Exhibit D

IN THE UNITED STATES DISTRICT COURT
IN AND FOR THE DISTRICT OF DELAWARE

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TELCORDIA TECHNOLOGIES INC., : Civil Action
Plaintiff/Counterclaim Defendant, :
v. :
LUCENT TECHNOLOGIES, INC., :
Defendant/Counterclaim Plaintiff. : No. 04-874-GMS

- - -

TELCORDIA TECHNOLOGIES, INC., : Civil Action
Plaintiff/Counterclaim Defendant, :
v. :
LUCENT TECHNOLOGIES INC., :
Defendant/Counterclaim Plaintiff. : No. 04-875-GMS

- - -

TELCORDIA TECHNOLOGIES, INC., : Civil Action
Plaintiff/Counterclaim Defendant, :
v. :
CISCO SYSTEMS, INC., :
Defendant/Counterclaim Plaintiff. : No. 04-876-GMS

- - -

Wilmington, Delaware
Thursday, January 5, 2006
1:30 p.m.

- - -

BEFORE: HONORABLE GREGORY M. SLEET, U.S.D.C.J.

APPEARANCES:

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THE COURT: Please take your seats. This is an informal office conference. Welcome and happy new year.

I appreciate everyone journeying to Delaware. I thought, given the number of issues and relatively complexity, they would be better addressed in person rather than on the phone.

So let's start with a round of introductions. Do you want to begin, Mr. Balick.

MR. BALICK: Thank you, Your Honor. Happy new year. All from the Finnegan Henderson firm, this is Don Burley, Richard Smith, John Williamson, and York Faulkner.

THE COURT: Happy new year.

Mr. Blumenfeld.

MR. BLUMENFELD: Good afternoon, Your Honor. Ed Reines from Weil Gotshal -- we are here for Cisco -- with Sonal Mehta, also from Weil Gotshal, and Marta Beckwith, who is in house at Cisco, in the back there.

THE COURT: Mr. Shaw.

MR. SHAW: Good afternoon, Your Honor. Steve Cherny from Latham & Watkins and David McKonte, for Lucent.

MS. PASCALE: Good afternoon, Your Honor. Karen Pascale. Stuart Sinder and Clement Naples of

Kenyon & Kenyon.

THE COURT: Good afternoon, everyone.

I have sort of broken things out a little bit from the various writings in a manner in which I think we can address the issues in a reasonably organized way. If there are other issues, or there is another approach that counsel believes might be beneficial on any individual issue, please don't hesitate to say so.

As I see it, there is at least one issue that is common to all three cases. That is the Telcordia request for the issuance of an order compelling defendants to address the means-plus-function claims during the claim construction process.

Why don't we start with that one. Make sure you identify yourselves.

MR. REINES: Ed Reines on behalf of Cisco.

THE COURT: You can sit or stand as you please.

MR. REINES: I will start by sitting.

Let me start with addressing the root of the motion to compel that has been identified by Telcordia. That starts with the position of all the defendants that the disclosure of the claims in suit by Telcordia was an unseasonal supplemental discovery disclosure, in

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them and accuse.

So it wasn't as if we had the documents and information since April and just waited to accuse products. By agreement, we wouldn't have all that information until at the earliest October 31 of last year.

MR. BURLEY: That is exactly my point, Your Honor. This is a Catch-22 situation that the defendants have tried to put us in where they are saying that we should have asserted the means-plus-function claims at an earlier time. But we didn't have the documents that gave us the information relating to the structure in order to be able to do that. They delayed that. In fact, now they are trying to get the benefit of having delayed that by saying, whoops, you are now too late and it's unfair because now the claim construction process is, I guess, compromised would be their view, irreconcilably compromised and that they are prejudiced. That is just simply wrong.

The point now is -- I will wait for a second, because I want Mr. Smith to actually talk about how different or similar the claims are and let him address that.

The point is, everybody was operating under the understanding that we were doing our best, engaging

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in good faith, to try as soon as we could to assert new claims and to identify new products. And it's tremendously unfair to us to assert that because they were able to string out the production of documents to the extent that they did that it has become too late for us to do what we were trying to do based on those documents.

As I said, when we did make the decision on November 11 that we wanted to assert the means-plus-function claims, at that point we still didn't have the basis for doing it that we thought we would from the documents. We did it solely because of the claim construction process and to try to avoid any question that somehow we were delaying it past the beginning of the claim construction process.

That is why we did it on November 11.

I can tell you, Your Honor, that as the defendants have produced documents, and I guess there are between a million and a half or two million pages of documents that were produced, if not more than that, in November -- from October 31st to now, and that we have been, I was going to say working diligently to review that, that is an understatement. We have been working around the clock to try to review those documents and to determine what they show.

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We have also now gotten approval from PMC-Sierra, the chip manufacturer, to use the information that they gave us in the FORE case with respect to two of the defendants, Cisco and Lucent. They have not given us permission to use that information yet with respect to Alcatel because there is still no protective order entered that deals with Alcatel. But now, as I understand it from Mr. Smith -- and he can talk about this, too -- we believe that the documents we have gotten from the defendants and from PMC-Sierra that we are allowed to use with respect to Cisco and Lucent are sufficient to confirm that in fact the defendants' products have the structure that corresponds to the means in the means-plus-function claims and that our assertion of those claims is appropriate.

Beyond that, Your Honor, the idea that the defendants have suffered any prejudice in this is really, I think, unsupported. We are at the beginning of the claim construction process. They have refused to engage in discussion in the last month about the means-plus-function claims. They have lost time as a result of that.

There is nothing that has happened already that couldn't essentially be done in a way that would

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relate to the means-plus-function claims. This isn't like we are coming in in June or July, after we have already had briefing and Your Honor has issued a Markman ruling on the method claims and now we are trying to add new claims. We are at the beginning of the claim construction process.

Now, Mr. Reines had mentioned the identification of new products. I can deal with that now. That I had looked at as a separate issue because it doesn't relate to all three defendants. The identification of new products only relates to two defendants, Lucent and Cisco. I would like to save that for a little while, if that is okay with Your Honor.

THE COURT: That is fine.

MR. BURLEY: And ask Mr. Smith, if he might, to discuss a little bit the similarities between the means-plus-function and method claims that are asserted.

THE COURT: Okay.

MR. SMITH: Dick Smith, Finnegan Henderson, for Telcordia.

Your Honor, the five means-plus-function claims which we provided contingent claim charts for on November 11th are counterpart claims to the method claims that were already asserted.

A good example, if you want to compare the

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similarity of the claims, would be to look at apparatus Claim 11 of the '633 patent and compare it to method Claim 33 of the '633 patent. You will find that the functional language of Claim 11, which says means for performing a recited function, that functional language is the exact same language that's recited in method Claim 33 for the steps of the method, for the process.

The problem in asserting the means-plus-function claims, as Your Honor is well aware, you have to be able to map the specific circuitry in the accused devices with the circuitry disclosed in the patent. And we just did not have information sufficient to do that in a way which would satisfy us that the circuits, the structure is the same or equivalent until very late in the game, like the middle of November, Lucent produced a specification document that had circuit details in it. And at the very end of November or the beginning of December, we finally got approval from PMC-Sierra, which is a chip company, to use the chip information, the circuit detail information we got in the FORE case in this case.

So with that information, we were able to satisfy ourselves that the circuit structure in some of the accused devices, because we did -- the devices that we initially accused and for which we received somewhat

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complete discovery, or document production, those were the documents that enabled us to find circuit information so that we were able to provide detailed claim charts by December the 5th for the means-plus-function claims for two of the patents. We were able to provide that information to Cisco and Lucent on the basis of the circuit details we were then able to use.

We were not able to provide that type of claim chart to Alcatel because PMC-Sierra would not permit us to use their circuit information, which is covered by the previous protective order, with Alcatel, because Alcatel had not signed onto a protective order in this case.

So the level of similarity between the means-plus-function claims and the method claims already asserted tracks very closely for all five of the means-plus-function claims, and with respect to Claim 11 of the '633 patent, it is virtually verbatim similarity.

So it is not like we suddenly came in and introduced completely new claim issues, claim construction issues into this case.

In fact, in the claim construction process that began on November 17th, the defendants submitted lists of disputed terms in the patents to construe every

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term that they submitted for Claim 33, the method claim of the '633 patent is also in Claim 11, a counterpart apparatus claim. As we go forward in the claim construction process for the method claims, we are covering claim construction issues that are present in all the apparatus claims anyway.

So the only claim constructions that would be different would be those claim construction positions which equate the recited means in the means-plus-function claims with the disclosed circuitry in the patents.

We have provided, in our submissions or in our exchange of information of proposed constructions, we have provided them with our constructions for all of the means elements of the claims. So they have those. They refused to give responding positions, because they say they don't have to, and they won't unless they are ordered by the Court to do so.

That is where we are.

MR. BURLEY: Your Honor, before Mr. Reines responds, and before we go onto the question of adding additional or identifying additional products, I would like to make one other point, then turn the floor over to Mr. Reines, which is that, there is a letter from Clement Naples at Kenyon that I would like to give Your

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Honor, if Your Honor would agree to receive this letter.

THE COURT: Sure.

MR. BURLEY: That basically shows that Alcatel had the same position -- Alcatel, of course, among the defendants, is the only one that has a counterclaim for infringement. Alcatel certainly looked at the situation the same way that Telcordia did, which was that they were acting in good faith, as we were, in asserting, or identifying the claims that they were asserting in the '052 patent based on the information that they had at the time, but that they would be able to change and assert new claims if discovery warranted that.

The letter says, basically, that please be advised that Alcatel will be asserting at least Claims 17, 18, 19 and 24 of the '052 patent. Because Telcordia has not yet responded to Alcatel's pending discovery requests relating to the '052 patent and has not yet produced any documents relating to Telcordia's products, Alcatel reserves the right to assert additional claims of the '052 patent after it reviews Telcordia's responses and the documents whose production has been requested.

That, Your Honor, is the exact same situation that Telcordia was in. And this is dated

Exhibit E



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: M. Jung

Group Art Unit: 263

Re: Patent Application of
H.J. CHAO et al.
Serial No. : 118,977
Filed : November 10, 1987
For : METHOD AND APPARATUS FOR MULTIPLEXING CIRCUIT AND PACKET TRAFFIC

AMENDMENT

9/B

8-24-89

Fee OK

Hon. Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

In response to the Office Actions of July 3, 1989 and July 18, 1989, please amend the above-identified application as follows:

IN THE SPECIFICATION

Page 1, line 8, after "Switch", insert --, Serial No. 118,979, now Patent No. 4,855,999, issued August 8, 1989--;

line 10, after "Circuitry", insert --, Serial No. 118,897, now Patent No. 4,833,671, issued May 23, 1989--;

line 12, after "Streams", insert --, Serial No. 118,978, now Patent No. 4,833,673, issued May 23, 1989--;

line 14, after "Circuit", insert --, Serial No. 118,898, now Patent No. 4,819,226, issued April 4, 1989--.

Page 5, line 29, after "1987,", insert --now Patent No. 4,782,474, issued November 1, 1988,--.

Page 14, line 12, after "disassembler" change "45" to -- 47 --.

IN THE CLAIMS

1. (Twice amended) A method for simultaneously transmitting [circuit and packet] data from sources having different bit rates in a telecommunications network comprising the steps of:

generating a bit stream comprising a sequence of frames, each of said frames including a transmission overhead field containing frame timing information and an empty payload field, and

filling the empty payload fields in said frames with data in packetized format from a plurality of sources which have access to the bit stream including circuit or packet sources, such that data in packetized format from any of said sources is written into any available empty payload field of any of said frames for transmitting data from each of said sources at its own desired bit rate via said bit stream and for transmitting data from said plurality of sources simultaneously via said bit stream.

3. (Twice amended) A method for generating a bit stream capable of transporting data originating from both circuit transmission and packet sources comprising

generating a bit stream comprising a sequence of frames, each of said frames including a transmission overhead field containing frame timing information and an empty payload field,

packetizing data from a plurality of sources having different bit rates and which have access to said bit stream including circuit transmission sources or customer premises equipment to produce data packets, and

inserting said packets from said sources into the empty payload fields of said frames such that a packet from any of said sources is inserted into any available empty payload field of any of said frames for transmitting data from each of said sources at its own desired bit rate via said bit stream and for transmitting data from said plurality of sources simultaneously using said bit stream.

4. (Twice amended) An apparatus for assembling a dynamic time division multiplexing bit stream comprising,

generating means for generating a train of frames wherein each frame includes a transmission overhead field containing timing information and an empty payload field,

processing means for processing data from a plurality of sources into packet format, and

inserting means for receiving said train of frames and for inserting each of said packets comprised of data from one of said plurality of sources into any empty payload field[s] of any of said frames available to said inserting means to form said bit stream so that data from each of said sources can be transmitted at its own desired bit rate via said bit stream and so that data from said plurality of sources can be transmitted simultaneously via said bit stream.

65. (Twice amended) An apparatus for assembling a bit stream for transmitting data from a plurality of sources comprising:

means for generating a train of frames, each of said frames including a transmission overhead field and an empty payload field, and

a plurality of interfaces, each of said interfaces serving to interface one of said sources with said train of frames, each of said interfaces comprising:

packetizing means for converting data into data packets,

memory means for storing at least one of said packets formed by said packetizing means, and

circuit means for inserting a packet stored in said memory means into [an] any empty payload field of any available one of said frames so that data from each one of said sources can be transmitted at its own desired bit rate via said bit stream and so that data from said plurality of sources can be transmitted simultaneously via said bit stream.

Cancel claims 8, 9 and 10.

REMARKS

The specification has been amended to identify the related applications filed on the same day as this application and referred to at page 1, to indicate the numbers of the patents issued on these applications, and to identify the patent now issued on the application referred to at page 5.

The specification is further being amended to correct the reference number at page 14, line 12, consistent with the drawing change requested with the amendment of February 15, 1989. Please ignore the requested change at page 14, line 9, of the February 15, 1989 amendment as this is in error. Applicants apologize for this mistake.

The Office Actions of July 3, 1989, which sets forth the current rejection, and of July 18, 1989, which defines the period for response, have been carefully considered. Claims 1-6 and 14 remain pending in this application. Previously pending claims 8, 9, and 10 have been cancelled herein.

In the Office Actions, claims 1-4 and 14 have been rejected as unpatentable over Shikama et al. U.S. Patent 4,685,105. Claims 5 and 6 have been rejected as unpatentable over the Shikama et al. reference taken in combination with Baran et al. U.S. Patent 4,771,425.

In response to this rejection, independent claims 1, 3, 4, and 5 have been amended to more particularly point out the claimed invention. The method and apparatus for transmitting data as set forth in independent claims 1, 3, 4 and 5 are

entirely different from the data transmission method and apparatus disclosed in the Shikama et al. reference.

As pointed out in applicants' response of February 15, 1989, it is an object of the present invention to provide a flexible network transport system for transmitting both circuit and packet traffic. To transport circuit and packet traffic in accordance with the present invention, a transmission bit stream is generated. The transmission bit stream is divided into frames. Each frame comprises at least a transmission overhead field and a payload field. The transmission overhead field includes, for example, frame timing information and information as to the empty/full status of the payload field. Initially, the payload fields in the frames are empty.

As pointed out in the prior Amendment, an empty payload field of each frame may be filled with a data packet including a header. Illustratively, the data packets may be formed from data generated by customer premises equipment, or the data packets may be formed from slots from a circuit transmission stream. Before such a slot can be inserted into an empty payload field of a frame in the transmission bit stream, it is first converted into packet format by attaching a header at the front thereof. In certain cases, it may be possible for a payload field of a frame to have the capacity for more than one packet. The data packets from a variety of sources are transmitted to remote locations via the transmission bit stream.

It is an important feature of the claimed invention that a data packet from any source can be written into any empty payload field of any available frame. It is this feature which enables the transport system of the present invention to simultaneously transmit data from sources having a variety of bit rates, as high bit rate sources can fill a relatively large number of frames while low bit rate sources fill relatively fewer frames. It is also this feature which allows each source to transmit at its own desired bit rate rather than being constrained to a particular predetermined bit rate as is the case in the circuit transmission system which is formed from a hierarchy of fixed bit rate transmission streams.

The Examiner is specifically referred to the example set forth in the prior amendment of how traffic from customer premises equipment and circuit traffic may be transmitted simultaneously in accordance with applicants' invention as set forth in the pending claims, as amended. The example is repeated here for the convenience of the Examiner.

Consider three sources, a digital phone generating 64 Kilobits/sec PCM voice, a graphics terminal sending bursty data at 1 Megabit/sec and a circuit transmission stream operating at the DS-3 rate of about 45 Megabits/sec.

A transmission bit stream is generated comprising frames with empty payload fields. Illustratively, 144,000 frames are generated per second with each frame comprising 130 bytes for a total bit rate of 150 Megabits/sec. The frames in the

transmission stream are shared by the three sources. Since the circuit source is relatively smooth, the circuit source takes approximately one out of every three frames passing by. Thus, the regularity of the circuit transmission will be maintained. Illustratively, the voice source is packetized by accumulating up to 15ms worth of voice samples before inserting this information into an empty payload field along with a header. Accordingly, the voice source will, on average, seize one out of every 2,160 frames. Similarly, because the graphics terminal is bursty, the graphics terminal will fill one frame out of 150 on average. However, in particular short intervals, the graphics terminal will take more or less than one frame out of 150.

In this manner, data from multiple diverse sources including circuit sources and customer premises equipment are combined into a single bit stream for simultaneous transmission to one or more remote locations. Because packets from each source can fill any empty payload field of any available empty frame, each source can transmit at its own desired and varying bit rate rather than be constrained to a predetermined bit rate characteristic of the network transmission system.

To define applicants' invention, in accordance with the above discussion, more precisely, the pending claims have been amended. Thus, Claim 1, for example, now recites "A method for simultaneously transmitting data from sources having different bit rates" comprising the steps therein recited "such that data in packetized format from any of said sources is written into any

available empty payload field of any of said frames for transmitting data from each of said sources at its own desired bit rate via said bit stream and for transmitting data from said plurality of sources simultaneously via said bit stream." Claim 3, as amended, similarly recites packetizing data from a plurality of sources having different bit rates. It is believed readily apparent wherein the other claims have also been amended more precisely to claim applicants' invention.

As shown in FIG 1, the Shikama et al. reference discloses a network which comprises a plurality of transmission devices 1, a circular transmission loop 2, and a plurality of data terminals 3. A transmission bit stream comprised of frames circulates on the transmission loop 2 so that a first specific transmission device 1 which receives data to be transmitted from a first specific data terminal 3 can transmit the data to a second specific transmission device 1 and a second specific data terminal 3.

The format of one frame of the transmission bit stream is shown in FIG 2 of the Shikama et al. reference. The frame 4 of FIG 2 comprises a frame management region 5 and the slots 6a, 6b, 6c, 6d, and 6e. Each slot has an access control region 7 associated therewith which indicates the status of the slot such as whether the slot is "free" or "busy".

One way for using the transmission bit stream of the Shikama et al reference may be understood in connection with FIG 3. FIG 3 shows three successive frames 4, each of which frames comprise

five slots 6a, 6b, 6c, 6d, 6e. Illustratively, a specific transmission device 1 has data 18 to transmit, which data is received from a specific data terminal 3. The data 18 is organized into transmission units or packets 15 by the specific transmission device 1.

To transmit the packets 15, the specific transmission device 1 must "catch" certain slots in the bit stream comprised of frames 4. To catch the necessary slots, the specific transmission device 1 searches for an access control region 7 which is set to "free" and changes its status to "busy." This serves to reserve the associated slot in the current frame 4 and reserves the corresponding slot in all succeeding frames 4 until the transmission is complete and the access control region of the slot in question is reset to "free." For example, as shown in FIG 3, the specific data transmission device 1 reserves the slot 6c in each frame and inserts the data packets 15 into these slots for remote transmission.

Thus, as in the claimed invention, the Shikama et al. reference discloses in connection with FIG 3 a network transmission system wherein data from a plurality of sources is packetized and wherein the packets are inserted into empty fields of a bit stream for transmission. However, the similarity between the inventive network transmission system and the transmission system of FIG 3 of Shikama et al ends at this point.

In the transmission system of FIG 3 of Shikama et al., each data source can fill only its one previously reserved slot per

frame with a data packet. Thus, regardless of the rate of data production by the particular data source, the data transmission rate for the source using the bit stream comprised of frames 4 is determined solely by the bit stream -- i.e., the data transmission rate for each source is constrained to the number of data bits available to a packet per slot multiplied by the number of frames per second. In contrast, in the claimed invention as set forth in independent claims 1, 3, 4 and 5 as amended, there is no advance reservation of particular frames or slots. Instead, each data source can insert a packet into any empty payload field of any available frame of the network transmission bit stream. Thus, the transmission bit rate of each source is determined by the source and not by the transmission bit stream.

Thus, the claimed invention realizes advantages which cannot be realized with the transmission system of FIG 3 of Shikama et al. In particular, the inventive transmission system allows a variety of sources including bursty and smooth sources with a variety of bit rates to simultaneously utilize the same network bit stream, with each source transmitting at its own desired bit rate. In contrast, as indicated above, in the system of FIG 3 of Shikama et al, each of a plurality of sources transmits at a rate determined by the network bit stream rather than at its own desired bit rate.

In connection with FIG 4, the Shikama et al reference discloses an alternative transmission system wherein a transmission device 1 can fill multiple slots 6 of the

transmission stream in succession. However, in this embodiment only one transmission device or data source can transmit at a time using the transmission stream. (Column 5, lines 34-62). This is entirely contrary to the claimed invention which is directed to a transmission system which utilizes a particular bit stream to simultaneously transmit data from a plurality of sources at bit rates desired by the sources.

For these reasons, it is respectfully submitted that the independent claims 1, 3, 4, and 5, as amended, are patentable over the Shikama reference.

Claims 2, 6, and 14 are dependent claims and are patentable over the Shikama et al. reference for the reasons stated above.

The Examiner has cited the Baran et al. reference for disclosing a packetizer and an interface for inserting a packet into a frame. The Baran et al. reference in no way makes up for the deficiencies of Shikama et al. with respect to the claimed invention. The Baran et al. reference merely discloses a switch which internally routes and transmits data in circuit or packet format.

Accordingly, it is respectfully submitted that the subject matter of claims 1-6 and 14 is patentable over the Baran et al. reference taken alone or in combination with the Shikama et al. reference.

The Examiner has also cited but has not applied Schwäertzel et al., U.S. Patent 4,321,703; Rozenblit, U.S. Patent 4,763,319; and Kume, U.S. Patent 4,706,246. These references have been

considered and it is respectfully submitted that they do not anticipate or render obvious the claimed invention.

Finally, allowance of claims 1-6 and 14 is requested. If the Examiner believes that further discussion of the matters raised herein is warranted, the Examiner is urged to telephone the undersigned.

Respectfully submitted,

H.J. Chao
S.H. Lee
L.T. Wu

By _____
James W. Falk, Attorney
Reg. No. 16,154
(201) 740-6100

Bell Communications Research, Inc.

Date: AUG 18 1989

Attached
Transmittal Letter
Acknowledgement postcard

Exhibit F

GP 2600

MAIL ROOM FEB 17 1989 28 PAT. & TRADEMARK OFF.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: M. Jung

Group Art Unit: 263

2-21-89

Re: Patent Application of
Jon CHAO et al. 1-3-2
Serial No. : 118,997
Filed : November 10, 1987
For : DYNAMIC TIME DIVISION MULTIPLEXING

AMENDMENT

Hon. Commissioner of Patents and Trademarks

Washington, D.C. 20231

Sir:

In response to the Office Action of November 25, 1988, please amend the above-identified application as follows:

IN THE TITLE

Please delete the present title and insert therefor -- Method and Apparatus for Multiplexing Circuit and Packet Traffic --.

IN THE SPECIFICATION

Do not enter MJ 9/14/89.

Page 14, line 9, delete "45" and insert therefor -- 47 --.

IN THE CLAIMS

1. (Amended) A method for transmitting circuit and packet data in a telecommunications network comprising the steps of:

generating a bit stream comprising a sequence of frames, each of said frames including a transmission overhead field containing frame timing information and an empty payload field, and

filling the empty payload fields in said frames with data in packetized format from a plurality of sources which have access to the bit stream including circuit or packet sources.

3. (Amended) A method for generating a bit stream capable of transporting data originating from both circuit transmission and packet sources comprising

generating a bit stream comprising a sequence of frames, each of said frames including a transmission overhead field containing frame timing information and an empty payload field,

packetizing data from a plurality of sources which have access to said bit stream including circuit transmission [bit streams] sources or customer premises equipment to produce data packets, and

inserting said packets into [said] the empty payload fields of said frames.

4. (Amended) An apparatus for assembling a dynamic time division multiplexing bit stream comprising,

means for generating a train of frames wherein each frame includes a transmission overhead field containing timing information and an empty payload field,

means for processing data from a plurality of sources into packet format, and

means for receiving said train of frames and for inserting said packets comprised of data from said plurality of sources into empty payload fields of said frames to form said bit stream.

5. An apparatus for assembling a bit stream for transmitting data from a plurality of sources comprising:

means for generating a train of frames, each of said frames including a transmission overhead field and an empty payload field, and

a plurality of interfaces, each of said interfaces serving to interface one of said sources with said train of frames, each of said interfaces comprising:

packetizing means for converting data into data packets,

memory means for storing at least one of said packets formed by said packetizing means, and

circuit means for inserting a packet stored in said memory means into an empty payload field of one of said frames.

~~8~~ 7. The apparatus of claim ~~5~~ 6 wherein [all of said circuit means are connected in a chain] said interface units are connected to one another serially and wherein said frames are passed sequentially to each of said interface units to receive said packets in said empty payload fields.

Cancel claim 7.

8. (Amended) An apparatus for disassembling a bit stream comprising data packets contained in frames and for routing data contained in said packets to appropriate customer premises equipment, said apparatus comprising:

a plurality of interface units, each of said interface units being adapted to interface said bit stream with an associated unit of customer premises equipment, each of said interface units comprising:

circuit means for receiving each frame in said bit stream and for determining if each frame contains a data packet including data to be routed to the associated unit of customer premises equipment, and

memory means coupled to said circuit means for storing data packets to be routed to the associated unit of customer premises equipment.

Cancel claims 11, 12, and 13 (without prejudice).

Please add the following claim.

~~14~~ 5. The apparatus of claim 4 wherein said sources include circuit transmission bit streams or customer premises equipment.

REMARKS

The Office Action of November 25, 1988 has been carefully considered. Claims 1-6, 8-10 and newly added claim 14 are pending in this application. Claims 7 and 11-13 have been cancelled. Claims 1, 3, 4, 5, 6, and 8 have been amended herein.

In the Office Action, the Examiner has denied applicants' traversal of an earlier restriction requirement in this application. In order to expedite prosecution, applicants acquiesce to the restriction requirement. Accordingly, claims 11-13 are cancelled without prejudice. Applicants reserve the right to renew prosecution of claims 11-13 in a divisional application.

The Examiner has also objected to the title of the application. In response, the title of the application has been changed by way of this amendment so that it is more indicative of the inventive subject matter.

In the Office Action, the Examiner has identified an error in FIG 3. Accordingly, a proposed drawing correction is being submitted herewith. A corrected formal drawing will be supplied upon receipt of a Notice of Allowance in accordance with standard procedures The corresponding error in the specification has also been corrected.

In the Office Action, the Examiner has rejected claims 6-10 under 35 U.S.C. 112. In response to this rejection, claims 6 and 8 have been amended to more particularly point out the claimed subject matter. Claim 7 has been cancelled because it is

duplicative of claim 6 as amended. It is respectfully submitted that claims 1-6 and 8-10 as amended and claim 14 comply in all respects with the requirements of 35 U.S.C. 112.

The Examiner has also rejected previously pending claims 1-10 as unpatentable over Baran et al.,U.S. Patent 4,771,425. In response to this rejection, independent claims 1, 3, 4 and 5 have been amended to clarify the inventive subject matter. The rejection is respectfully traversed with respect to independent claim 8.

Before discussing the Examiner's rejection, it may be helpful to briefly discuss the claimed subject matter as set forth in the claims as amended.

It is an object of the present invention to provide a flexible network transport system for transmitting both circuit and packet traffic. Typically, circuit networks utilize time division multiplexing (TDM) as a transmission technique. When TDM is used, each data stream comprises frames which are subdivided into slots. Corresponding slots in each frame are allocated to specific connections. For example, the first slot in each frame is allocated to one specific connection, and the second slot in each frame is allocated to a second specific connect. Each frame also includes transmission overhead information including a frame synchronization signal. In a circuit transmission system, a combination of space division switching and time division switching is utilized at the network switches to swap time slots between various bit streams so that

connections to and between specific subscribers are established. In circuit transmission systems, a multiplexing hierarchy comprised of a set of fixed bit rate signals is utilized. One such hierarchy includes the DS-1(1.544 Mbits/sec), DS-1C (3.152 Mbits/sec), DS-2 (6.312 Mbits/sec), DS3 (44.736 Mbits/sec) and DS-4 (274.176 Mbits/sec) signals. A plurality of signals at one level in the hierarchy may be multiplexed together to form a higher bit rate signal in the hierarchy.

Conventional circuit systems suffer from a number of shortcomings. One important problem is the multiplexing hierarchy itself. An important result of the hierarchy is an inherent lack of flexibility. Since the network can only transmit the set of signals in the hierarchy, every telecommunication service has to meet the stringent requirement of given hierarchical signal bit rates, instead of being able to transmit at its own natural bit rate.

In contrast with the circuit mode of transmission, the packet mode of transmission is inherently bit rate flexible. Accordingly, packet transmission is favored for future broadband networks which are to be used to deliver enhanced telecommunications services such as HDTV. In the packet transmission mode, data is transmitted in discrete blocks or packets, with each packet having an address header at the front thereof. At the network switches, packets are routed from a specific input line to a specific output line based on address information contained in the packet header. In this way,data

packets can be routed from a specific subscriber location, through a telecommunications network, to another subscriber location.

In accordance with the present invention, a method and apparatus for transporting both circuit and packet traffic in a telecommunications network is provided. To transport circuit and packet traffic in accordance with the present invention, a transmission bit stream is generated. The transmission bit stream is divided into frames. Each frame comprises two fields, a transmission overhead field and payload field. The transmission overhead field includes, for example, frame timing information and information as to the empty/full status of the payload field. Initially, the payload fields in the frames are empty.

The empty payload field of each frame may be filled with a data packet including a header. Illustratively, the data packets may be formed from data generated by customer premises equipment, or the data packets may be formed from slots from a circuit transmission stream. Before such a slot can be inserted into an empty payload field of a frame in the transmission bit stream, it is first converted into packet format by attaching a header at the front thereof. In certain cases, it may be possible for a payload field of a frame to contain more than one packet. The data packets from a variety of sources are transmitted to remote locations via the transmission bit stream.

An appropriate analogy is as follows. The stream of empty frames may be analogized to a train of empty freight cars. The empty freight cars are filled with data in packetized format from various sources which have access to the train of freight cars. The train, with its now filled freight cars, transmits the data to remote locations.

The following example illustrates how packet traffic and circuit traffic may be transmitted in an integrated fashion using the present invention. Consider three data sources, a digital phone generating 64 Kilobits/sec PCM voice, a graphics terminal sending bursty data at 1 Megabit/sec, and a circuit transmission stream operating at the DS-3 rate of about 45 Megabits/sec.

A transmission bit stream is generated comprising frames with empty payload fields. Illustratively, 144,000 frames are generated per second with each frame comprising 130 bytes for a total bit rate of 150 Megabits/sec. The frames in the transmission stream are shared by the three sources. The circuit source takes one out of every three frames passing by. Thus, the regularity of the circuit transmission will be maintained. Illustratively, the voice source is packetized by accumulating up to 15ms worth of voice samples before inserting this information into an empty payload field along with a header. Accordingly, the voice source will, on average, seize one out of every 2,160 frames. Similarly, the graphics source will fill one frame out of 150. In this manner data from three diverse sources including circuit sources and customer premises equipment are combined into

a single bit stream for transmission to one or more remote location.

In a particular embodiment of the invention, each source is interfaced with the transmission bit stream by means of an interface unit. Each interface unit includes a packetizer for converting data into data packets, a memory for storing packets formed by the packetizer, and means for inserting a packet stored in the memory into an empty payload field of one of the frames. Illustratively, the interface units are connected in series. In this case, the frames are passed sequentially from one interface unit to the next to pick up packets for the payload fields.

Similarly, a transmission bit stream of the type described above may be disassembled in accordance with the present invention to transmit data to various customer premises equipment. Illustratively, an apparatus for disassembling such a bit stream includes a plurality of interface units. Each of the interface units serves to interface an associated unit of customer premises equipment with the bit stream. Each interface unit comprises a circuit for receiving each frame in the bit stream and for determining if the frame includes a data packet to be routed to the associated customer premises equipment. If a frame includes a data packet to be routed to the associated customer premises equipment, the relevant interface unit stores the packet in a memory for subsequent transmission to the equipment.

In short, the present invention provides a network transport scheme for transmitting data from diverse sources including customer premises equipment or circuit transmission streams. To transmit the data, a bit stream comprising a sequence of frames with empty payload fields is generated. The data from the sources is packetized and the resulting packets are inserted into the payload fields for transmission to remote locations.

Like the claimed invention, the Baran et al. reference relied on by the Examiner discloses a network transport system for handling both circuit and packet traffic. However, the mechanism used to transport packet and circuit traffic in the Baran et al. reference is totally different from the transport mechanism of the claimed invention.

The system of Baran et al. may be understood with reference to FIGs 2, 3A, 3B and 8. FIG 2 illustrates a switch which interconnects a plurality of trunk lines. The protection interface card 92 of FIG 2 converts data between a transmission voltage level and a processing voltage level at which data is processed in the switch of FIG 2. The switch of FIG 2 includes a bus 90 which operates under control of the packet control card 100. Connected to the bus 90 are a plurality of transceiver units 94, 96 and a voice/data processor 103. The transceiver 94 transmits data arriving via the trunks to the bus 90. The transceiver 96 receives data from the bus 90 and transmit this data outward on the trunks. The bus 90, which operates in a

packet mode or in a circuit mode, transmits data among the various processing units attached thereto.

The switch of FIG 2 may act as a circuit switch. Thus, for example, data may arrive at the switch of FIG 2 in a circuit transmission format such as the DS-1 frame of FIG 3B which comprises 24 slots. Such a frame is routed by the bus 90, for example, from the transceiver 94 to the transceiver 96 so that the frame is routed outward from the switch via a particular trunk line. Similarly, the switch of FIG 2 may act as a packetizer. Thus, data in unpacketized form may arrive at the transceiver 94 from customer premises equipment. This data is routed by the bus 90 to the processor 103 where it is packetized to form a packet (see FIG 3A) whose length is the same as a DS-1 frame (see FIG 3B). This packet is then routed to a transceiver such as the transceiver 96 where it is supplied with appropriate circuit frame signal bits so that it can be transmitted via one of the trunks in a DS-1 frame. The bus 90, when operating in the packet mode, also serves to transmit packets arriving at transceiver 94 to the transceiver 96 for subsequent transmission via a particular trunk. In this manner the switch of FIG 2 of Baran et al. is able to integrate circuit and packet traffic in a single transmission system.

A channel trunk transceiver for use in connection with the switch of FIG 2 of the Baran et al. reference is shown in more detail in FIG 8. The receivers 94, 96 of FIG 2 may be formed from a plurality of units of the type shown in FIG 8. One of the

trunk lines entering/leaving the transceiver of FIG 8 uses the standard DS-1 format and the other trunk transmits packets which are co-extensive with DS-1 frames. The transceiver of FIG 8 comprises the TTL receivers 182 which drive a frame and signaling extractor 184. The device 184 illustratively removes DS-1 framing information and provides control information to the receiver control unit 186. Arriving data in packet format is routed by the control unit 186 to the FIFO 188 and arriving data in circuit format is routed to the RAM 190. The FIFO 188 and RAM 190 are used for temporary storage of packets and circuit data to be transmitted via the bus 90.

Circuit data transmitted by the bus 90 is received by the transceiver of FIG 8 at the RAM 192 when the bus 90 is in a circuit transmission mode. Similarly, packet data transmitted by the bus 90 is received at the transceiver of FIG 8 at the FIFO 194 when the bus 90 is in a packet transmission mode. The RAM 192 and FIFO 194 are coupled to a transmit control unit 198 through which either circuit signals in frame/slot format or packets are transmitted to the frame and signaling inserter 200. The frame and signalling inserter 200 inserts the DS-1 framing signals into the circuit frames or into the packets in accordance with conventional trunk technology. The data in circuit or packet form are then transmitted via the transmitters 202.

Thus, the Baran et al. reference integrates packet and circuit data in a manner totally different from that of the claimed invention. In particular, the transmission format is

entirely different. In the claimed invention, all of the data to be transmitted is transmitted in the form of packets which are contained in the payload fields of frames. In contrast, in the Baran et al. reference, some data is transmitted in the form of frames divided into slots and some of the data is transmitted in the form of packets whose length is the same as the length of the frames. In addition, the transmission bit streams are formed entirely differently in the claimed invention and in Baran et al. Thus, as indicated above, the transmission stream of the claimed invention is formed by first generating a bit stream comprised of frames with empty payload fields. Data from a plurality of sources which have access to the transmission stream are packetized. The packets are then inserted into the empty payload fields of the frames. The Baran et al. reference in no way discloses the formation of a transmission bit stream by generating a sequence of frames with empty payload fields and picking up packets from a plurality of sources to fill the payload fields. Instead, Baran merely discloses a switch which internally routes and transmits data in circuit or packet format.

Accordingly, it is respectfully submitted that the claims as amended are not anticipated or rendered obvious by Baran et al.

Applicant's claims are now considered in more detail. Independent claims 1 and 3 are method claims which include the steps of generating a bit stream comprising a sequence of frames with empty payload fields, and inserting packets from a plurality of sources into the empty payload fields. As indicated above, no

such method is disclosed or suggested in Baran et al. Accordingly, it is respectfully submitted that claims 1 and 3 are patentable over Baran et al. Claim 2 is dependent on claim 1 and is patentable over Baran et al. for the reasons stated above.

Claims 4 and 5 are apparatus claims directed to an apparatus for forming a transmission bit stream. The apparatus comprises means for generating a bit stream comprising a sequence of frames with empty payload fields, means for packetizing data from a plurality of sources, and means for inserting the packets into the empty payloads fields of the transmission bit stream. Claim 5 is directed to an embodiment wherein each of the sources accesses the bit stream by means of an interface unit including packetizing, memory and inserting circuitry. No such apparatus is suggested or disclosed in Baran et al. Accordingly, it is respectfully submitted that claims 4 and 5 are patentable over Baran et al. Claim 14 is dependent on claim 4 and claim 6 is dependent on claim 5. Claims 4 and 6 are patentable over Baran et al. for the reasons stated above.

Claim 8 is directed to an apparatus for disassembling a bit stream which comprises packets contained in the payload fields of frames. The apparatus includes a plurality of interface units. Each interface unit serves to interface a unit of customer premises equipment with the bit stream. The interface units read the frames as the bit stream passes by and if an interface unit detects a packet destined for the associated customer premises equipment, the packet is stored for subsequent forwarding to the

customer premises equipment. No such apparatus is disclosed or suggested in Baran et al. Accordingly, it is respectfully submitted that claim 8 is patentable over Baran et al. Claims 9 and 10 are dependent on claim 8 and are patentable over Baran et al. for the reasons stated above.

In short, applicants submit that claims 1-6, 8-10 and 14 are not anticipated or rendered obvious by the Baran et al. reference.

The Examiner has cited but has not relied upon Servel et al, U.S. Patent 4,594,708, Graves et al., U.S. Patent 4,764,921 and Kume et al, U.S. Patent 4,516,240. Applicants have considered these references and respectfully submit that they do not anticipate or render obvious the claimed invention.

Finally, allowance of claims 1-6, 8-10 and 14 is requested. If the Examiner believes that further discussion of the matters raised herein is warranted, the Examiner is urged to telephone the undersigned.

Respectfully submitted,

H.J. Chao
S.H. Lee
L.T. Wu

By 

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Bell Communications Research, Inc.

Date: FEB 15 1989

Attached
Transmittal Letter
Acknowledgement postcard
Proposed Drawing Correction

Exhibit G

FILED
SEP 9 4 32 PM '99
CLERK U.S. DISTRICT COURT
DISTRICT OF DELAWARE

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BELL COMMUNICATIONS RESEARCH, INC. (now TELCORDIA TECHNOLOGIES, INC.) Plaintiff, v. FORE SYSTEMS, INC. Defendant.	Civil Action No. 98-586 MMS

PLAINTIFF, BELL COMMUNICATIONS RESEARCH, INC.'S REPLY BRIEF IN SUPPORT OF ITS CLAIM INTERPRETATION ANALYSIS AND IN OPPOSITION TO THE ERRONEOUS CLAIM INTERPRETATION ADVANCED BY DEFENDANT, FORE SYSTEMS, INC.

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BELL COMMUNICATIONS RESEARCH, INC.

Date: September 9, 1999

Although Fore's enablement argument, discussed above, is less than clear, Fore apparently contends that the term "*[f]illing the empty payload fields in said frames*" means that the term is limited to putting only a single packet into a payload field. As shown above, Fore's enablement argument is legally flawed and Fore offers no evidence that one skilled in the art would not be enabled by the '306 patent to put more than one packet into a single payload field.[10]

v. ***"such that data in packetized format from any of said sources is written into any available payload field of any of said frames"***

Here again, Fore wants the court, for non-infringement purposes, to construe the claims to require insertion of only a single packet in each frame so that systems that insert multiple packets per frame are not within the literal language of the claim. As shown above, importing details of the described embodiments into a claim, when the plain language of the claim does not so warrant, defies the basic rules of claim construction.

Claims 1 and 3 require each frame to have "an empty payload field." Frames that have several empty payload fields literally have "an empty payload field," as claimed. Fore's attempt to have the Court rewrite the claims to require each frame to have "one and only one empty payload field" must be rejected. Fore cites no authority that requires patents to describe every embodiment within the scope of the claims, because no such rule exists.[11] An applicant need not describe more than one embodiment of a broad claim to adequately support that claim. *Ethicon Endo Surgery, Inc. v. United States Surgical Corp.*, 93 F.3d 1572, 1582 (Fed. Cir. 1996).

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[10] Fore simply ignores the fact that, during prosecution of the application leading to the '306 patent, the applicants explained to the Examiner that the invention would cover implementations having multiple packets in a single frame payload. Ex. 6 at A*82.

[11] Fore's argument (Brief, p. 13) that the '306 patent does not enable placing multiple packets in a frame is irrelevant. Claims 1 and 3 do not claim a process for inserting multiple packets in a frame. The claim language is nonetheless broad enough to cover a system that inserts more than one packet in each frame.

Exhibit H

IN THE UNITED STATES DISTRICT COURT

IN AND FOR THE DISTRICT OF DELAWARE

- - -

TELCORDIA TECHNOLOGIES INC., : CIVIL ACTION
Plaintiff, :
v :
ALCATEL S A., and ALCATEL USA INC., :
Defendants. : NO. 04-874 (GMS)

TELCORDIA TECHNOLOGIES INC., :
Plaintiff, :
v :
LUCENT TECHNOLOGIES, INC. :
Defendant. : NO. 04-875 (GMS)

TELCORDIA TECHNOLOGIES INC., :
Plaintiff, :
v :
CISCO SYSTEMS INC., :
Defendant. : NO. 04-876 (GMS)

- - -

Wilmington, Delaware
Thursday, April 14, 2005 at 2:00 p.m.
RULE 16.2(b) CONFERENCE

- - -

BEFORE: HONORABLE GREGORY M. SLEET, U.S.D.C.J.

- - -

APPEARANCES:

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and

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and

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Brian P. Gaffigan
Official Court Reporter

- oOo -

P R O C E E D I N G S

(REPORTER'S NOTE: The following 16(2)(b) scheduling hearing was held in open court, beginning at 2:00 p.m.)

THE COURT: Good afternoon, everyone.

(Attorneys respond, "good afternoon, Your Honor.")

THE COURT: This is an informal office conference but because of the numbers we don't have the space inside to accommodate everyone, so why don't we start with plaintiff whom I'm assuming are the outgunned lawyers here.

MR. BALICK: Yes, Your Honor. Your Honor, usually I'm on the other side.

THE COURT: Hello, Mr. Cherney. How are you?

MR. BALICK: It's not true today.

THE COURT: I'll leave this alone.

MR. BALICK: Your Honor, I'm here on behalf of Telcordia; and here from the Finnegan Henderson firm here are Don Burley and Richard Rainey.

THE COURT: Good afternoon.

MR. RAINEY: Good afternoon, Your Honor.

MR. BALICK: Your Honor, Mr. Dunner was planning

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or to dismiss and deny the motion for discovery, the Court reconsider those rulings.

So, okay, thank you. Let's then talk about what we have to talk about. We have two patents being asserted in this case; right? The '306 and the '633.

MR. BLUMENFELD: Two against Cisco and one against the other two defendants.

THE COURT: Yes. And I suspect at this point we don't have a good understanding of how many elements are in dispute, how many claims are being asserted. It's a little early.

MR. CHERNEY: They haven't identified any specific claims yet.

THE COURT: All right. Let's talk about another legal issue, and that occurs at page three. And that's the parties' positions on the claim construction that has gone on heretofore in the Fore Systems Inc. case, both by Judge Farnan and by the Federal Circuit. And I believe it's the defendants' view that this court need not engage in additional, further claim construction on those matters. Do I have it?

MR. CHERNEY: That's plaintiffs.

THE COURT: I have it exactly the opposite. Okay. So let's hear from Telcordia first.

MR. RAINEY: Your Honor, Richard Rainey for

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Telcordia.

Essentially, Your Honor, it's one of the patents that is asserted in this case that was considered by Judge Farnan and by the Federal Circuit in the prior Fore Systems case that is the '306 patent which is common to all three of the defendants in this case. And Judge Farnan had issued an initial claim construction in that case which on the '306 patent resulted in a stipulated judgment of noninfringement against Telcordia. That went up to the Federal Circuit and the Federal Circuit reversed the claim constructions on the '306 patent.

It then was remanded back to Judge Farnan who considered an additional term in the patent which was also disputed that the Federal Circuit declined to reach in the appeal and Judge Farnan ruled in favor of Telcordia on that claim construction as well. The case then settled so there was not actually a full trial on that case.

But we believe that the issues as to the claim terms that were addressed by Judge Farnan and by the Federal Circuit certainly have been fully vetted and certainly the Federal Circuit's rulings on that as a Court of Appeals on a pure issue of law should be binding on any future proceeding. We believe that is consistent with what the Supreme Court was talking about when it issued its Markman decision where it talked about uniformity and consistency in

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deciding that the issue of claim construction was a pure issue of law, much like parties would be bound if the Court of Appeals for the Third Circuit were to rule on a statutory construction issue. We believe it's an analogous situation here.

THE COURT: Okay. And defendants believe that Telcordia is bound but you are not. Who is going to take this?

MR. CHERNEY: I will.

THE COURT: Okay.

MR. CHERNEY: Obviously, the reason we believe Telcordia is bound is because they got to litigate the issues. They put forth claim constructions. They litigated the claim constructions. So we, our view is they're collateral estopped because they went up.

It doesn't sound like they're disagreeing with it because they sound like they're happy with what happened in terms of the claim construction in front of Judge Farnan and the Federal Circuit. Our perspective as to us, in contradiction to Telcordia, is take the example of, for example, say I come up with something from the prosecution history or argument from the specification. Or some other argument in light of perhaps the Philips case coming out. I didn't get a chance to argue this, nor did the Alcatel people, nor did the Cisco people at that time. We didn't

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have a chance to be heard on the claim construction point.

I'm not saying the Fore System lawyers didn't do a good job, I just don't know. They put their best foot forward given what is important to them. I don't know why they argued the way they argued, whether things, more things were important to them in terms of prior art, in terms of infringement. They made the case they did and Telcordia litigated with them and that worked out the way it did but I didn't get to be heard and I didn't get to make the argument and there may be arguments that I make or the Cisco people or the Alcatel make that you say are all right.

THE COURT: That's an interesting argument.

MR. CHERNEY: Judge Farnan's decisions are out there. Obviously, the Federal Circuit decisions are out there. They're not going to be out of the way, although the Federal Circuit expressed it's non precedential, so in some respects I'm not sure they can cite it as binding precedent in this case. They ruled the way they ruled that said it was nonprecedential.

So I mean I didn't get to go up in front of the Federal Circuit and say, you know, one of the judges says okay. What is your answer to this question? You know, maybe I would have answered a different way, a more persuasive way. It's one of those things whereas always with collateral estoppel the people that get to participate

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are estopped but the people who don't get to participate shouldn't be stuck because otherwise that would give a company like Telcordia an incentive to go sue someone like Fore Systems, perhaps knock them off and then come after people like Alcatel, Cisco, Lucent and say, okay, you are stuck with what Fore Systems did on this budget and based on what they thought was important to them.

MR. RAINEY: Your Honor, on the issue of the nonprecedential decision, actually the Federal Circuit has expressly addressed that and said despite the fact that they have labeled a prior decision on a claim construction as nonprecedential does not bar that case from being cited and considered in subsequent decisions, so the Court has actually expressly addressed that very point.

THE COURT: But it's authoritative, not binding, is that correct?

MR. RAINEY: Well, I think --

THE COURT: Or is that incorrect?

MR. RAINEY: I think stare decisis is the principle of law that would apply to a nonparty in the proceedings.

In any event, the issue of collateral estoppel, I think Mr. Cherney is correct in articulating that the theory, we would be bound by it. We obviously are happy with the decision with Judge Farnan and subsequent ruling

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and by the Federal Circuit in its appeal, so we're not going to be advocating that those rulings should be different. Whether collateral estoppel is the right theory or whether we're just simply happy with those rulings is a matter we can address.

THE COURT: Do you resist their contention that they should be able to raise anew, or raise arguments that were not advanced or actually argue claim construction to this Court?

MR. RAINEY: I think as to the issues at the very least decided by the Federal Circuit, I think that is the law of the land as far as those claims are concerned. To me, Markman doesn't make a lot of sense if, in every subsequent case, the arguments Mr. Cherney makes are applicable in every single patent case. There is nothing unique about this situation that is different from any other situation. Markman from the Supreme Court is going to have no force or effect if a party can simply say you can disregard what the Federal Circuit has done on this pure issue of law simply because we found an argument that we think is more persuasive than the argument the parties made. I mean that, in our view, that just eviscerates what the Supreme Court was trying to talk about in trying to come up with an uniform, consistent approach in dealing with.

THE COURT: So there is a tension between a

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finality and a new party that was a nonparty about its ability to advance its theory based upon a new theory and/or perhaps adducing new evidence.

MR. RAINEY: I think that this is not a simple issue that has a simple answer to it, but --

THE COURT: Okay.

MR. RAINEY: We believe that at the very least what the Federal Circuit has said should be the end of it as to those issues.

THE COURT: So for purposes of our schedule and setting up a Markman process, what are the parties and the Court should do, Mr. Cherney.

MR. CHERNEY: I have to take a look back at the schedule.

THE COURT: Well, there is a process.

MR. CHERNEY: I mean right now we have a schedule that seems to contemplate that both sides will brief Markman issues.

THE COURT: It does. But I want, since it was noted for, brought to my attention in your joint status report.

MR. CHERNEY: It seems what we could do is that each side should follow the process set forth here; and if Telcordia wants to raise as some type of bar to us deviating from that, they should raise it in the papers and cite

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whatever support they have and we should argue to the contrary just like anyone would in terms of support. Essentially what they're saying in support of our claim construction positions, they should be bound. "I hereby cite the Federal Circuit's decision and I want to make some type of argument based on Markman" and we will respond to that at the time, but it seems as far as contemplating a full Markman schedule and they're free to make this argument at that time and we're free to respond.

THE COURT: Do you agree?

MR. RAINEY: Yes, Your Honor. I think that is fine. And I would also add that the Markman schedule that we have that talked about in this case contemplates patents beyond the '306 patent which is the only patent that was considered in the Fore Systems case that is now presently in these cases. So we're still going to need a Markman procedure to deal with the '633 patent and we have advised the defendants we're planning to add additional patents in this case and those patents will have to be addressed down the road as well.

THE COURT: Okay.

MR. CHERNEY: And we have to talk about that.

I don't know if we're at the point yet in talking about status report, about talking about adding other patents and obviously that is something we'll have to

Exhibit I

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TELCORDIA TECHNOLOGIES, INC., Plaintiff/Counterclaim Defendant, v. ALCATEL S.A., Defendant, and ALCATEL USA, INC., Defendant/Counterclaim Plaintiff.	C.A. No. 04-874-GMS
TELCORDIA TECHNOLOGIES, INC., Plaintiff/Counterclaim Defendant, v. LUCENT TECHNOLOGIES INC., Defendant/Counterclaim Plaintiff.	C.A. No. 04-875-GMS
TELCORDIA TECHNOLOGIES, INC., Plaintiff/Counterclaim Defendant, v. CISCO SYSTEMS, INC., Defendant/Counterclaim Plaintiff.	C.A. No. 04-876-GMS

JOINT STATUS REPORT

Pursuant to the Court's Notices of Scheduling Conference (D.I. 24 in C.A. No. 04-874-GMS; D.I. 12 in C.A. No. 04-875-GMS; D.I. 12 in C.A. No. 04-876-GMS), Fed. R. Civ. P. 16, and Local Rule 16.2(b), the parties to the above-referenced, non-consolidated actions submit this Joint Status Report. The following addresses each of the agenda items appearing in the Court's Notice of Scheduling Conference. Counsel will appear and be prepared to further discuss these and other matters that the Court may raise.

1. Jurisdiction and Service.

a. Does the court have subject matter jurisdiction?

Each complaint by Telcordia Technologies, Inc. ("Telcordia") in the above-captioned cases asserts one or more claims for patent infringement. Under 28 U.S.C. § 1338(a), the "district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents . . . ." Therefore, this Court has subject matter jurisdiction over each of the above cases under section 1338(a).

b. Are all parties subject to the court's jurisdiction?

All parties in all three cases with the exception of Alcatel S.A. have admitted that they are subject to the Court's jurisdiction. Alcatel S.A. has moved to dismiss for lack of personal jurisdiction in lieu of answering the complaint. That motion is fully briefed and awaiting resolution by the Court.

c. Do any remain to be served?

Defendants have all been served or do not intend to challenge service.

2. Substance of the Action.

a. Factual and Legal bases for plaintiff's claims:

These are actions for patent infringement based on Telcordia's United States Patent Nos. 4,893,306 ("the '306 patent") and Re. 36,633 ("the '633 patent"). The '306 patent has been asserted in all three cases. Certain patent claim terms in the '306 patent have already been construed by Judge Farnan in a prior suit by Bell Communications Research, Inc. (now Telcordia) against FORE Systems, Inc. (now Marconi Communications, Inc.). *See Bell Communications Research, Inc. v. Fore Sys., Inc.*, 113 F. Supp. 2d 635 (D. Del. 2000). Several of those terms were subsequently construed by the United States Court of Appeals for the Federal Circuit also in Telcordia's prior suit against FORE. *See Bell Communications Research, Inc. v. Fore Sys., Inc.*, 62 Fed. Appx. 951, 2003 WL 1720080 (Fed. Cir. 2003) (non-precedential decision). Thereafter, in a remand from the Federal Circuit, Judge Farnan construed an additional term. *See Bell Communications Research, Inc. v. Fore Sys., Inc.*, No. Civ. A. 98-586 JJF, 2003 WL 22295442 (D. Del. Oct. 3, 2003). Telcordia believes that those constructions should govern in these cases.

Defendants believe that Telcordia is bound by and collaterally estopped from challenging those constructions, but Defendants are not. Defendants should be entitled to a full opportunity to address all claim construction issues, given that Defendants were not parties to the prior case. Telcordia believes that it is entitled to respond to and fully address any claim construction advanced by the Defendants that deviates from the claim construction rulings in the prior case.

At the present time, the '633 patent has been asserted only against Cisco Systems, Inc. ("Cisco"). Telcordia reserves the right to seek leave to amend one or more of the complaints

Exhibit J

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BELL COMMUNICATIONS RESEARCH, INC. (now Telcordia Technologies, Inc.),	)	
Plaintiff,	)	
v.	)	Civil Action No. 98-586-JJF
FORE SYSTEMS, INC. (now Marconi Communications, Inc.),	)	
Defendant.	)	

FILED
AUG 4 8 43 AM '03
U.S. DISTRICT COURT

SUPPLEMENTAL MARKMAN BRIEF
OF BELL COMMUNICATIONS RESEARCH, INC.
(NOW TELCORDIA TECHNOLOGIES, INC.)

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Attorneys for Plaintiff
Bell Communications Research, Inc.
(now Telcordia Technologies, Inc.)

Date: August 1, 2003

In short, therefore, the Court should clarify its previous construction by amending it to state:

> An "empty payload field" means that a frame's payload has zero *source* data in it but can include bit signals of some kind."

This is the only construction consistent with the ordinary meaning of "empty" in its proper context in the claim, the specification—which defines a frame's payload field as "empty" or not based solely on whether it has source data in it—and the Federal Circuit's decision—which recognizes that an "empty payload field" can have some data in it, including, but not limited to, placeholder or garbage data that maintains the bit rate of the data stream.

IV. CONCLUSION

For the foregoing reasons, "empty payload field" means a payload field that has no source data in it but can include bit signals of some kind.

Dated: August 1, 2003

Respectfully submitted,

Dale R. Dubé

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- and -

Exhibit K

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BELL COMMUNICATIONS RESEARCH, INC.
(now Telcordia Technologies, Inc.),

Plaintiff,

v.

FORE SYSTEMS, INC
(now Marconci Communications, Inc.),

Defendant.

Civil Action No. 98-5883JF

FILED
CLERK U.S. DISTRICT COURT
DISTRICT OF DELAWARE
2003 AUG 11 PM 4:33

BELLCORE'S REPLY TO FORE'S SUPPLEMENTAL MARKMAN BRIEF

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Date: August 11, 2003

represent data" and that they "might not even be bits, they might just be uncontrolled voltage" (*id.*), he ultimately conceded the point:

> [I]n some way there must be place holders in there for the period of time. And, most likely, what it is is garbage bits that are just in there.

Id. Indeed, it bears repeating here that the term "garbage" was introduced by Judge Bryson, who characterized it as non-source data—"1's and 0's that have no relationship to the stream of any information that's coming in from the source." *Id.* at 8.

Moreover, when Judge Clevenger then asked FORE's counsel what effect his admission had on Bellcore's concession of noninfringement, FORE's counsel did not correct himself to say that garbage bits and placeholders are not bit signals (as FORE argues today). Instead, counsel argued that the concession remained operative for a different reason—that the accused device does not generate a complete frame before it is filled:

Judge Clevenger:	Well now, if you interpret the claim to say that you can have the, what I call the garbage bits, and you would still have zero data ...
Mr. Hillman:	That's right.
Judge Clevenger:	Then is the concession from Bellcore of noninfringement still upholdable?
Mr. Hillman:	Yes it is, absolutely.
Judge Clevenger:	Because the accused device does what?
Mr. Hillman:	The accused device never generates frames as a first step. It simply assembles these packets of information, without having contributory frames, without any sort of thing, except that it has these F1's and F2's, in order to be compatible with existing

Exhibit L

UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
07/138,977	12/28/87	[illegible]	[illegible]

JAMES W. FALK
HEL CORPORATED RESEARCH, INC.
250 WEST PRATT PLEASANT AVENUE
LIVINGSTON, NJ 07039

EXAMINER	
ART UNIT	PAPER NUMBER
	7

DATE MAILED: 07/06/89

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

☐ This application has been examined ☒ Responsive to communication filed on 9/17/87 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☒ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449
4. ☐ Notice of Informal Patent Application, Form PTO-152
5. ☐ Information on How to Effect Drawing Changes, PTO-1474
6. ☐ _____

Part II SUMMARY OF ACTION

1. ☒ Claims 1-6, 8-10, and 14 are pending in the application.
   Of the above, claims _____ are withdrawn from consideration.
2. ☒ Claims 7, 11-13 have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-6, 8-10 and 14 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved. ☐ disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections MUST be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

PTOL-326 (Rev. 7-82) EXAMINER'S ACTION

1. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

2. Claims 1-4 and 14 are rejected under 35 U.S.C. 103 as being unpatentable over Shikama et al.

The Shikama et al. patent discloses a loop transmission system which Utilizes a frame format as shown in Fig. 2 as a prior art. The system generates a series of frames 4 each of which includes a frame management region 5, and a plurality of slots 6. A data packet with header is inserted in each of the slots. The transmission overhead field of the present invention is analoguous to the frame management region 5, and an empty payload field reads on the number of slots. Data is packetized by attaching a header in the transmission apparatus 1 (See column 4, lines 3-15). The types of data are the data from data terminals, telephones, and facsimiles. The only difference between the Shikama reference and the present invention is that the frame

management region taught by Shikama doesn't specifically include the frame timing information although it is said to include "information, such as number of slots, validity or invalid of frame" (See column 3, lines 63-65). However, it would have been obvious for one of ordinary skill in the art to include frame timing information in the frame management region because Shikama's examples of the possible contents of the frame management region implies that there can be other types of frame management information, and including frame timing information in the beginning of the frame is the most common method to achieve frame synchronization.

3. Claims 5-6, 8-10 are rejected under 35 U.S.C. 103 as being unpatentable over Shikama et al. in view of Baren et al.

Shikama et al. only show a block diagram of the transmission system without showing the specifics of interface units (shown as the transmission apparatus in the present invention). Baren et al. teach an interface unit comprising packetizing means for a group of sources instead of the packetizing means for each of the sources as in the present invention. However, the function of the interface unit of Baren et al. is the same as the one claimed in the present invention, namely, packetizing, storing temporarily, and inserting into frame. Therefore, it would have been obvious for one of ordinary skill in the art to design the communication system by incorporating the interface unit of Baren et al. into the transmission apparatus of Shikama et al. because

this incorporation would result in the complete system specification to achieve the transmission method as described in the Shikama et al. patent. The phase locked loop added by claim 10 as an element of the interface unit is considered well known in the art because phase locked loop is commonly used in designing any communication system for phase alignment, ror regulating the rate, or for any synchronizing ~~management~~ arrangement.

4. Applicant's arguments with respect to claims 1-6, 8-10, and 14 have been considered but are deemed to be moot in view of the new grounds of rejection.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Rozenblit patent is cited to show a voice and data communication network that generates frames of data with a frame sync bit and 24 slots.

The Kume patent is cited to show a packet transmission in data frame.

The Schwaertzel et al. reference is cited to show a ring type of communication network in which frames with a plurality of slots are circulated in the ring for the transmitting devices to insert data blocks in available time slots.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Min Jung whose telephone number is (703) 557-3996.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 557-3321.

MJ

M. JUNG:mg

(703) 557-3996

06-27-89

Douglas W Olms

DOUGLAS W. OLMS
PRIMARY EXAMINER
GROUP 263