

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
TYLER DIVISION

ERICSSON INC., *et. al.*,

*Plaintiffs,*

v.

D-LINK CORPORATION, *et. al.*,

*Defendants.*

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Civil Action No. 6:10-CV-473  
(LED/KFG)

MEMORANDUM OPINION AND ORDER CONSTRUING CLAIM TERMS OF  
UNITED STATES PATENT NOS.  
6,772,215, 6,330,435, 5,987,019, 6,466,568, and 5,790,516

This claim construction opinion construes the disputed claim terms in U.S. Patent Nos. 6,772,215, 6,330,435, 5,987,019, 6,466, 568, and 5,790,516 as asserted in the above captioned case. A *Markman* hearing was held on June 27, 2012, to construe the disputed terms of the various patents. For the reasons stated herein, the Court adopts the constructions set forth below.

CLAIM CONSTRUCTION PRINCIPLES

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005)(quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 111, 115 (Fed. Cir. 2004)). The Court examines a patent’s intrinsic evidence to define the patented invention’s scope. *Id.* at 1313-1314; *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification and the prosecution history. *Phillips*, 415 F.3d at 1312-13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood

by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312-13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

Claim language guides the Court's construction of claim terms. *Phillips*, 145 F.3d at 1314. "[T]he context in which a term is used in the asserted claim can be highly instructive." *Id.* Other claims, asserted and unasserted, can provide additional instruction because "terms are normally used consistently throughout the patent." *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning that it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See Sci Med Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343-44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. For example, "[a]

claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct.’ *Globetrotter Software, Inc. v. Elam Computer Group, Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004)(quoting *Vitronics Corp.*, 90 F.3d at 1583). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during the prosecution of the patent. *Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004)(“As in the case of the specification, a patent applicant may define a term in prosecuting the patent.”). The well-established doctrine of prosecution disclaimer “preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng’g Inc. v. Raytek Corp.*, 334 F.3d 1314 (Fed. Cir. 2003). The prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 164 F.3d 1372, 1378-79 (Fed. Cir. 1988)(quotations omitted). “As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public’s reliance on definitive statements made during prosecution.” *Omega Eng’g, Inc.*, 334 F.3d at 1324.

Although, “less significant than the intrinsic record in determining the legally operative meaning of claim language, “the Court may rely on extrinsic evidence to “shed useful light on the relevant art.” *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises

may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful.” *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

Determining the claimed function and the corresponding structure of means-plus-function clauses are matters of claim construction. *WMS Gaming Inc., v. Int’l Game Tech.*, 184 F.3d 1339, 1347 (Fed. Cir. 1999). Claim construction of a means-plus-function limitation involves two steps. *See Medical Instrumentation and Diagnostics v. Elekta*, 344 F.3d 1205, 1210 (Fed. Cir. 2003). The court must first identify the particular claimed function, and then look to the specification and identify the corresponding structure for that function. *Id.* “Under this second step, ‘structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.’” *Id.* (citations omitted). “While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function.” *Default Proof Credit Card System, Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005).

### OVERVIEW OF THE ‘215 PATENT

The ‘215 patent is entitled “Method for Minimizing Feedback Responses in ARQ Protocols” and the invention relates in general to the telecommunications field and, in particular, to a method for minimizing feedback responses in Automatic Repeat Request (ARQ) protocols. Data sent by a

transmitter (such as a wireless router) to a receiver (such as a computer) is broken into data packets (also called “Protocol Data Units” or “PDUs”) which have sequence numbers. ‘215 patent at 1:29-30. The receiver assembles the data packets back into the proper order using the sequence numbers. In a perfect world, the receiver would receive all the data packets in the proper order. However, frequently data packets get lost or corrupted during the transmission from the transmitter to the receiver and never make it to the receiver’s buffer. Certain algorithms are used to recover from the transmission of erroneous data and the loss of data on the transmission links between the nodes. ‘215 patent at 1:21-23. An algorithm commonly used to recover from the transmission of erroneous data is referred to as an Automatic Repeat Request (ARQ) protocol. ‘215 patent at 1:23-25. The basic function of the ARQ protocol is to allow the receiver to request that the transmitter re-transmit those PDUs that were lost or contained errors during transmission. ‘215 patent at 1:34-37. The PDUs that are sent from the receiver back to the transmitter include control data needed for error control/recovery and are called “status PDUs” (S-PDUs).

Two main methods are currently used for coding the sequence numbers of the lost or corrupted data within the S-PDUs sent from the transmitter back to the receiver. One method is to use a list of sequence numbers to be re-transmitted. The second method is to use a bitmap to represent the sequence numbers to be re-transmitted. ‘215 patent at 2:48-52. However, a significant problem with the existing ARQ protocols is that they are static in construction and, in certain situations, this may lead to a waste of bandwidth, because a great deal of information is transmitted unnecessarily in the S-PDUs. ‘215 patent at 3:46-50.

Therefore, the inventors of the ‘215 patent recognized that a significant need existed for a method that can be used to minimize the size of S-PDUs in an ARQ protocol and for a method that

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