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NOT FOR CITATION
IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

TOWNSHEND INTELLECTUAL PROPERTY,
L.L.C.,

Plaintiff,

v.

BROADCOM CORPORATION,

Defendant.

Case Number C-06-05118 JF (RS)

ORDER¹ CONSTRUING CLAIMS OF
UNITED STATES PATENTS NO.
5,801,695, NO. 5,809,075, NO.
5,835,538, NO. 5,859,872, NO.
5,970,103, NO. 6,233,275, NO.
6,233,284, AND NO. 6,400,770

[re: docket no. 71]

On November 26, 2007, the Court held a hearing for the purpose of construing disputed terms in the claims of United States Patents No. 5,801,695 (“the ’695 patent”), No. 5,809,075 (“the ’075 patent”), No. 5,835,538 (“the ’538 patent”), No. 5,859,872 (“the ’872 patent”), No. 5,970,103 (“the ’103 patent”), No. 6,233,275 (“the ’275 patent”), No. 6,233,284 (“the ’284 patent”), and No. 6,400,770 (“the ’770 patent”). After consideration of the arguments and evidence presented by the parties and the relevant portions of the record, the Court construes the disputed terms as set forth below.

¹ This disposition is not designated for publication and may not be cited.

I. BACKGROUND

1
2 This case involves dial-up modem technology. Townshend Intellectual Property, LLC
3 (“Townshend”) alleges that certain modems sold by Broadcom Corporation (“Broadcom”)
4 infringe seven Townshend patents including the ’872 patent, the ’695 patent, the ’075 patent, the
5 ’103 patent, the ’770 patent, the ’275 patent, and the ’284 patent (collectively referred to as “the
6 patents”).

7 The patents share the same specification, with the exception of three patents (’872, ’275,
8 and ’284) that are continuations-in-part of the original application and thus contain some
9 additional material. The invention generally relates to high-speed modem technology. A modem
10 is used to translate digital signals from computers into analog signals, and vice versa, for
11 transmission over and receipt from telephone lines. The patents describe a method of utilizing
12 unique properties of Internet Service Provider (“ISP”) computer connections to increase the
13 speed of this data transmission process. In particular, the invention takes advantage of the fact
14 that, because ISPs often are connected to the Internet via digital telephone lines, the modem at
15 the ISP can transmit information more quickly. The patents describe a modem for use at the ISP
16 site and one for use at the end-user site that together take advantage of the faster digital telephone
17 lines to increase the speed of information transmission from ISP to end-user.

18 In earlier litigation, Townshend asserted the patents against Analog Devices, Inc.², Agere
19 Systems, Inc., Cisco Systems, Inc., ESS Technologies, and Intel Corporation. *In re Townshend*
20 *Litigation* (referred to herein as the “prior case”), Case No. C-02-4833 JF (PVT). Broadcom
21 asserts that the majority of the defendants in the prior case sold server-side (downstream)
22 modems.³ Broadcom alleges that it is a client-side modem manufacturer and thus does not
23 infringe the patents.

II. LEGAL STANDARD

24
25 Claim construction is a question of law to be decided by the Court. *Markman v.*
26

27 ² Subsequently, Analog Devices, Inc. was dismissed by stipulation of the parties.

28 ³ Townshend argues that this assertion lacks support.

1 *Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff'd* 517 U.S. 370 (1996). The
2 patentee's use of a claim term in the specification is highly relevant to understanding the proper
3 context in which the term is used. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005).
4 The specification is the "single best guide to the meaning of a disputed term." *Id.*, citing
5 *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

6 III. DISCUSSION

7 A. The Court's Previous Claim Construction

8 This Court construed the following disputed terms in the prior case: (1) "encoder" and
9 "encoding"; (2) "digital source" and "data source"; (3) "high speed," "communication," and
10 "transferring data"; (4) "codeword(s)"; and (5) "inverse filter". Townshend contends that the
11 Court's prior construction of these claim terms should be adopted because the Court properly
12 considered the intrinsic evidence, including the specifications and the file histories of the patents.
13 Broadcom argues that the Court must construe these terms again in light of new arguments raised
14 by Broadcom that were not previously before the Court. Broadcom also argues that the
15 construction should be re-evaluated in light of *Phillips*⁴, which was decided after this Court's
16 claim construction ruling in the prior case.

17 Because Broadcom was not a party to the previous case, the Court will not subject it to
18 collateral estoppel based upon the previous claim construction. *See, e.g. Tex. Instruments, Inc. v.*
19 *Linear Techs. Corp.*, 182 F. Supp. 2d 580, 589-90 (E.D. Tex. 2002); *Nilssen v. Motorola, Inc.*,
20 80 F. Supp. 2d 921, 924, n.4 (N.D. Ill. 2000). Instead, the Court will adopt or modify the
21 previous construction as is appropriate in light of the parties' arguments in the instant case and
22 the current state of the law.

23 B. Disputed Terms

24 1. Encoder; Encoding

25 These terms appear in the '075, '872, '770, '284, and '275 patents. A representative
26 claim of the '075 patent is set forth below with the disputed term highlighted in bold.

27
28 ⁴ 415 F.3d at 1303.

1 1. A high speed data transfer system for communicating between a digital data
 2 source and an analog subscriber connected to a digital telephone network by an
 analog loop comprising:
 3 **an encoder** coupled to said digital data source, said **encoder** converting an
 input from said data source into a series of codewords from a set of
 4 codewords corresponding to quantizer values utilized by said digital
 telephone network;
 5 an interface for transmitting said series of codewords in digital form from
 said **encoder** to said digital telephone network; and
 6 a decoder coupled by said analog loop to said digital telephone network,
 wherein said analog loop provides an analog signal to said decoder, which
 7 analog signal is an analog representation of said series of codewords, and
 wherein said decoder is responsive to said analog signal to reconstruct said
 8 series of codewords in digital form from said analog signal.

9 The parties propose the following construction:

Term	Townshend’s proposed construction	Broadcom’s proposed construction
“Encoder”	A device for or method of converting data by the use of a code or a coded character set in such a manner that reconversion to the original form is generally possible.	A server (modem) connected digitally to the digital telephone network for converting the Bitstream into a sequence of 8-bit words.
“Encoding”		The method of converting the Bitstream into a sequence of 8 bit words by a server (modem) connected digitally to the digital telephone network.

18 Townshend’s proposed construction adopts the Court’s construction in the prior case.
 19
 20 Townshend contends the Court properly considered the intrinsic evidence in arriving at this
 21 construction. Townshend asserts that Figure 3 of the ’872 patent shows that the function of the
 22 encoder is to “convert the data stream into a format compatible with the telephone system” (i.e.,
 23 into “codewords”). Townshend points to the specification, which states that “[t]he
 24 transformation performed by encoder 150 is then inverted and decoder 156 outputs data stream
 25 126, which is a delayed estimate of the original data stream 100.” ’872 patent, col.10 lns.7-10.
 26 Townshend asserts that the encoder converts the data in such a manner that reconversion to the
 27 original form is usually possible. For further support, Townshend also references the American
 28 National Dictionary for Information Processing Systems, which defines “encode” as follows:

1 to convert data by the use of a code or a coded character set in such a manner that
2 reconversion to the original form is possible. Encode is sometimes loosely used
when complete reconversion is not possible.

3 Broadcom contends that the prior claim construction is ambiguous. It argues that the
4 specification of the '872 patent clearly sets out three characteristics of an "encoder": (1) the
5 device is a server; (2) it is digitally connected to the digital telephone network ("DTN"); and (3)
6 it converts digital data into an eight bit format compatible with the telephone network.

7 Townshend disputes that the device must be limited to "a server" or that the codewords must be
8 limited to "8-bit words." For example, Townshend points to Figure 19 of the '872 patent which
9 shows the encoder associated with a fax machine. Townshend does not dispute Broadcom's
10 argument that the encoder always is connected to the Digital Telephone Network (DTN). At oral
11 argument, Broadcom stated that it would be willing to modify its proposed construction of these
12 terms, and that its main concern is the direction in which the encoder sends the data.

13 The intrinsic evidence supports Broadcom's construction that the encoder sends data in
14 the downstream direction. *See* Figure 3; '872 patent, col.10 lns.48-49 ("The channel from server
15 to client begins with arbitrary digital data provided as data stream 100. Encoder 150 converts
16 this bitstream into a sequence of eight-bit words . . ."). When information is being sent in the
17 reverse, upstream, direction that task is performed by a modulator. *See* Figure 17; the '872
18 patent, col.22 lns.11-16. Specifying that the encoder is digitally connected to the digital
19 telephone network ensures that the construction of the term shows the data being sent in the
20 downstream direction.

21 Accordingly, the Court adopts Broadcom's modified construction offered at oral
22 argument: "Encoder" means "a device digitally connected to the digital telephone network for
23 converting the bitstream into a sequence of codewords;" "encoding" means "the method of
24 converting the bitstream into a sequence of codewords by a device connected digitally to the
25 digital telephone network."

26 2. "Data Source"; "Digital Source"

27 These terms appear in the '695, '075, and '103 patents and are used interchangeably. A
28 representative claim of the '075 patent is set forth below with the disputed term highlighted in

1 bold.

2 1. A high speed data transfer system for communicating between a **digital data**
 3 **source** and an analog subscriber connected to a digital telephone network by an
 4 analog loop comprising:
 5 an encoder coupled to said **digital data source**, said encoder converting an
 6 input from said data source into a series of codewords from a set of
 7 codewords corresponding to quantizer values utilized by said digital
 8 telephone network;
 9 an interface for transmitting said series of codewords in digital form from
 10 said encoder to said digital telephone network; and
 11 a decoder coupled by said analog loop to said digital telephone network,
 12 wherein said analog loop provides an analog signal to said decoder, which
 13 analog signal is an analog representation of said series of codewords, and
 14 wherein said decoder is responsive to said analog signal to reconstruct said
 15 series of codewords in digital form from said analog signal.

16 The parties propose the following construction:

Term	Townshend’s proposed construction	Broadcom’s proposed construction
“Data Source”	A non-intermediary device capable of originating digital signals for a data-transmission system	A device directly connected to the digital telephone network capable of transferring signals.
“Digital Source”		

17 Townshend’s proposed construction of these terms adopts the construction in the prior
 18 case. The Court determined that “[t]he plain language of the claim also indicates that the signal
 19 originates at the data source and then is transmitted through several steps to the end user.”
 20 8/26/04 Order at 12. Figure 3 shows the flow of data in the invention, *initiating* at the “data
 21 source” or “digital source” (100). The patent specification indicates that this data stream (100) is
 22 provided from a non-intermediary, originating source: “Data applied at data stream 100 will
 23 appear some time later at data stream 126.” ’872 patent, col.8 lns.46-47. In other words, the
 24 data source is the device feeding data stream 100. See ’075 patent, claim 1 (“[A]n encoder
 25 coupled to said digital data source, said encoder converting an input from said data source . . .”).

26 Broadcom asserts that Townshend’s proposed construction is unsupported by the intrinsic
 27 evidence. Specifically, Broadcom argues that the “non-intermediary” and “originating” terms
 28 included in Townshend’s proposed construction are ambiguous and are found in extrinsic rather
 than intrinsic evidence. Broadcom contends that the specification supports its proposed

1 construction— “A device directly connected to the digital telephone network capable of
2 transferring signals”—pointing out that the specification specifically defines the term “data
3 source” as “the data source, which has direct access to the digital network (for example, the
4 ISDN), can transfer exact data to the central office serving the consumer of the data.” ’872 patent,
5 col.5, lns.52-55. Broadcom argues that the patent is “rife with support” (Opp. at 11) for its
6 construction of the term “data source.” *See* ’872 patent, col.5 lns.19-21 (“High data rates are
7 required in one direction only, the source of which has direct digital access to the telephone
8 system.”); *see also* col.5 lns. 33-37; col.5 lns. 41-41; col.5 lns.52-53; col.23 lns.25-27; col.28
9 lns.5-14. According to Broadcom, the “data source” unambiguously is a device directly
10 connected to the digital telephone network. Broadcom also takes issue with the inclusion
11 “originating,” arguing that this word is never used in the patent specification or the claims.
12 Rather, Broadcom argues, the sole support for “originating” comes from a dictionary definition
13 that was proffered by defendants in the prior case and now should be disregarded in light of
14 *Phillips*.

15 Townshend replies that the “digital source” or “data source” cannot be any device that
16 merely outputs or transmits signals, pointing out that any intermediate component within the
17 digital telephone network may, generally speaking, take a digital input signal, process it in some
18 way, and produce a digital output signal, but such a component should not be considered a “digital
19 source” or “data source.” The Court agrees with Townshend that as used here, “digital source” or
20 “data source” is not any device but must be a non-intermediary source as shown in Figure 3.
21 Accordingly, the Court determines that the intrinsic evidence supports Townshend’s proposed
22 construction and once again construes the term as “a non-intermediary device capable of
23 originating digital signals for a data-transmission system.”

24 3. “High Speed”, “Communication”, “Transferring data”

25 These terms are used in the preambles of all of the independent claims of the patents. For
26 example, the ’075 patent describes “[a] **high speed** data transfer system for communicating
27 between a digital data source and an analog subscriber connected to a digital telephone network
28 by an analog loop comprising” ’075 patent, claim 1.

1 The parties propose the following construction:

2 Term	Townshend's proposed construction	Broadcom's proposed construction
3 "High Speed"	4 A speed of data transfer from the provider to the end-user between approximately 33,600 and 64,000 bits/second	5 A speed of data transfer from the provider to the end-user above 28,800 bits/second
6 "Communication"		
7 "Transferring data"		

8 Townshend's proposed construction of these terms adopts the construction in the prior
 9 case. Townshend argues that its proposed construction is correct because in the context of the
 10 claims the term "high speed" relates to what a person of ordinary skill in the art would have
 11 considered "high speed" at the time of patenting. For example, the patent states that "[o]ne aspect
 12 of the present invention comprises a system for transferring data over existing telephone
 13 connections at rates higher than known modems or conventional methods of data transmission."
 14 '872 patent, col.5 lns.11-14. Additionally, the invention relates to "a new system of data transfer
 15 which provides the capability to receive data at high rates over existing telephone lines." '872
 16 patent, col.4 lns.53-55. Townshend argues that the prosecution history supports its proposed
 17 construction. In support of the patent applications, the applicant submitted to the United States
 18 Patent and Trademark Office ("USPTO") a declaration by Dr. John Cioffi, who was a professor of
 19 Electrical Engineering at Stanford University and a leading expert in communications. In this
 20 declaration, Dr. Cioffi stated the highest known speed at the time of filing was 33.6 kbps and that
 21 "Mr. Townshend's invention is a pioneering invention in the field of high speed data transfer."
 22 Accordingly, Townshend argues that the "high speed" data rates of this new system is defined
 23 with respect to what was previously considered the highest known communication speed: 33.6
 24 kbps.

25 Broadcom's proposed construction provides for a speed of data transfer of 28,800
 26 bits/second and above. Broadcom asserts that although the claim language does not define "high
 27 speed," the specification provides guidance. The specification describes modems at the time of
 28 invention as incapable of exceeding approximately 30,000 bits per second. '872 patent, col.1

1 ln.66 to col.2 ln.4 (“capable of operating at speeds up to 28,800 bits per second”); col.7 lns.61-64,
2 col.23 lns.3-10 (“rates up to 28,000 bits/second); col.2 lns.12-13 (“speeds approaching 30,000 bits
3 per second”); col.5 lns.63-67 (“asymmetrical channel capacity of “20,000 to 30,000
4 bits/second.”). Broadcom points out that the “33,600 bits/second” threshold now asserted by
5 Townshend does not appear anywhere in the patents. Additionally, the declaration by Dr. Cioffi
6 was written two and a half years after the effective filing date for the majority of the patents.
7 Broadcom asserts that the known speed of transmission changed between the time the patents
8 were filed and the date the declarations were prepared and submitted to the USPTO. Broadcom
9 argues that the only evidence of the highest known speed at the time of the actual applications is
10 the V.34 Standard, and that this standard supports Broadcom’s, not Townshend’s, proposed
11 construction.

12 Broadcom also argues that claim differentiation supports its proposed construction because
13 dependent claims in three of Townshend’s patents differ materially from the independent claims
14 only with respect to a rate “in excess of 33 kbps.” *See* ’695 patent, claim 48 (“wherein said data is
15 extracted at a rate in excess of 33 kbps”); ’075 patent, claim 18 (“wherein said input is extracted
16 from said reconstructed sequence of codewords at a rate in excess of 33 kbps”); ’538 patent, claim
17 34 (“wherein said data stream is transmitted as said sequence of digital codewords at an
18 uncompressed rate in excess of 33 kbps.”). Broadcom asserts that “high speed” must be
19 something greater than the rate specified in these narrower dependent claims and that
20 Townshend’s proposed construction would render the dependent claims meaningless. Finally,
21 Broadcom argues that “communication” and “transferring data” do not need to be construed
22 because they are commonly understood terms.

23 As the Court noted in its prior decision, and as Dr. Townshend explained during the pre-
24 hearing tutorial, “high speed” was not used as a precise term but rather as a term distinguishing
25 the present invention from the prior art based on the speed of data transfer. As such, the goal of
26 the invention was not to transfer data above 28.8 kbps but to approach what at the time of
27 patenting was the theoretical maximum of 64,000 bits/second. This range constitutes “high
28 speed” transmission as distinguished from the prior art.

1 Claim differentiation is not “a ‘hard and fast’ rule of construction.” *Bristol-Myers Squibb*
 2 *Co. v. Ben Venue Laboratories, Inc.*, 246 F.3d 1368, 1376 (Fed Cir. 2001). Townsend asserts that
 3 the limitation in the dependent claims regarding speed relates not to the “high speed” limitation,
 4 but rather the rate at which the data is “extracted.” Viewed in this way, construing the term “high
 5 speed” to mean “above 33 kbps” would not necessarily render the dependent claims meaningless.

6 The Court concludes that a person of ordinary skill in the art would understand “high
 7 speed” (as well as the speed aspect of the corresponding terms listed above) for the purposes of
 8 the invention to mean “a speed of data transfer from the provider to the end-user between
 9 approximately 33,600 and 64,000 bits/second.”

10 4. “Codeword(s)” and “Digital Telephone Network Codeword(s)”

11 The term “codeword(s)” appears in all of the patents-in suit. This claim element relates to
 12 the way signals are transported over the digital telephone network, that is, using “codewords.”

13 The parties propose the following construction:

Term	Townshend’s proposed construction	Broadcom’s proposed construction
“Codeword(s)”	a set of signal elements representing the quantized value of a sample in PCM; there are multiple possible representations of the same codeword. Particular requirements of these codewords are specified or described in the G.712, G.711, and G.701 Standards.	a set of signal elements representing the quantized value of a sample in PCM; there are multiple possible representations of the same codeword.
“Digital Tele”phone Network Codeword(s)		

22 Townshend’s proposed construction adopts the Court’s construction in the prior case.
 23 Broadcom’s proposed construction differs only with respect to the reference to the communication
 24 standards. While Townshend argues that the standards should be considered because they were
 25 used by the telephone system that existed as of the date of the patents-in-suit, Broadcom contends
 26 that the G.712, G.711, and G.701 Standards merely were used by the Court in the prior case as
 27 examples of support for a broad construction of “codeword.” Broadcom asserts that reference to
 28

1 other standards, such as V.34 or ISDN, should not be precluded.

2 In its prior Order, the Court noted that:

3 . . . one of ordinary skill in the art would have understood “codewords” to include
4 any digital representation of a signal element corresponding to the associated
5 quantized value. Although the specification may have referred to the eight-bit
6 standard for convenience, other standards are not necessarily precluded.

7 8/26/04 Order at 17.

8 The G.17, G.711, and G.701 Standards represent the telephone industry’s standards for
9 “codewords” at the time of patenting. The patents incorporate by reference the ITU-T
10 Recommendation G.712. ’872 Patent, col.11 ln.65-col.12 ln.3. G.712 requires compliance with
11 the G.711 Standard, and the G.711 Standard incorporates G.701. Broadcom has not demonstrated
12 that other standards other than the G.712, G.711 and G.701 existed at that time. Accordingly, the
13 intrinsic evidence supports Townshend’s proposed construction.

14 Accordingly, the Court construes the term “Codeword(s)” to mean “a set of signal
15 elements representing the quantized value of a sample in PCM; there are multiple possible
16 representations of the same codeword. Particular requirements of these codewords are specified
17 or described in the G.712, G.711, and G.701 Standards.”

18 5. “Inverse filter”

19 The term “inverse filter” appears in claim 6 of the ’103 patent:

- 20 1. A high speed decoder for recovering a digital data stream from an analog signal
21 transmitted to said decoder from a digital source connected to a digital telephone
22 network interface via an analog loop connected to said decoder, comprising:
23 a clock recovery circuit including a clock estimator coupled to a clock
24 synchronizer [sic], said clock recovery circuit being coupled to receive an
25 input signal from the analog loop;
26 an **inverse filter** coupled to receive a output from the clock recovery circuit;
27 and
28 a converter coupled to the inverse filter, the converter providing an estimated
code steam [sic] in response to an output of the **inverse filter**, wherein
said code stream comprises a sequence of codewords associated with a
codeword set utilized by the digital telephone network.

1 The parties propose the following construction:

Term	Townshend's proposed construction	Broadcom's proposed construction
"Inverse Filter"	a filter that operates on an input signal to produce a compensated output signal	A filter that inverts the transformations performed by the line interface 140 of Figure 3

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7 Townshend's proposed construction of these terms adopts the definition used by the Court
8 in the prior case. Townshend argues that Broadcom's proposed construction is an incorrect
9 attempt to limit the claim to a particular embodiment.

10 The patent states that "the purpose of inverse filter 268 is to invert the transformation
11 performed by line interface 140 of Figure 3", '695 patent, col.12 lns.58–60, and "also outputs a
12 delay error estimate 270 giving the timing error inherent in synchronized signal 266," *Id.* at col.12
13 lns.61–62. Broadcom's proposed definition ignores the interface in Figure 17. Although
14 Broadcom asserts that the "inverse filter" only inverts the line interface transformation, the
15 specification demonstrates that the inverse filter also produces a delay error estimate, '872 patent,
16 col.13 lns.65-67, and it also reconstructs the compensated signal. '872 patent, col.12 lns.61-62.
17 Accordingly, the Court will adopt Townshend's proposed construction.

18 6. "Using a predetermined training pattern", "Predetermined pattern of PCM
19 Codewords"

20 Broadcom proposes that the Court construe two related terms—"Using a predetermined
21 training pattern" and "Predetermined pattern of PCM Codewords"—not construed in the prior
22 case. The phrase "using a predetermined training pattern" appears in the '695 patent. For
23 example, Claim 37 of the '695 patent, reads as follows:

24 37. A high speed data transfer decoding method as claimed in claim 25. . .

25 further comprising the step of training said decoder using a **predetermined
26 training pattern.**

1 The parties propose the following construction:

Term	Townshend's proposed construction	Broadcom's proposed construction
"Using a predetermined training pattern"	using a training pattern that is determined before being used to train the decoder	Using a training pattern that is known both to the decoder and the encoder prior to training

7 Townshend argues that the plain reading of the claim supports its proposed construction
8 and the Court does not need to construe the terms. Townshend also argues that the claims do not
9 require that the training pattern be known to both the decoder and encoder as Broadcom proposes.
10 Townshend contends that Broadcom incorrectly is reading a limitation from the specification into
11 the claims.

12 Broadcom contends that both the encoder and decoder know the pattern prior to training.
13 It points to language in the specification to the effect that: "[w]hen a connection is first established
14 between a server and a client, both encoder 150 and decoder 156 of Fig. 3 must commence in a
15 state known to each other." '872 patent, col.17 lns.29-32. Broadcom argues that if the invention
16 is to function as disclosed, both the encoder and decoder must know the sequence of codewords
17 prior to training.

18 A close reading of the specification supports Broadcom's proposed construction. In order
19 for the sequence to be predetermined, it has to be known previously. Accordingly, the Court
20 construes the term to mean "using a training pattern that is known both to the decoder and the
21 encoder prior to training."

22 The phrase "using a predetermined training pattern" appears in the '872 patent. For
23 example, Claim 1 of the '872 patent reads as follows:

- 24 1. In a communication system that includes a encoder and a decoder
25 comprising the steps of:
26 sending a **predetermined pattern of PCM codewords** from the encoder
27 to the digital portion of the telephone network.

The parties propose the following construction:

Term	Townshend’s proposed construction	Broadcom’s proposed construction
“predetermined pattern of PCM codewords”	a pattern of PCM codewords that is determined before the pattern is sent form the encoder	set of codewords that is utilized by the digital telephone network and is known to both the decoder and encoder prior to training.

Townshend again argues that Broadcom’s proposed construction is incorrect because Broadcom is attempting to read a limitation from the specification into the claim. Broadcom again asserts that the encoder and the decoder both must know the PCM codewords prior to transmission and that this view is supported by the specification. For example, the patent specification states:

The encoder 150 sends a **known pattern** of 8-bit PCM codewords over the transmission channel and the decoder 156 stores samples [that] . . . it receives. The decoder 156 then attempts to resynchronize and equalize this signal to minimize the difference between its output and the **known pattern**

’872 Patent, col.26 lns.31-32 (emphasis added).

The “known pattern” is a pattern known to both sides, or “predetermined.” Accordingly, the Court will adopt Broadcom’s proposed construction that a “predetermined pattern of PCM codewords” is a “set of codewords that is utilized by the digital telephone network and is known to both the decoder and encoder prior to training.”

IT IS SO ORDERED.

DATED: January 18, 2008



JEREMY FOCHEL
United States District Judge