starhome concludes, demonstrates that a connection to an external network is not a required feature of an intelligent gateway.

Defendants argue that the patentee used the specific term "gateway" rather than a generic network element, and that the common usage of that term should control. Defendants thus argue that the district court correctly construed "intelligent gateway" as "a network element that transfers information to and from a mobile network and another network external to the mobile network." In support of that construction, Defendants point to three dictionaries showing that "gateway" refers to a point of interconnection between networks at which information transfer occurs.

Further, Defendants argue, the specification describes the "present invention" as intelligent gateways connecting different networks. Likewise, Defendants continue, the '487 patent incorporates by reference a Patent Cooperation Treaty ("PCT") application, which describes the "present invention" as a system that "transfer[s] certain signals over a packet-switch network through service nodes connected to the telephone networks." Joint Appendix ("J.A.") 4803. The service nodes are intelligent gateways, Defendants contend, and are associated with a first mobile network directly connected to an external network.

Moreover, Defendants argue, every embodiment in the '487 patent requires the intelligent gateway to directly connect different networks. In the first embodiment (Figures 1 and 2), the visited mobile network may be coupled to a global packet-switch network via a visited intelligent gateway. In the second embodiment (Figures 3–5), in addition to the visited intelligent gateway, a home network is coupled to a global packet-switch network via a home intelligent gateway. Notably, Defendants argue, the specification describes no system where the intelligent gateway is not connecting two different networks.

Regarding Starhome's argument that Figure 2 is a separate embodiment, Defendants respond that the figure merely illustrates a call flow occurring within the larger system of Figure 1. The figure omits components not essential to explaining the call flow, Defendants continue, and is not a separate embodiment.

Turning to Starhome's argument based upon claim differentiation, Defendants respond that the doctrine does not apply because each dependent claim in the '487 patent adds a feature not otherwise required by the independent claims. Specifically, Defendants argue, the district court's construction requires access to a generic external net-

work, but the dependent claims recite access to a specific type of network.

In further support of their position, Defendants point to statements that Starhome made in a related foreign application. To overcome prior art during prosecution of a European application that claims priority to the same provisional application as the '487 patent, Starhome argued that "a gateway provides access to an external environment beyond the immediate network," and is defined "in terms of an access means from one network to another." Those statements, Defendants urge, should preclude Starhome from now advocating a broader construction.

In response, Starhome argues that its statements in connection with the PCT application are consistent with its proposed construction. The prior art at issue in the European application did not involve roaming, Starhome continues, so when the prosecuting attorney said the gateway accessed an external network, he was referring to another telephone network. Accessing a separate telephone network, Starhome concludes, is exactly what the intelligent gateway accomplishes.

III. ANALYSIS

"The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history." *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc)). "There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution." *Id.* (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1580 (Fed. Cir. 1996)).

We have made clear that dictionaries and treatises can often be useful in claim construction, particularly insofar as they help the court "'to better understand the underlying technology' and the way in which one of skill in the art might use the claim terms." *Phillips*, 415 F.3d at 1318 (quoting V*itronics Corp.*, 90 F.3d at 1584 n.6). Moreover, judges are free to rely on dictionaries at any time during the process of construing claims "so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." *Id.* at 1322–23 (quoting *Vitronics Corp.*, 90 F.3d at 1584 n.6).

Both asserted claims recite an "intelligent gateway." The term "gateway" had a well-understood meaning in the art at the time the patentees filed the application that led to the '487 patent. As evidenced by technical dictionaries, one of ordinary skill in the art would have understood a "gateway" to be a connection between different networks. *See* Andrew S. Tanenbaum, *Computer Networks* 16 (3d ed. 1996) (describing a gateway as a means to connect networks and provide necessary translation); Harry Newton, *Newton's Telecom Dictionary* 362–63 (15th ed. 1999) ("A gateway is what it sounds like. It's an entrance and exit into a communications network."); *The IEEE Standard Dictionary of Electrical and Electronic Terms* 449 (6th ed. 1996) (defining a "gateway" as a device that connects two systems or networks).

Considering "gateway" in the context of the claims and specification of the '487 patent, one of ordinary skill would have understood that the inventors did not depart from the ordinary meaning of "gateway" with their use of the term "intelligent gateway." The gateway is intelligent because it includes a database of information and is adapted to do things such as translate dialing sequences, deliver short messages, provide assistance, and obtain information for call completion. '487 patent col. 2 ll. 33–38, claims 10, 35, and 40. But, consistent with its ordi-

nary meaning, the specification also explains that it connects different networks. For example, when describing the services performed by the invention, the specification explains that "[t]he system providing these services is based upon a configuration comprising a global packet switch network connecting mobile networks via intelligent gateways." *Id.* col. 2 ll. 19–21. Further, in describing the invention, the specification discloses two main embodiments. The first—shown in Figure 1—contains a visited mobile network coupled to a packet-switch network via a single intelligent gateway. The second—shown in Figures 3, 4, and 5—contains two mobile networks coupled to a packet-switch network via two intelligent gateways. After reading the claims and specification, one of ordinary skill in the art would therefore have understood that "intelligent gateway" carries its ordinary meaning as a device that connects different networks.

Starhome relies on Figure 2 to support its proposed construction, arguing that the figure shows an intelligent gateway operating within a single network, thus constituting a preferred embodiment excluded by the district court's construction. If true, Starhome's argument would carry force because a construction that excludes a preferred embodiment "is rarely, if ever, correct and would require highly persuasive evidentiary support." *Vitronics Corp.*, 90 F.3d at 1583. However, although Starhome correctly points out that Figure 2 does not show a connection to a packet-switch network, we disagree that it constitutes a separate embodiment. The specification explains that Figure 2 is a simplified drawing of a call flow in accordance with the system of Figure 1. '487 patent col. 1 ll. 43–44, col. 3 ll. 23–29. The packet-switch network of Figure 1 is not needed to explain the call flow, and one of ordinary skill in the art would understand that the drawing omits it for that reason. At best, Figure 2 inserts ambiguity as to whether the patentees intended to depart from the ordinary meaning of "intelligent gate-

way." But such ambiguity does not rise to the level of the clear intent our case law requires. *See, e.g.*, *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002) ("In the absence of an express intent to impart a novel meaning to claim terms, an inventor's claim terms take on their ordinary meaning. We indulge a 'heavy presumption' that a claim term carries its ordinary and customary meaning." (internal citations omitted)). Accordingly, we find nothing in the specification that indicates a clear intent to depart from the ordinary meaning of "intelligent gateway."

Starhome further argues that the doctrine of claim differentiation supports its proposed construction. As Starhome's argument goes, unasserted claims 1 and 47 require the intelligent gateway to connect to an external packet-switch network, whereas asserted claims 10 and 40 do not. The district court's construction, Starhome continues, ignores this distinction and improperly imports the limitation of an external packet-switch network into every claim. We disagree.

The doctrine of claim differentiation is "based on the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope." *Karlin Tech. Inc. v. Surgical Dynamics, Inc.*, 177 F.3d 968, 971–72 (Fed. Cir. 1999). The doctrine is not a hard and fast rule, but instead "a rule of thumb that does not trump the clear import of the specification." *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1332 (Fed. Cir. 2009); *see also Netcraft Corp. v. eBay*, Inc., 549 F.3d 1394, 1400 n.1 (Fed. Cir. 2008) ("While claim differentiation may be helpful in some cases, it is just one of many tools used by courts in the analysis of claim terms."). The doctrine does not control the outcome here. The district court's construction of "intelligent gateway" requires that it transfer information to and from a "network external to the mobile network." Claims 1 and 47, however, claim a specific type

of external network; namely, a packet-switch network. The claims differ in scope, therefore, and the district court's construction neither imports limitations from one claim to another nor renders any claims redundant.

To bolster their case, Defendants point to the prosecution history of a related European application. We have previously held that statements made before foreign patent offices are sometimes relevant to interpreting the claims. *See Gillette Co. v. Energizer Holdings, Inc.*, 405 F.3d 1367, 1374 (Fed. Cir. 2005) (relying on party admissions before the European Patent Office to construe the claims). But we have also cautioned against indiscriminate reliance on foreign file histories. *See AIA Eng'g Ltd. v. Magotteaux Int'l S/A*, 657 F.3d 1264, 1279 (Fed. Cir. 2011) ("[T]he varying legal and procedural requirements for obtaining patent protection in foreign countries might render consideration of certain types of representations inappropriate for consideration in a claim construction analysis of a United States counterpart." (internal quotation marks omitted)). In this case, Starhome argued in a related foreign application that "a gateway provides access to an external environment beyond the immediate network," and that "the term 'intelligent gateway' is defined in this way, that is in terms of an access means from one network to another." J.A. 181. Although we view Starhome's statements with the requisite caution, they do provide yet another indication that the patentees did not intend to depart from the ordinary meaning of "intelligent gateway."

As noted, the district court accepted Defendants' proposed claim construction and construed "intelligent gateway" to mean "a network element that transfers information to and from a mobile network and another network external to the mobile network." Because, as discussed above, that construction is not inconsistent with the ordinary meaning of "gateway," we will not disturb it. We have considered Starhome's proposed construction of

"intelligent gateway," but because it does not reflect the ordinary meaning of "gateway," we conclude that it is not correct.

Turning to infringement, the parties stipulated that "the accused systems do not directly transfer information to and from a network external to the mobile network." J.A. 7. In addition, the parties agree that the accused systems are not connected to an external packet-switch network or other external network. Appellant's Br. 16; Appellee's Br. 57. Because the term "intelligent gateway" requires connection to an external packet-switch network or other external network, there can be no infringement. *See Dynacore Holdings Corp. v. U.S. Philips Corp.*, 363 F.3d 1263, 1273 (Fed. Cir. 2004) ("To prove infringement, the patentee must show that the accused device meets each claim limitation, either literally or under the doctrine of equivalents."). Accordingly, we affirm the district court's judgment of noninfringement.

CONCLUSION

As set forth above, we see no error in the district court's construction of "intelligent gateway." We therefore affirm the judgment of noninfringement.

AFFIRMED

COSTS

Each party shall bear its own costs.