

United States Court of Appeals for the Federal Circuit

04-1154

IRDETO ACCESS, INC.
(formerly known as TV/COM International, Inc.),

Plaintiff-Appellant,

v.

ECHOSTAR SATELLITE CORPORATION
(now known as EchoStar Satellite L.L.C.),

Defendant-Appellee,

and

KUDELSKI, S.A. and NAGRAVISION S.A.,

Defendants-Appellees.

David A. York, Latham & Watkins LLP, of Menlo Park, California, argued for plaintiff-appellant. With him on the brief was David S. Foster, of Chicago, Illinois.

Philip L. Cohan, Piper Rudnick LLP, of Washington, DC, argued for all of the defendants-appellees. With him on the brief was James M. Heintz for Kudelski, S.A., et al. Also on the brief was Robert R. Brunelli, Sheridan Ross, P.C., of Denver, Colorado, for EchoStar Satellite Corporation.

Appealed from: United States District Court for the District of Colorado

Senior Judge Richard P. Matsch

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DECIDED: September 14, 2004

Before NEWMAN, MICHEL, and BRYSON, Circuit Judges.

MICHEL, Circuit Judge.

Irdeto Access, Inc. (“Irdeto”) appeals the decision of the United States District Court for the District of Colorado granting summary judgment of noninfringement to Echostar Satellite Corporation, and Kudelski, S.A. and Nagravision, S.A. (collectively, “Echostar”). Irdeto Access, Inc. v. Echostar Satellite Corp., Civil Action No. 98-M-1291 (D. Colo. Sept. 26, 2003) (“Summary Judgment Order”). Because we find no error in the district court’s claim construction, we affirm the summary judgment of noninfringement.

I. BACKGROUND

A. The '020 Patent

Irdeto owns U.S. Patent No. 4,531,020 (“the '020 patent”) directed to a system for controlling the broadcast of digital information signals by using three layers or tiers of complementary encryption and decryption keys -- “service keys,” “group keys,” and “box keys.”

The '020 patent abstract describes:

A method of controlling the simultaneous broadcast of enciphered digital information signals, for example in a radio or television broadcast environment, to a plurality of subscribers provides several levels of enciphering keys. The broadcast digital information signal is in a broadcast common service enciphering key and communication between the transmitter and subscribers may take place in a box key or in a group enciphering key common to a group of subscribers having a common interest in the reception of broadcast signals of a particular type. Each receiver will decipher the broadcast digital information in a specific service key which is common to that broadcast. The service key may be changed at one or more subscribers by communicating the change in the service key to the subscribers by means of the group enciphering key. Further, the group enciphering key may be changed at one or more subscribers or new groups may be formed among subscribers by communicating to the subscribers in one or more group enciphering keys.

B. Specification

The specification describes “group keys” as “common to a group of subscribers, all of whom are to receive a specific type of broadcast.” '020 patent at col. 2, ll. 23-24. “There may be a substantial number of groups associated with a specific communication system and an individual subscriber may itself belong to more than one or a plurality of groups.” *Id.* at col. 2, ll. 24-28. The number, type, and composition of groups change according to subscriber preferences: “From time to time subscribers’ tastes and desires in programming change and thus it is necessary to change groups, to reform groups and to add or delete subscribers from a particular group.” *Id.* at col. 2, ll. 36-39. Groups may be formed by content or geography:

For example, there may be a group composed of those interested in adult movies, those interested in opera, those interested in specific types of sports programs. The group may be formed of those in a specific geographical area. The numbers and types of groups are almost infinite and normally each subscriber will be able to belong to a plurality of groups and will have a group key and group ID associated with each such group.

Id. at col. 5, ll. 28-36.

In the event that one or more group keys is compromised, a box key peculiar to each subscriber provides “a final means for insuring security and privacy.” ’020 patent at col. 2, l. 60. The individual box keys allow the broadcaster to communicate in complete privacy with individual subscribers, to reform groups or change the group key. According to the specification,

there need not be a logical distinction between group keys and box keys, or group addresses and box addresses. The box address/box key pair simply constitutes another subscriber subset (group) to which there happens to be only a single member.

Id. at col. 3, ll. 7-12 (emphasis added).

C. Claims

Independent claim 1 recites a three-step method for the use and distribution of keys to subscribers:

1. A method of controlling the simultaneous broadcast of enciphered digital information signals to a plurality of subscribers in which each subscriber has a permanent box enciphering key; in which the broadcast digital information signal is in a service enciphering key; and in which communication to subscribers may take place in a group enciphering key common to a group of subscribers having a common interest in the reception of broadcast signals of a particular type, including the steps of:

(a) simultaneously broadcasting digital information signals in a specific service key, which digital information signals are deciphered by subscribers having the service key,

(b) changing the service key at subscribers by simultaneously communicating the

change in service key to subscribers in at least a portion of a group, such communication being in the group enciphering key,

(c) changing the group enciphering key in at least a portion of the subscribers in a group by communicating such change in the group enciphering key to the selected subscribers in the group, with each communication to a subscriber in the group being preceded by an address to designated subscribers in the group.

'020 patent at col. 6, ll. 20-43.

The other independent claim of the '020 patent, claim 4, recites the receiver used to decipher encrypted signals:

4. A receiver for deciphering broadcast digital information signals enciphered in a broadcast common service enciphering key including:

(a) a service data decryptor using a broadcast common service deciphering key to decipher broadcast digital information signals,

(b) memory storage means for retaining an individual subscriber box deciphering key, at least one changeable group deciphering key, and one or more addresses specific to a subscriber and its specified group or groups,

(c) and a control channel decryptor having a control channel input and being connected to said memory storage and service data decryptor, comparison means for determining if a control channel message is addressed to a specific subscriber, said control channel decryptor using the box deciphering key or a group deciphering key to decipher a control message as to a change in the service deciphering key or a change in or formation of a group deciphering key.

'020 patent at col. 6, l. 56 - col. 7, l. 7.

D. Prosecution History

During prosecution, the examiner rejected all pending claims of the application that issued as the '020 patent as indefinite under 35 U.S.C. § 112, ¶ 2, explaining that,

The claims have certain "Key" modifiers, i.e. "box", "group", "service" which have no accepted meaning within the art thus [sic] are not understood. Applicant should make some attempt to differentiate the claimed keys and prevent them from being taken as the same element, i.e. the "box", "group" and "service" key are the same key.

Agreeing that the “key” modifiers have no accepted meaning in the art, applicant responded:

Referring first to the Examiner’s rejection under 35 U.S.C. 112 on the basis that the claims have certain “key” modifiers which have no accepted meaning in the art, we believe the Examiner is well aware of the substantial body of law which states that a patentee or in this case a patent applicant may be his own lexicographer. We believe that the modifiers for key -- “box”, “group” and “service” -- are very adequately described in the specification and therefore there is a complete foundation for the use of these terms in the claims.

Applicant concluded that “[e]verything considered, we do not believe there is any accepted terminology in the art and since the applicants have described their specific keys in the specification, we believe that the claims are not indefinite.”

In addressing a rejection of all claims for obviousness, applicant, inter alia, amended claim 1 to add step 1(c), and explained that “[a] group may be as small as a single individual or it may be substantially larger.” Applicant then summed up the novelty of the invention as follows:

We repeat that the art does not disclose a three-tier communication system or the possibility of reforming or changing or creating new groups within a subscriber base by communicating to individual subscribers in either a box key or in a group key.

(emphasis added).

The Examiner thereafter allowed all pending claims.

E. The Accused DISH Network System

In the accused DISH Network system, digital television signals are encrypted and decrypted using a key called a “Control Word.” The district court found, and the parties do not dispute, that Control Words correspond to the “service keys” in claim 1(a). The DISH Network changes Control Words very frequently. Changes in Control Words are, in turn, communicated through Entitlement Control Messages or ECMs -- encrypted using the so-called “Transmission Key” -- broadcast to all active receivers within the system. As the district court found, and as

the parties do not dispute, the Transmission Key is shared by all subscribers within the DISH Network system. It is also undisputed that the accused system has no key associated with groups organized by viewer programming preference, geographic area, or any other subset of the total DISH Network subscriber base, that is used to encipher messages communicating new Control Words.

F. District Court Proceedings

Irdeto brought suit against Echostar on June 12, 1998, alleging that the DISH Network system infringed the '020 patent as well as U.S. Patent No. 4,531,021; the latter is not at issue in this appeal. On April 13, 2001, Irdeto moved for summary judgment of infringement of claim 1 of the '020 patent. Echostar opposed the motion and cross-moved for noninfringement of all claims of the '020 patent.

Following a Markman hearing with respect to the '020 patent on September 20, 2002, the district court issued a claim construction order on October 15, 2002. Irdeto Access, Inc. v. Echostar Satellite Corp., Civil Action No. 98-M-1291 (D. Colo. Oct. 15, 2002) ("Claim Construction Order"). The court construed the term "group" in the "group enciphering key" limitation of claim 1(c) and "group deciphering key" limitations of claim 4(b) and (c) as keys "associated with a subset of the total subscriber base." Claim Construction Order at 10.

Based on the patent applicant's representation to the PTO that the "key" modifiers -- lacking an accepted meaning within the art -- are "very adequately described in the specification," the court held that "the term 'group' must be defined as it is in the specification, even if the ordinary meaning of group might be broader." Id. at 11 (citation omitted). The district court determined that the specification consistently uses the term "group" to refer to fewer than all subscribers. "Notably," the district court emphasized, "in discussing the box address/box key pair, the specification describes them as another 'subscriber subset (group).'" Id. at 10.

As noted above, it is uncontested that the DISH Network system lacks an encryption key associated with only a subset of all subscribers. The "Transmission Key" used by the

DISH Network is common to all subscribers within the network. Having construed “group key” as associated with fewer than all subscribers within the network, the district court denied Irdeto’s motion for summary judgment of infringement of claim 1, and granted Echostar’s motion for summary judgment of noninfringement of all claims of the ’020 patent.

The district court entered final judgment on December 4, 2003, and Irdeto timely appealed to this court, which has jurisdiction pursuant to 28 U.S.C. § 1295(a)(1). We heard oral argument on August 6, 2004.

II. DISCUSSION

A. Standard of Review

Claim construction is a question of law subject to de novo review on appeal. Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc). Summary judgment of no literal infringement is proper “when no genuine issue of material fact exists, in particular, when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device.” Bai v. L & L Wings, 160 F.3d 1350, 1353 (Fed. Cir. 1998).

The parties agree that the Transmission Key in the accused DISH Network system is broadcast to all subscribers within the subscription base. The parties further agree that the accused system has no encryption key associated with a subset of all subscribers within the network. Accordingly, if this court agrees with the district court’s construction of “group key” as pertaining to fewer than all subscribers in the claimed system, we must affirm summary judgment of noninfringement.

B. Analysis

Claim construction analysis begins with the intrinsic evidence. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). It is well-established that the

patentee can act as his own lexicographer, so long as he clearly states any special definitions of the claim terms in the patent specification or file history. Id. Even when guidance is not provided in explicit definitional format, “the specification may define claim terms ‘by implication’ such that the meaning may be ‘found in or ascertained by a reading of the patent documents.’” Bell Atl. Network Servs., Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1268 (Fed. Cir. 2001) (quoting Vitronics, 90 F.3d at 1582, 1584 n.6). Moreover, if a disputed term has “no previous meaning to those of ordinary skill in the prior art[,] its meaning, then, must be found [elsewhere] in the patent.” J.T. Eaton & Co. v. Atl. Paste & Glue Co., 106 F.3d 1563, 1570 (Fed. Cir. 1997).

Consistent with the term’s usage in the specification, the district court construed “group key” in claims 1 and 4 to mean a key associated with a subset of the total subscriber base. Irdeto challenges this construction on appeal, arguing that the district court departed from the ordinary meaning of the term “group.” Relying on this court’s pronouncements regarding the “‘heavy presumption’ that [the claims] mean what they say,” Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 913 (Fed. Cir. 2004), Irdeto proffers definitions from a general-usage dictionary to show that nothing in the “ordinary meaning” of the claim terms requires limiting “group” to fewer than all subscribers. Absent “clear disclaimer” or words of “manifest exclusion,” Irdeto argues, the heavy presumption of ordinary meaning must apply. Here, Irdeto claims, the intrinsic record lacks such clear disavowal.

Echostar, on the other hand, contends that there can be no such “heavy presumption” where a disputed term lacks an accepted meaning in the art. We agree. As we held in J.T. Eaton, absent such an accepted meaning, we construe a claim term only as broadly as provided for by the patent itself. 106 F.3d at 1570. The duty thus falls on the patent applicant to provide a precise definition for the disputed term. Id. Moreover, where evidence such as expert testimony or technical dictionaries demonstrates that artisans would attach a special meaning to a claim term or would attach no meaning at all to the claim term independent of the specification “general-usage dictionaries are rendered irrelevant with respect to that term . . .”

Vanderlande Indus. Nederland BV v. Int'l Trade Comm'n, 366 F.3d 1311, 1321 (Fed. Cir. 2004). “[A] general-usage dictionary cannot overcome credible art-specific evidence of the meaning or lack of meaning of a claim term.” Id. (citation omitted).

Here, applicant informed the examiner and all competitors that the “key” modifiers -- “service,” “group,” and “box” -- have no accepted meaning in the art and “are very adequately described in the specification.” The applicant’s use of those terms in the specification thus controls their scope.

Irdeto faults the district court for reading the preferred embodiment into the claims. Just because the applicant told the examiner that the terms “service,” “group,” and “box” modifying “key” are “very adequately described in the specification,” Irdeto maintains, does not transform every aspect of the preferred embodiment into a claim limitation. Irdeto points to language such as “for example,” “may,” and “normally” in the following specification passage as evidence of the district court’s error:

For example, there may be a group composed of those interested in adult movies, those interested in opera, those interested in specific types of sports programs. The group may be formed of those in a geographical area. The number and types of groups are almost infinite and normally each subscriber will be able to belong to a plurality of groups and will have a group key and group ID associated with each such group.

'020 patent at col. 5, ll. 28-36. All examples in the specification, Irdeto argues, are permissive rather than mandatory, illustrative rather than exhaustive, and do not necessarily or explicitly exclude a group made up of all subscribers. Echostar responds that the specification describes every group as a subscriber subset and lacks any disclosure of a group that includes all subscribers.

Indeed, the specification consistently uses the term “group” to refer to a subset of all subscribers. The specification teaches that service key change messages take place in the “group key which is common to a group of subscribers, all of whom are to receive a specific

type of broadcast.” ’020 patent at col. 2, ll. 22-24. “There may be a substantial number of groups associated with a specific communication system and an individual subscriber may itself belong to more than one of a plurality of groups.” Id. at col. 2, ll. 24-28. As subscribers’ “tastes and desires in programming change,” it is “necessary to change groups, to reform groups and to add or delete subscribers from a particular group.” Id. at col. 2, ll. 36-39. And,

if a substantial portion of a current group is to be involved in a new group, the broadcaster may address those subscribers to form the new group in the group key but with the message being preceded by the individual IDS of those particular subscribers. Thus the broadcaster may form new groups, delete subscribers from a particular group, etc., all by communicating to the subscribers within the concept of the group identification and the group key.

Id. at col. 5, ll. 42-51. Nowhere does the specification contemplate a single group made up of the entire subscriber base.

Instead, the specification consistently equates group with a subset of all subscribers. The passage characterizing the box address/box key pair as “simply . . . another subscriber subset (group),” ’020 patent at col. 3, ll. 9-11 (emphasis added), is most telling. Irdeto attempts to explain away this passage by arguing that because a group may be a subset as small as one subscriber, in that particular instance, the group key/group address and box key/box address pairs overlap. Yet Irdeto cannot explain every example in the specification, all of which consistently point to an implicit definition of group as a subset of all subscribers in the system. See Bell Atl., 262 F.3d at 1271 (“Thus, when a patentee uses a claim term throughout the entire patent specification, in a manner consistent with only a single meaning, he has defined that term ‘by implication.’”); see also Vitronics, 90 F.3d at 1582 (“The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.”).

Irdeto argues that only statements of “clear disclaimer” in language expressly indicating “manifest exclusion or restriction” can overcome the “heavy presumption” in favor of ordinary meaning, citing our recent cases such as Liebel-Flarsheim, 358 F.3d at 913; Brookhill-Wilk 1,

LLC v. Intuitive Surgical, Inc., 334 F.3d 1294, 1301 (Fed. Cir. 2003); Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1327 (Fed. Cir. 2002). Relying on these cases -- with little or no analysis of their holdings -- does not help Irreto.

The cited cases are not in conflict with Bell Atlantic, which held that terms may be redefined away from their ordinary meaning by their consistent use in the specification. In fact, Teleflex discusses Bell Atlantic without any disapproval of its methodology or result, stating that “[a]lthough [in Bell Atlantic] the term’s ordinary meaning may have supported a broader reading, we found that ‘the patentees defined the term “mode” by implication, through the term’s consistent use throughout the ’786 patent specification.’” Teleflex, 299 F.3d at 1327 (citations omitted).

In Liebel-Flarsheim, the district court interpreted a claim that recited a “syringe receiving opening” to require that the claimed syringe loading system use pressure jackets, because all of the embodiments described in the specification featured such pressure jackets. 358 F.3d at 901. In reversing, this court noted that the specification did not define the term “opening” to require that the term, as used in each of the claims, be limited to an opening at the front end of a pressure jacket, nor did the court find anything in the specification that supported the district court’s conclusion that the term “opening” was ambiguous as used in the patent. Moreover, the court concluded that the written description “does not contain a clear disavowal of embodiments lacking a pressure jacket” and does not “expressly or by clear implication restrict the scope of the invention to injectors using a pressure jacket.” Id. at 908 (emphasis added). Once again, redefinition by implication was not criticized as a methodology.

In Liebel-Flarsheim, our construction found further support in the prosecution history, “squarely contrary” to limiting the claims to require pressure jackets. Id. at 909. Because patent applicants replaced claims referring to a pressure jacket with new claims removing all such references, we held that applicants clearly intended the asserted claims to cover injectors without pressure jackets. Id. The prosecution history thus affirmatively precluded a narrow

reading of the claim language.

Similarly, in Brookhill, we declined to limit the term “remote location” to “a location outside the operating room” based on the single embodiment described in the specification, especially where amendments in the prosecution history specifically supported the broader construction. 334 F.3d at 1302. While the preferred embodiment contemplated a surgeon located outside of the operating room, the written description as a whole contained no specific parameters as to the distance between the surgeon and patient and generally taught that “a surgeon using the disclosed assembly may operate without directly touching the patient, the surgical instruments, or the endoscope -- regardless of the extent of the physical separation between the surgeon and the patient.” Id. at 1300 (emphasis added). During prosecution, patentee overcame an indefiniteness rejection for the phrase “remote location beyond a range of direct visual contact,” by replacing the word “visual” with “manual,” clarifying that the amended text “means that the remote location is beyond the arm’s reach of the patient.” Id. at 1302. Accordingly, we construed “remote location beyond a range of direct manual contact” to encompass all locations where the surgeon is beyond direct physical contact with the patient, including inside the operating room, as in the accused system, and outside the operating room. As in Liebel-Flarsheim, the prosecution history specifically endorsed the broader construction.

Most importantly, neither Liebel-Flarsheim nor Brookhill nor Teleflex involved a situation where the applicant admitted that certain claim terms lacked any agreed upon meaning in the art -- i.e., ordinary meaning -- and unequivocally directed the patent examiner, as well as the public, to the specification as the complete source of meaning for the disputed terms by stating that those terms “are very adequately described in the specification and therefore there is a complete foundation for the use of those terms in the claims.” Patentee’s clear intent to rely on the four corners of his patent to define fully the terms at issue thus takes this case out of the “heavy presumption” regime of our cases.

In short, the district court correctly construed the term “group” in claims 1 and 4 to pertain only to a subset of all subscribers to the claimed broadcast system. A contrary result, moreover, would undermine the notice function of the patent itself. What Irdeto, in effect, argues is that even after telling the PTO and the public that given the absence of ordinary meaning in the art for the term “group,” the specification sets forth the full intended scope of that term, a patentee can nonetheless later lay claim to a broader, general-usage dictionary meaning of “group” absent explicit narrowing statements in the specification. This cannot be. Having conceded that the “key” modifiers have no accepted meaning in the art, the applicant expressly directed the public to the specification to discern that meaning and thus measure the scope of the claimed invention. And while the specification does not contain any statements of explicit disavowal or words of manifest exclusion, it repeatedly, consistently, and exclusively uses “group” to denote fewer than all subscribers, manifesting the patentee’s clear intent to so limit the term. The specification also contains no affirmative indication that group can consist of all subscribers within the system. A reasonable competitor reading the patent could only understand “group” to refer to a subset of all subscribers. The claims must be limited accordingly.

III. CONCLUSION

For the foregoing reasons, we agree with the district court’s claim construction. The district court’s order granting summary judgment of noninfringement in favor of Echostar is therefore

AFFIRMED.