

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RED HAT, INC.
Petitioner

v.

COMPETITIVE ACCESS SYSTEMS, INC.
Patent Owner

Case No. IPR2025-01370
U.S. Patent No. 11,582,343

PATENT OWNER PRELIMINARY RESPONSE

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. BACKGROUND	2
A. Background of the Invention	2
B. The Claimed Invention	15
III. ASSERTED PRIOR ART REFERENCES	18
A. Challenger.....	18
B. Kotzin.....	21
IV. PRIORITY	22
V. RED HAT HAS FAILED TO CARRY ITS BURDEN TO PROVE THAT CLAIMS 1-20 OF THE '343 PATENT ARE INVALID.....	28
A. Red Hat's Argument Under Ground 1 Fails to Demonstrate each Claim Limitation of Claim 1 is Disclosed or Rendered Obvious by Challenger Alone or in View of Peirce and Held.....	28
[1.3] "establishing a connection through which data may be transferred between the first device and a fourth device by concurrently using a first portion of the first bandwidth and a second portion of the second bandwidth, the connection having an effective bandwidth including the first portion of the first bandwidth and the second portion of the second bandwidth".....	28
B. Red Hat's Argument Under Ground 1 Fails to Demonstrate each Claim Limitation of Claim 12 is Disclosed or Rendered Obvious by Challenger Alone or in View of Peirce and Held.....	34
[12.p] "a communication device capable of providing broadband communications services ..."	34
[12.4] "wherein, in response to transmitting a request to the remote device via the third connection ..."	36
C. Red Hat's Argument Under Ground 2 Fails to Demonstrate each Claim Limitation of Claim 1 is Disclosed or Rendered Obvious Kotzin Alone or in View of Peirce and Held.....	37
[1.3] "establishing a connection through which data may be transferred between the first device and a fourth device by concurrently using a first portion of the first bandwidth and a second portion of the second bandwidth,	

the connection having an effective bandwidth including the first portion of the first bandwidth and the second portion of the second bandwidth” first portion of the first bandwidth and the second portion of the second bandwidth” second bandwidth”	37
D. Red Hat’s Argument Under Ground 2 Fails to Demonstrate each Claim Limitation of Claim 12 is Disclosed or Rendered Obvious by Kotzin Alone or in View of Peirce and Held.....	39
[12.4] “wherein, in response to transmitting a request to the remote device via the third connection ...”	39
VI. CONCLUSION.....	41

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Burroughs Wellcome Co. v. Barr Labs., Inc.</i> , 40 F.3d 1223 (Fed. Cir. 1994)	23
<i>Cooper v. Goldfarb</i> , 154 F.3d 1321 (Fed. Cir. 1998)	24
<i>Dynamic Drinkware LLC v. Nat’l Graphics, Inc.</i> , IPR2013-00131, Paper 42 (PTAB Sept. 12, 2014), <i>aff’d</i> 800 F.3d 1375 (Fed. Cir. 2015).....	22
<i>Goeddel v. Sugano</i> , 617 F.3d 1350 (Fed. Cir. 2010)	23
<i>Perfect Surgical Techniques, Inc. v. Olympus Am., Inc.</i> , 841 F.3d 1004 (Fed. Cir. 2016)	24
<i>Purdue Pharma LP v. Boehringer Ingelheim GmbH</i> , 237 F.3d 1359 (Fed. Cir. 2001)	23
<i>Sequenom v. Leland Stanford Junior Univ.</i> , IPR2013-00390, Paper 45 (PTAB Nov. 25, 2014).....	22
Statutes	
35 U.S.C. § 102(e)	22, 23

EXHIBIT LIST

Exhibit No.	Description
2001	Complaint from <i>Competitive Access Systems, Inc. v. Oracle Corporation et al.</i> , No. 2:22-cv-00287 (E.D. Tex.)
2002	Red Hat Partnership webpage, https://www.oracle.com/cloud/red-hat/ (last accessed Sept. 30, 2025)
2003	Order transferring Oracle case the Western District of Texas
2004	Unified Patents member listing, https://www.unifiedpatents.com/members
2005	Red Hat's Complaint from <i>Red Hat, Inc. v. Competitive Access Systems, Inc.</i> , No. 5:24-CV-505-D (D.N.C.)
2006	Red Hat Joint Planning Report including Proposed Schedule
2007	Red Hat's Motion to Dismiss
2008	Red Hat Litigation Scheduling Order
2009	Complaint from <i>Competitive Access Systems, Inc. v. Apple Inc.</i> , No. 3:25-cv-04595 (N.D. Cal.)
2010	Complaint from <i>Competitive Access Systems, Inc. v. Samsung Elects. Co., Ltd., et al.</i> , No. 4:25-cv-00886 (E.D. Tex.)
2011	Complaint from <i>Competitive Access Systems, Inc. v. Motorola Mobility LLC</i> , No. 4-25-cv-00948 (N.D. Tex.)
2012	Apple, Inc.'s Motion to Dismiss
2013	Case Management Order in Apple, Inc. Litigation
2014	Oct. 2, 2023 Demand Letter

2015	Declaration of Dr. Stan McClellan
2016	CV of Dr. Stan McClellan
2017	Executive Summary
2018	Photograph
2019	Presentation slides
2020	Letter to McEntee
2021	April 2002 Draft Application
2022	Application Drawings
2023	Declaration of Eric M P. Delangis

Emphasis Added Throughout Unless Indicated Otherwise

I. INTRODUCTION

Although U.S. Patent No. 11,582,343 (the “’343 Patent”) (EX1003) issued more recently, its priority dates to Provisional Application No. 60/418,521 filed on October 15, 2002. In the field of multilink computer communications, the ’343 Patent’s priority is downright ancient.

Because of the ’343 Patent’s early priority, Petitioner Red Hat, Inc. (“Red Hat”) clearly struggled to find prior art for its Petition, and was forced to settle on two alleged (pre-AIA) 35 U.S.C. § 102(e) secret art references as its lead references. Of Red Hat’s two lead references, Challenger (EX1017) was filed on June 28, 2002, and Kotzin (EX1018) was filed on August 2, 2001. But the invention claimed in the ’343 Patent dates back to January 2001, well before either Challenger’s or Kotzin’s filing dates.

As explained below, the inventor of the ’343 Patent—Eric Delangis—has commenced identifying and collecting evidence corroborating his earlier conception and reduction to practice. Without surprise, the evidence collected to date is by no means complete. Mr. Delangis continues to search decades-old files and hard drives, and Competitive Access Systems, Inc. (“CAS”) continues to identify and locate third parties—including potential investors and long-since retired attorneys—whom are yet to be contacted to further corroborate the conception and reduction to practice.

Even without antedating Challenger and Kotzin, Red Hat’s Petition fails to

meet its burden of establish its prima facie case of obviousness.

CAS respectfully submits that Red Hat's Petition should be denied either discretionarily as requested in CAS's October 6, 2025 Motion for Discretionary Denial or based on Red Hat's failure to demonstrate a reasonable likelihood that it will prevail on its unpatentability challenges.

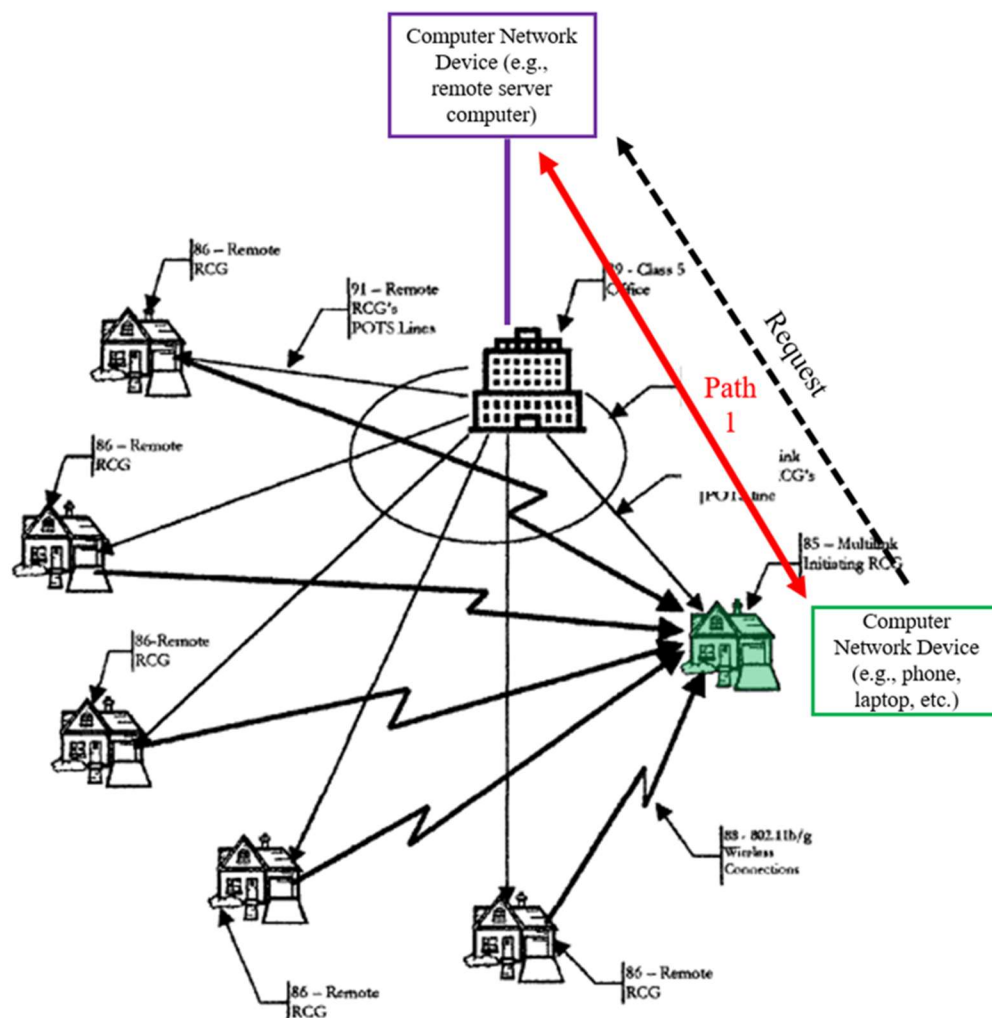
II. BACKGROUND

A. Background of the Invention

At its most basic level, the '343 Patent pertains to devices and methods to improve the effective bandwidth between a remote sending device (*e.g.*, a server) and a receiving device by leveraging the bandwidth of at least two separate communication paths to receive the data sent from a remote device. McClellan Declaration ("EX2015") ¶ 24. Without delving into any of the specific claims or claim limitations—which may be directed to only certain aspects of the configuration or to separate, but related embodiments—Figure 7 of the specification of the '343 Patent shows an example network configuration. EX2015 at ¶ 25.

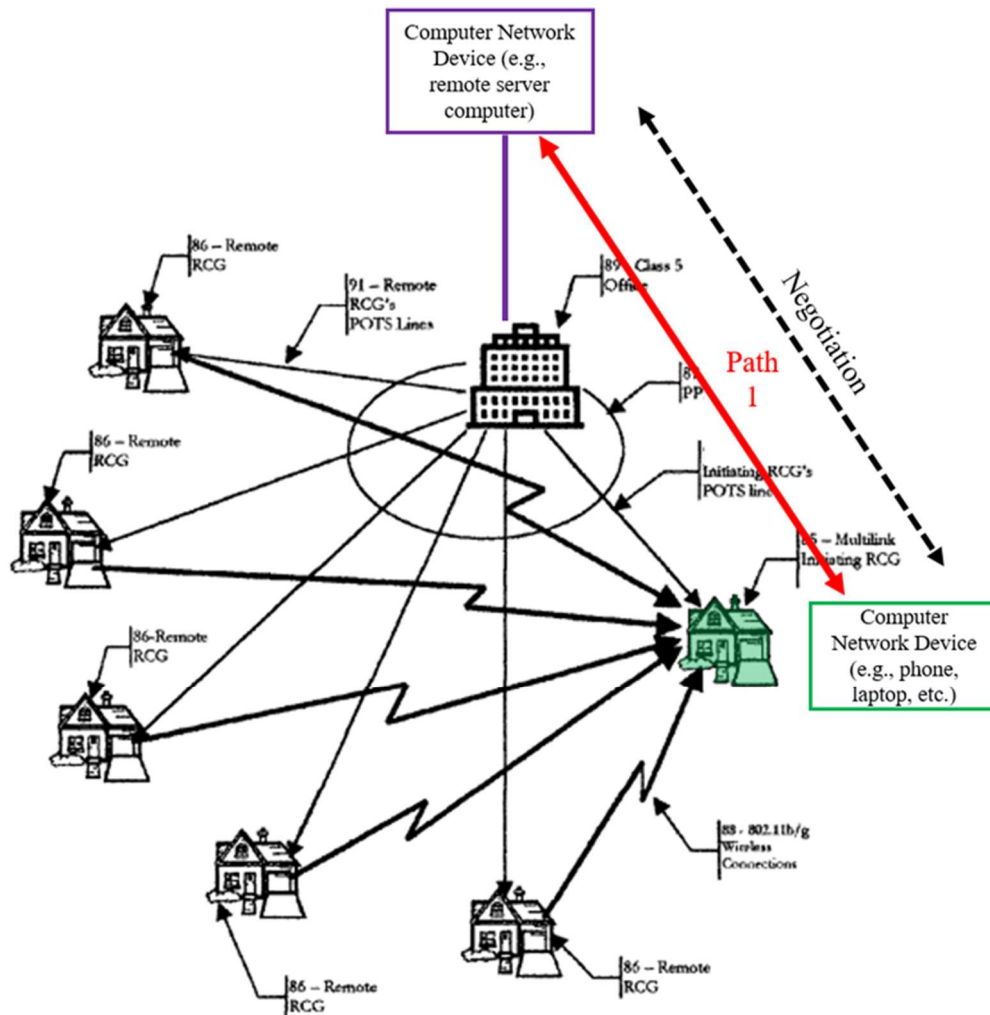
In this configuration, a request is sent from a computer network device (*e.g.*, phone, laptop, server, etc.) over a first link to another computer network device, such as, for example, a remote server computer, for participation in a multilink session. EX2015 at ¶ 26. For example, the specification state: "Referring to FIG. 7, an RCG—85 that decides to initiate a multilink PPP session with a remote computer

i.e. internet URL, requests a multilink PPP session with that URL resource via Link Control Protocol (LCP) session management.” EX1003 at 12:5–9; *see also* EX2015 at ¶ 26.



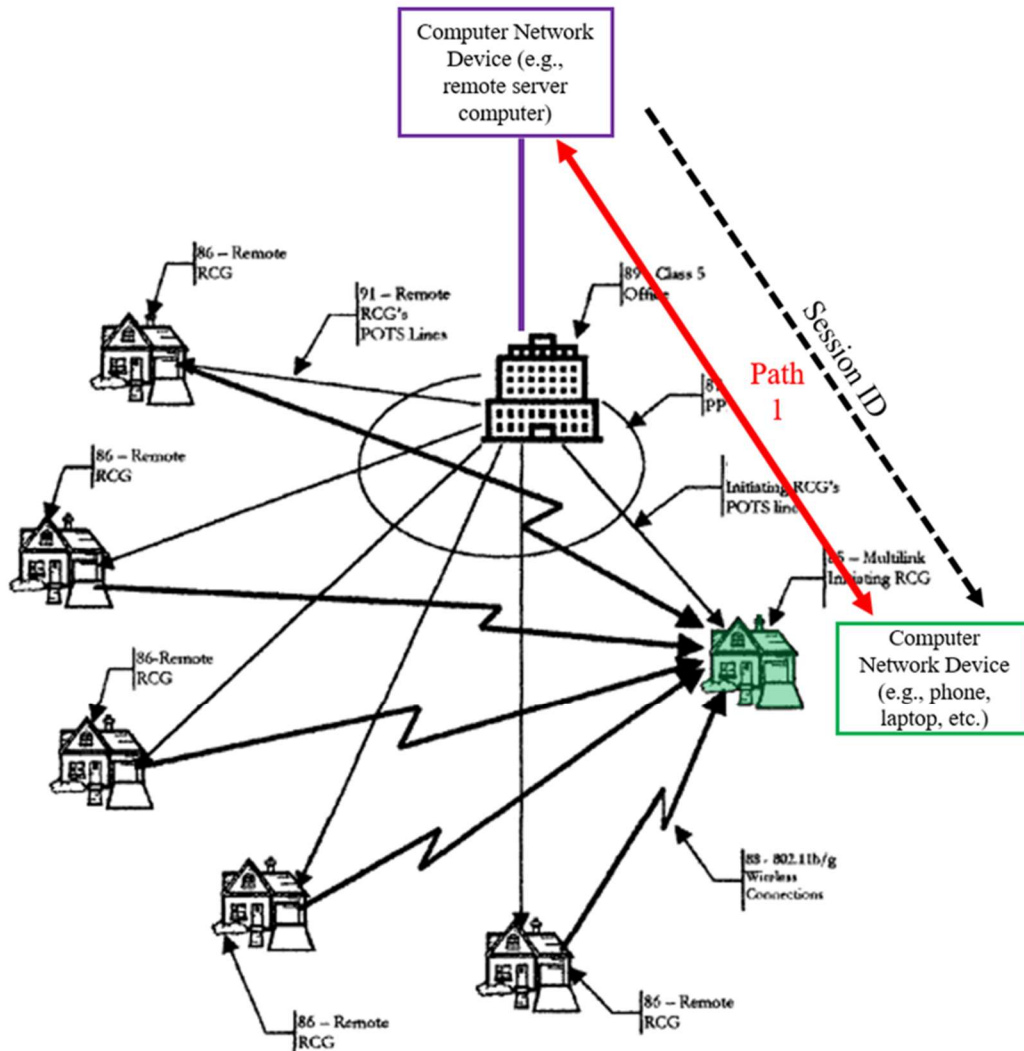
The two devices negotiate the pertinent multilink parameters such as compression, packet size, sync/async, link quality monitoring, bit stuffing etc. EX2015 at ¶ 27. For example, the specification states: “The initiating RCG—85 and the remote server computer (not shown) will negotiate the pertinent multilink parameters such as compression, packet size, sync/async, link quality monitoring,

bit stuffing etc.” EX1003 at 12:9–12; *see also* EX2015 at ¶ 27.



The multilink session setup is completed including that the remote server computer sends a multilink session ID to the computer network device (*e.g.*, phone, laptop, etc.), which is used to identify this particular multilink session and is also used for adding or removing links from the multilink session. EX2015 at ¶ 28. For example, the specification states: “As part of a successful multilink PPP session

setup, the initiating RCG—85 receives a multilink PPP session ID, or ‘magic number’, which is used to identify this particular multilink PPP session and is also used for adding or removing links from the multilink bundle—87.” EX1003 at



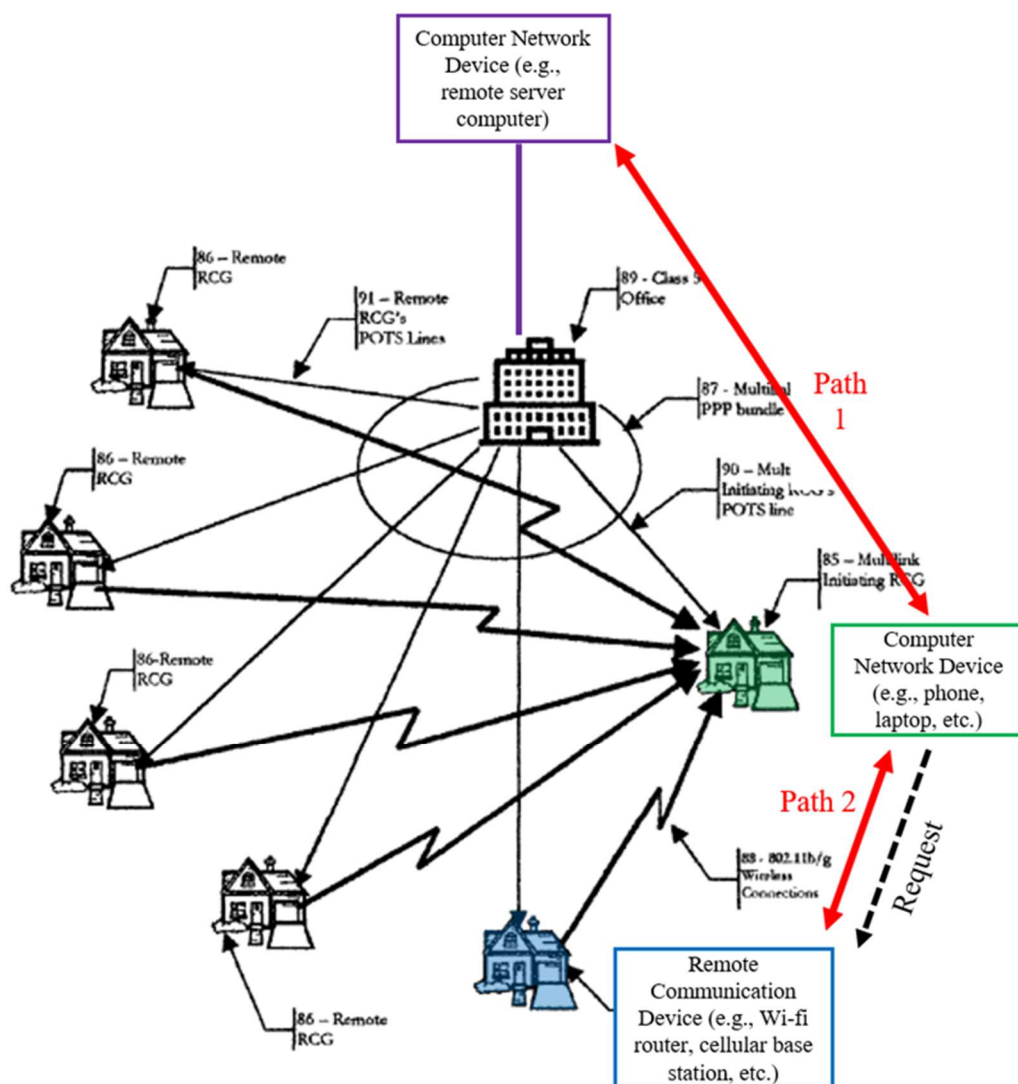
12:12–17; *see also* EX2015 at ¶ 28.

The computer network device (*e.g.*, phone, laptop, server etc.) then sends a multilink request to one or more remote communications devices such as, for example, a router or base station to participate in the multilink session. EX2015 at

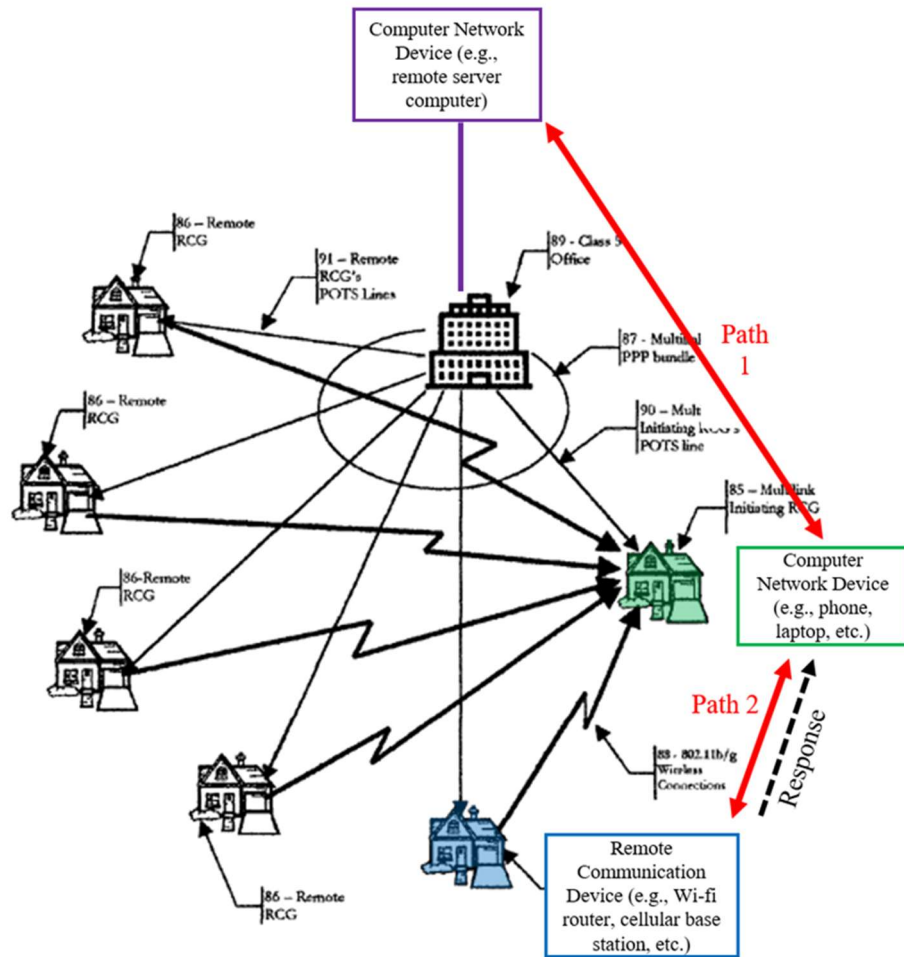
¶ 29. For example, the specification states: “The initiating RCG—85 then looks up the addresses of up to 31 (in this embodiment) other RCGs in its router tables to use for the multilink PPP transfer. (If a Neighborhood Access Point is available the RCG could request service through it instead of setting up a Multilink PPP connection-see FIG. 8.) The initiating RCG—85 determines the number of remote RCGs—86 that it wants to use to get the desired bandwidth for the transfer and sends multilink PPP service requests via the 802.11b/g wireless connections—88 to the selected remote

RCGs—86.” EX1003 at 12:19–29; *see also* EX2015 at ¶ 29.

The remote communications devices respond back to the computer network device (e.g., phone, laptop, etc.) with acceptance or denial. EX2015 at ¶ 30. For example, the specification states: “The selected remote RCGs—86 respond back to the initiating RCG with either an acceptance or denial of multilink PPP service request. This decision is made based upon the remote RCG’s currently available POTS bandwidth and the current local demands for that bandwidth. The remote

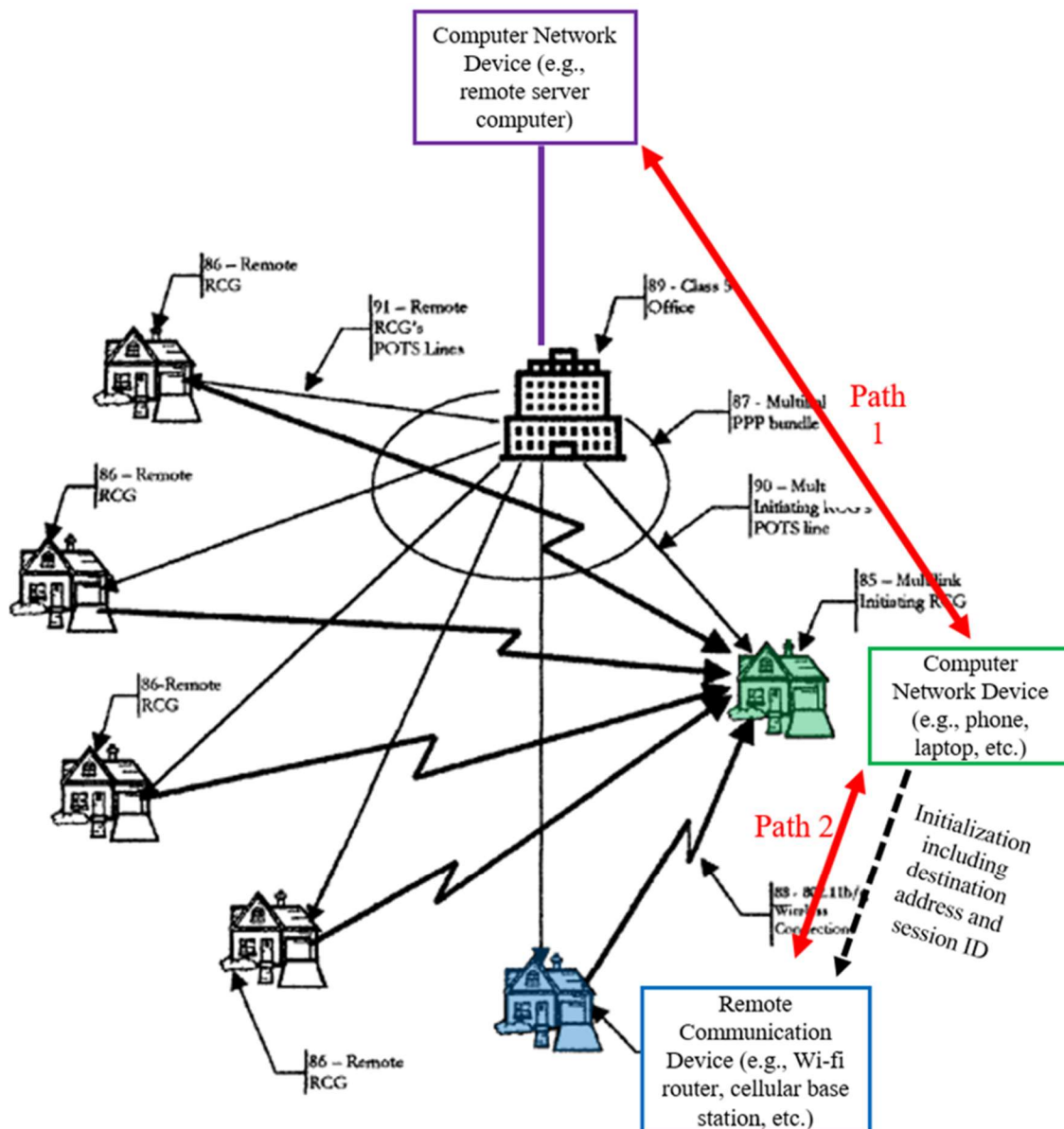


RCG—86 makes a decision to participate in a multilink PPP service for an initiating RCG If the remote RCG—86 accepts the multilink PPP service request from the initiating RCG—85 it also sends its currently available bandwidth on its POTS line—91 that the initiating RCG—85 will have available to it for the multilink PPP transfers.” EX1003 at 12:29–54; *see also* EX2015 at ¶ 30.



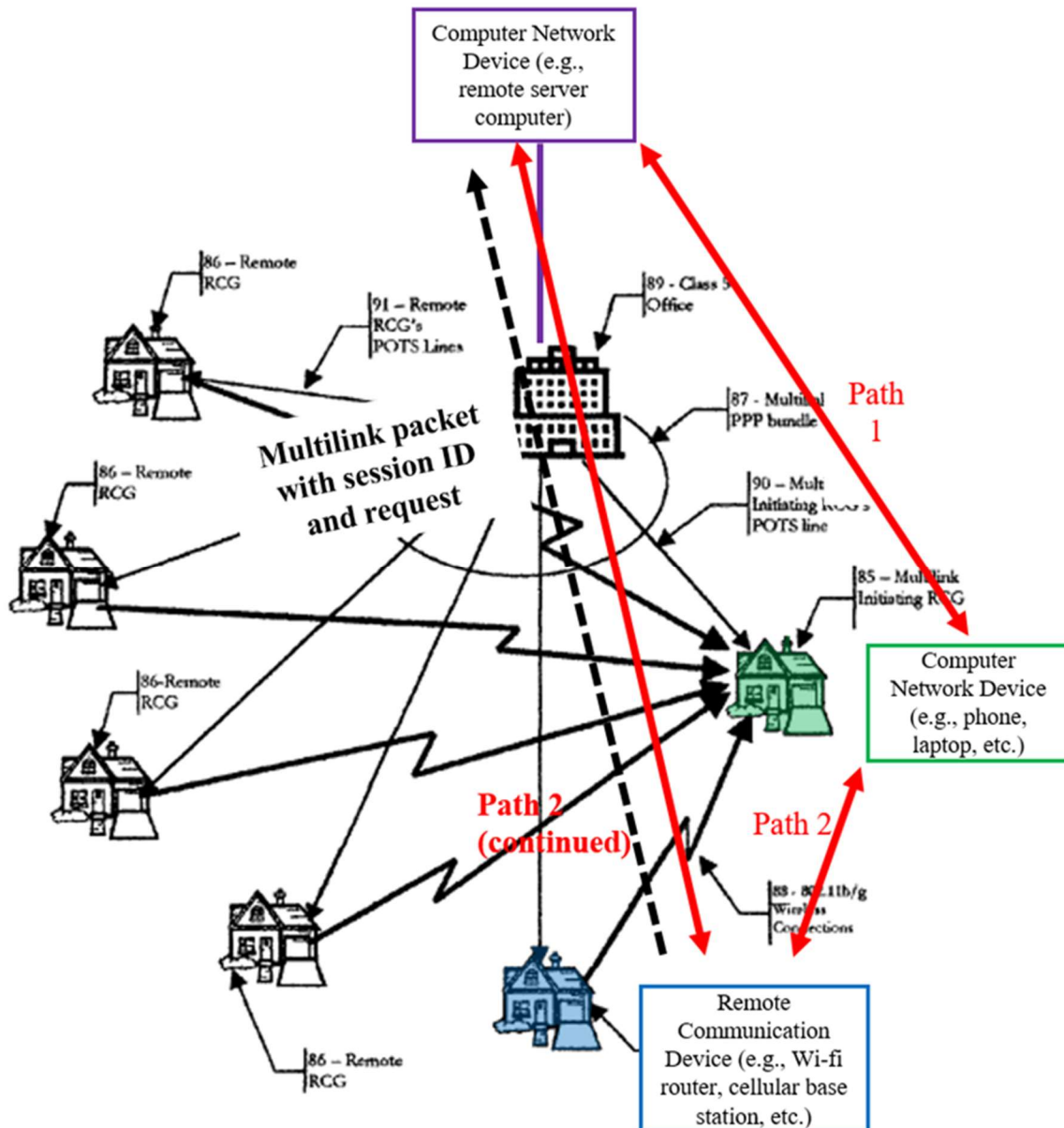
The computer network device (e.g., phone, laptop, server, etc.) sends a multilink initialization packet containing the address of the destination as well as the multilink session ID (magic number) and any other pertinent information required for the remote communications device to join in the existing multilink session. EX2015 at ¶ 31. For example, the specification states: “The initiating RCG then selects which of the responding remote RCGs—86 it will use for the multilink PPP bundle—87 and sends them a multilink initialization packet containing the URL of the destination as well as the multilink PPP session ID (magic number) and any other

pertinent information required for the remote RCG to join in the existing multilink PPP bundle—87. Each remote RCG POTS interface—91 participating in a multilink PPP bundle, represents a logical ‘link’ in the initiating RCG’s multilink PPP bundle—87.” EX1003 at 12:54–63; *see also* EX2015 at ¶ 31.



Each of the participating remote communications devices sends a multilink packet to the remote server computer with the multilink session ID and requests to

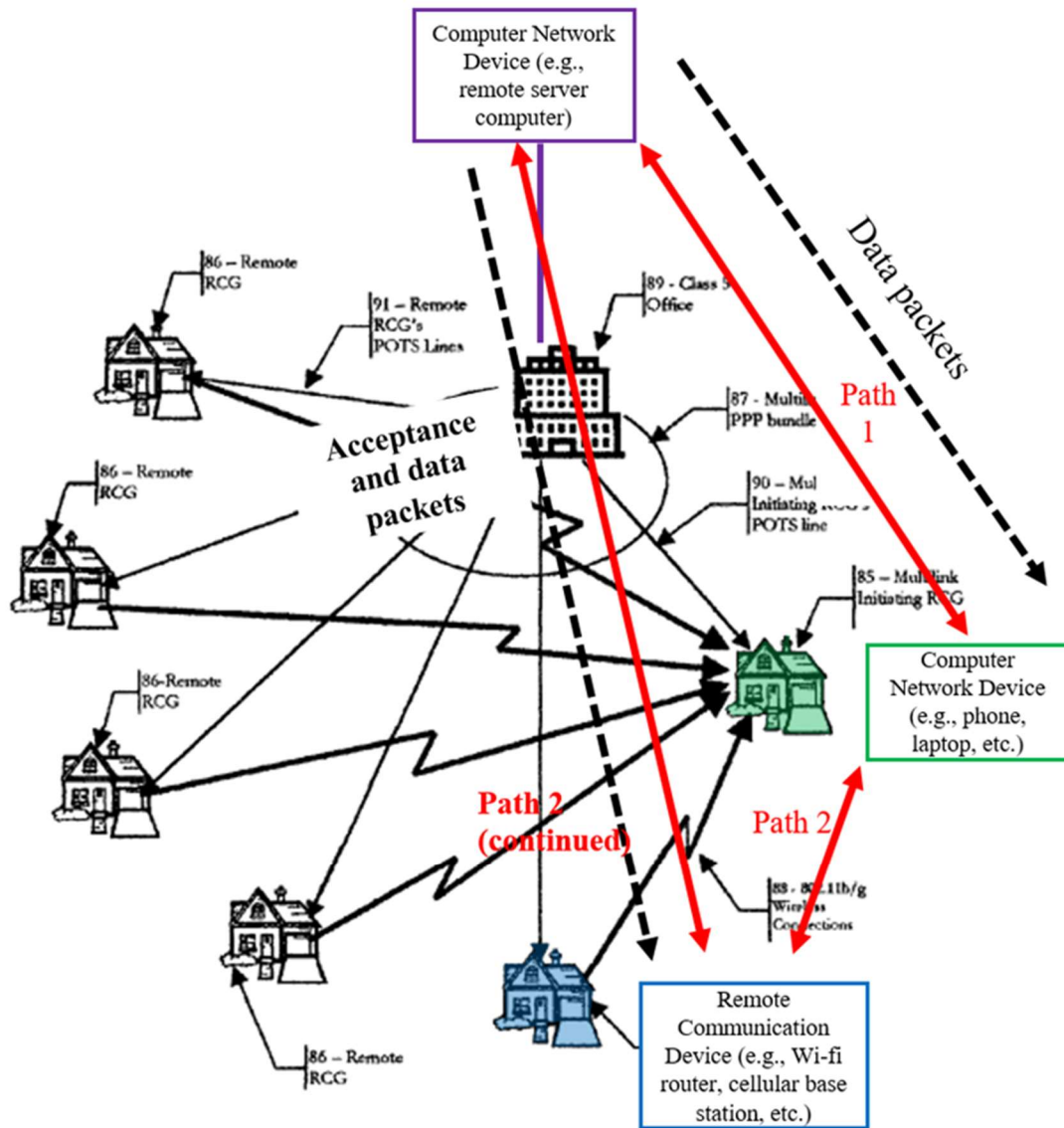
be added to the multilink session. EX2015 at ¶ 32. For example, the specification states: “The remote RCGs—86 then send a multilink PPP packet (over their respective POTS lines—91) to the destination URL with the multilink PPP session ID and request to be added to that multilink PPP bundle—87.” EX1003 at 12:63–66;



see also EX2015 at ¶ 32.

The remote server computer accepts the request and begins sending data

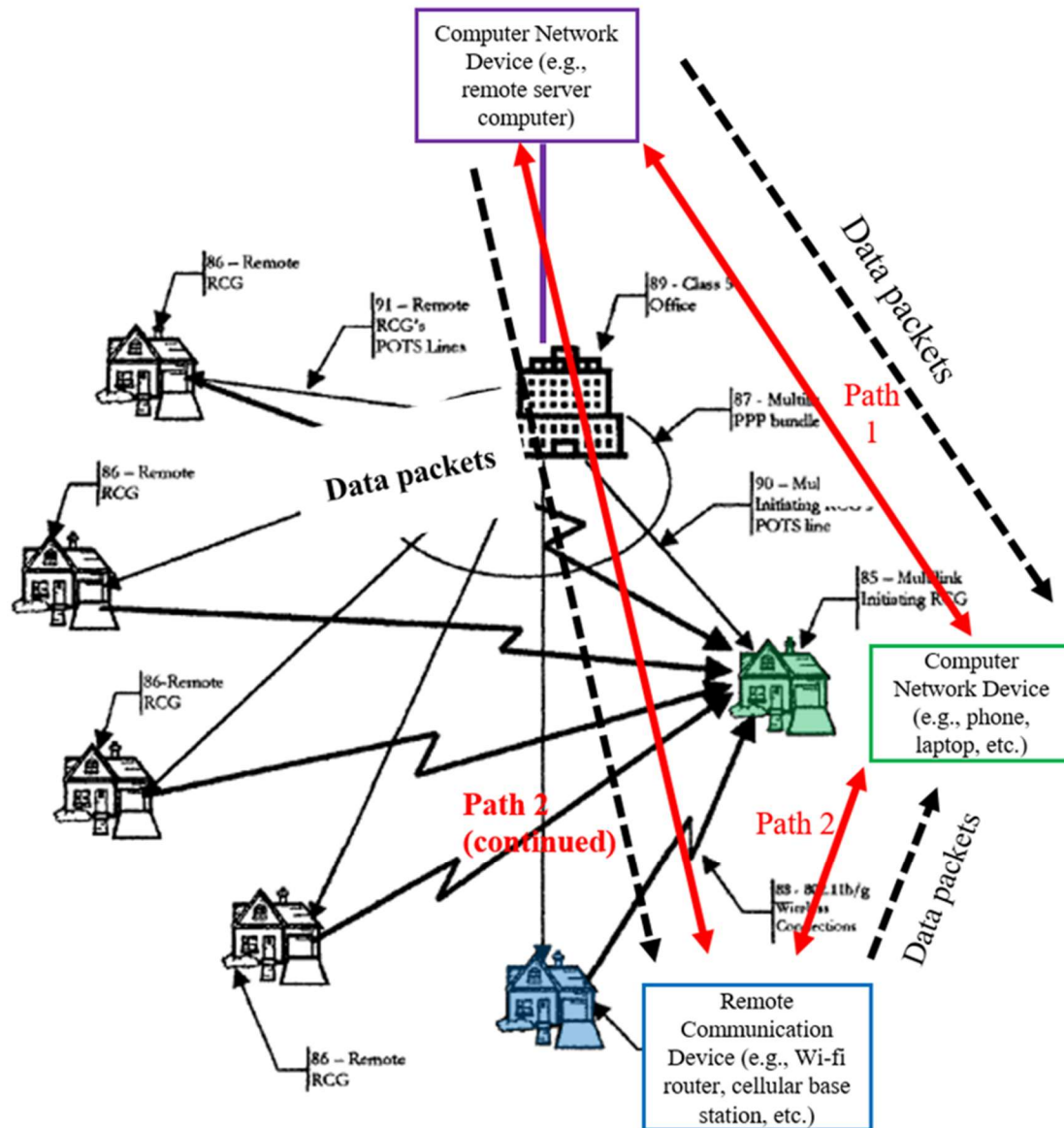
packets to each of the remote communications devices over their respective paths or links. EX2015 at ¶ 33. For example, the specification states: “The destination URL accepts the request of each of the remote RCGs—86 and begins sending data packets



to each over their respective POTS lines—91.” EX1003 at 12:66–13:2; EX2015 at ¶ 33.

The remote communications device relays the data packets to the computer

network device (e.g., phone, laptop, etc.). EX2015 at ¶ 34. For example, the specification states: “When the remote RCGs—86 receive data packets sent over their respective POTS lines—91, that are destined for the multilink PPP bundle—



87, they simply relay the data packets over their 802.11b/g interface-88 to the initiating RCG—85.” EX1003 at 13:2–6; *see also* EX2015 at ¶ 34.

The use of the additional links thus results in increased bandwidth, data

throughput, quality of service, and/or connection reliability. *See, e.g.*, EX1003 at 11:50–59 (“An RCG that is transferring a very large file can request the services of 31 (in this embodiment) other RCGs to assist in the file transfer using their respective POTS lines. A single RCG can therefore gain the combined bandwidth of up to 32 POTS lines transferring data at as much as 56 Kbps each to transfer information. This is roughly equivalent to a transfer rate of 1.79 Mbps in the inbound direction (towards the RCG) and approximately 1.075 Mbps in the outbound direction (towards the PSTN).”); *see also* EX2015 at ¶ 35.

The inventions recited in the claims of the ’343 Patent and its family members improve upon the prior art. EX2015 at ¶¶ 36, 41. Exemplary prior art configurations and operations of computer network devices as of the early 2000s involved in the exchange of data included the use of Plain Old Telephone Service (“POTS”) lines, cable lines, or DSL lines to connect two computer network devices. EX2015 at ¶ 41.

Problems with prior art configurations and methods included that they provided low bandwidth, data throughput, quality of service, and reliability, yet were associated with substantial costs. EX2015 at ¶ 42. For example, POTS lines had very limited bandwidth. EX1003 at 10:61–11:21 (“... standard POTS lines can only guarantee a maximum of 56 Kbps transfer rate under the best conditions. . . . DSL, however, suffers from the very high costs associated with the purchase, installation, maintenance, floor lease costs, etc.”); *see also* EX2015 at ¶¶ 43–44. Likewise, DSL

and cable lines required tremendous infrastructure costs, required expensive modems at the customer's end, were difficult to deploy, were too complicated for the average user, and were not available to many customers. EX1003 at 2:5–6 (“DSL or Cable services [] require tremendous infrastructure costs on behalf of the CLEC.”); *id.* at 2:17–20 (“The high-speed services require expensive infrastructure enhancements to the local telephone companies’ facilities and cable plants, as well as expensive modems at the customer’s end . . .”); *see also* EX2015 at ¶ 43. Prior art configurations and methods also suffered from poor quality of service. EX1003 at 2:22–24 (“Internet based VoIP services suffer from Internet delays caused by a lack of true Quality of Service (QOS) capabilities across the Internet.”); *see also* EX2015 at ¶ 45.

B. The Claimed Invention

The claims of the '343 Patent are limited to particular configurations and/or operations of the computer network devices involved in an exchange of data designed to enable technological improvements such as increasing bandwidth, data throughput, quality of service, and/or connection reliability. EX2015 at ¶¶ 36-40.

Claim 1 of the '343 Patent recites the following:

1. A computer-implemented method for a first device to communicate via a wide area network, comprising the steps of:

- connecting the first device to a first network having a first bandwidth via a second device;

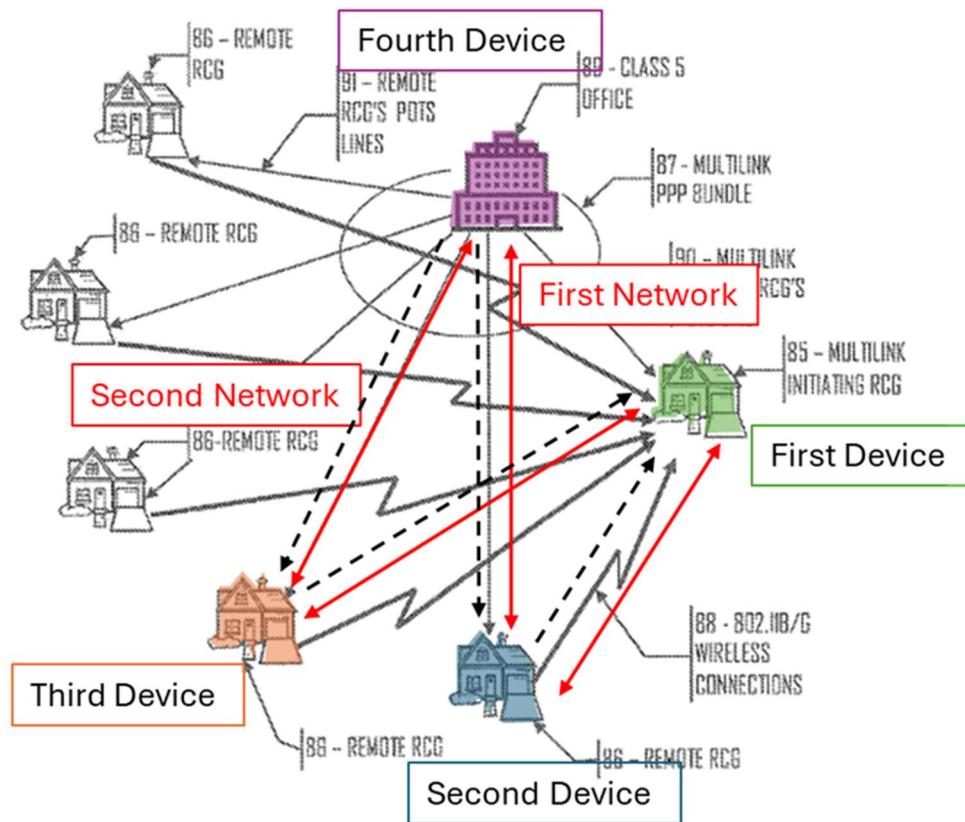
connecting the first device to a second network having a second bandwidth via a third device;

establishing a connection through which data may be transferred between the first device and a fourth device by concurrently using a first portion of the first bandwidth and a second portion of the second bandwidth, the connection having an effective bandwidth including the first portion of the first bandwidth and the second portion of the second bandwidth; and

receiving by the first device a data set from the fourth device via the connection, wherein a portion of the data set is received through the first network and a portion of the data is received through the second network.

EX1003 at 16:60–17:11; *see also* EX2015 at ¶ 37.

Using Figure 7 as an exemplary, non-exclusive example, this claimed configuration can be depicted as shown below:



EX2015 at ¶ 38.

Claim 12 of the '343 Patent recites the following:

12. A communication device capable of providing broadband communications services comprising:

a first connection via a first device to a first network having a first bandwidth including an allocated first portion of the first bandwidth;

a second connection via a second device to a second network having a second bandwidth including an allocated second portion of the second bandwidth; and

a third connection to a remote device via the first network and the second network, the third connection having an effective bandwidth including the allocated first portion of the first bandwidth and the allocated second portion of the second bandwidth;

wherein, in response to transmitting a request to the remote device via the third connection, the communication device receives a response from the remote device wherein a portion of the response is received via the first network and a portion of the response is received via the second network.

EX1003 at 17:46–18:17; EX2015 at ¶ 39.

Using Figure 7 as an exemplary, non-exclusive example, this claimed configuration can be depicted as shown below:

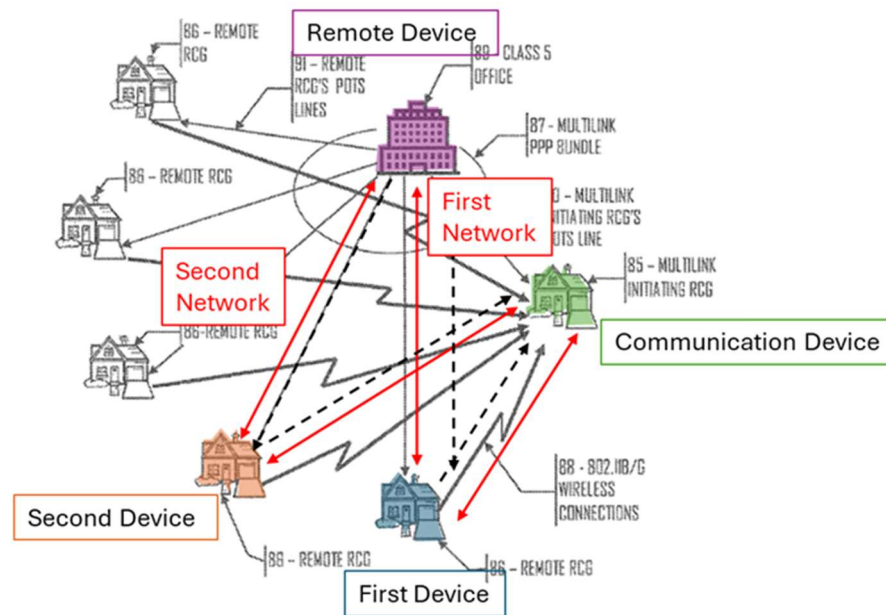


FIG. 7

EX2015 at ¶ 40.

III. ASSERTED PRIOR ART REFERENCES

A. Challenger

U.S. Patent Application Publication No. 2004/0001512 A1 (“Challenger”) (EX1017) discloses a method and apparatus for sharing bandwidth among a plurality of end users to increase the bandwidth available to each user as depicted in its Figure 2. EX2015 at ¶ 46.

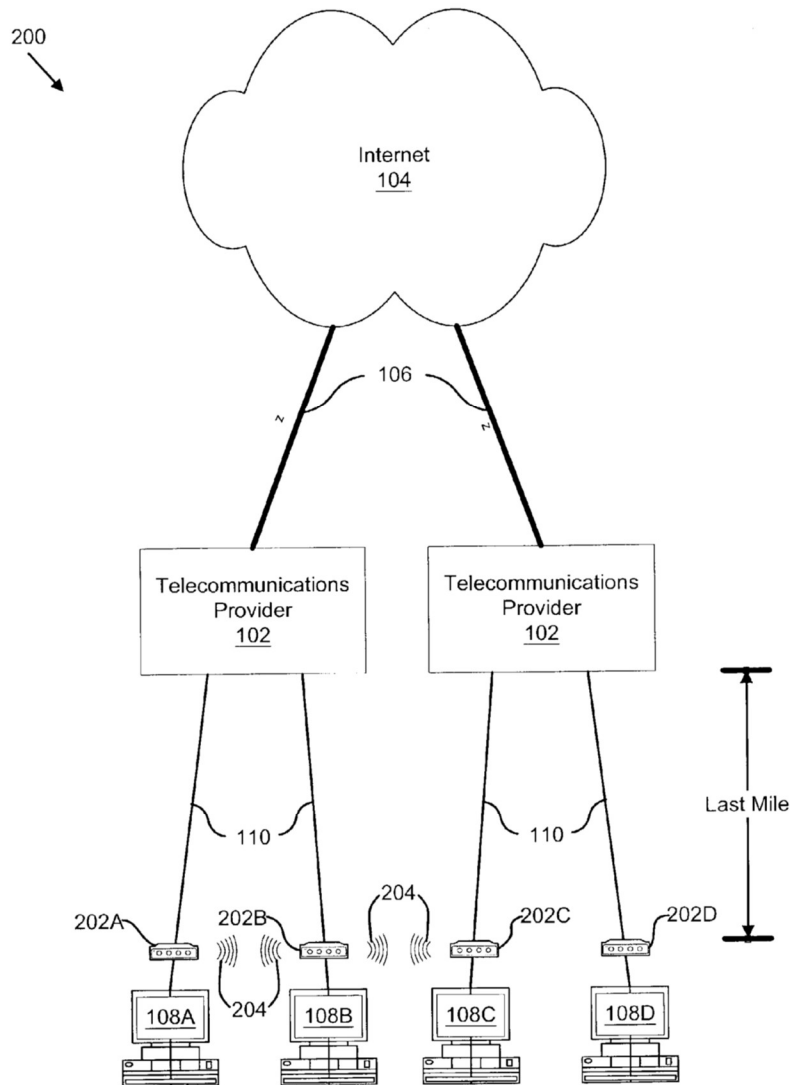


Fig. 2

Challenger also discloses the following sequence by which data is sent from a remote site through at least two bandwidth sharing devices (one device acting as a

master device and the other acting as slave device) in its Figure 7. EX1017 at FIG. 7; *see also* EX2015 at ¶ 47.

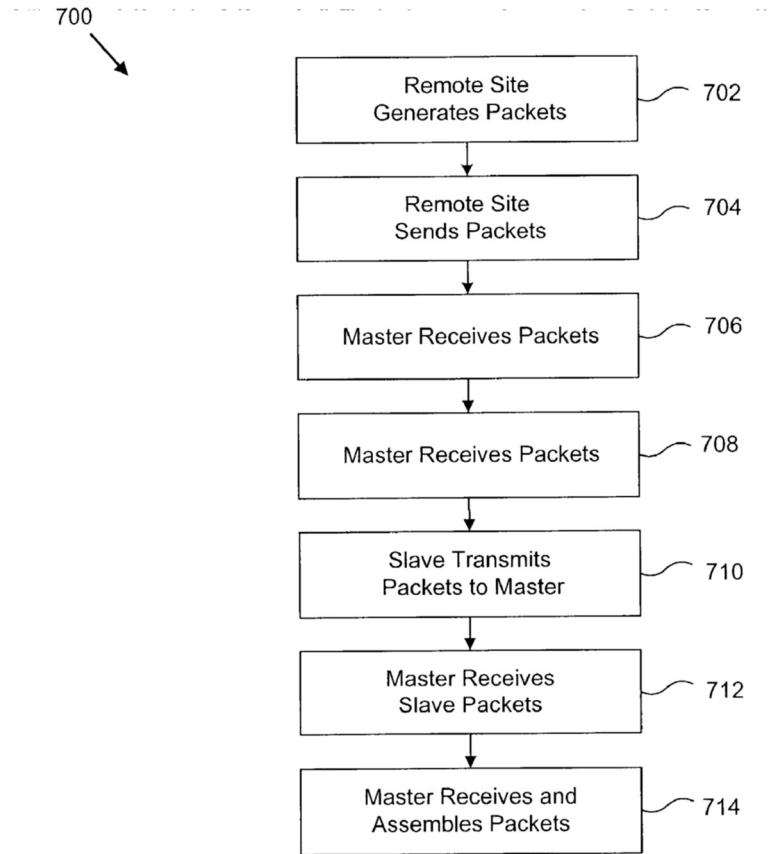


Fig. 7

B. Kotzin

U.S. Patent Application Publication No. 2003/0026221 (“Kotzin”) (EX1018)

discloses “[a] method and apparatus splits information into subsets of information to be communicated for a wireless apparatus.” EX1018 at Abstract; *see also*

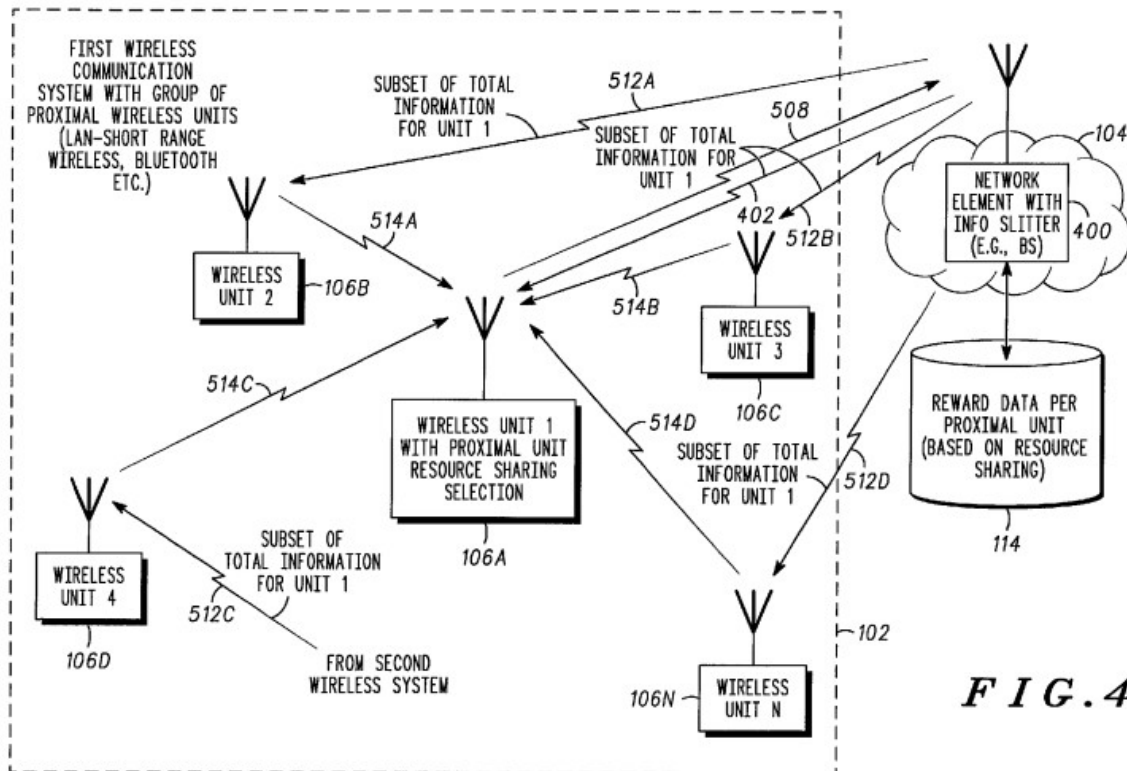


FIG. 4

EX2015 at ¶ 48.

Kotzin also discloses in its Figure 5 the following sequence by which participation of wireless units are requested and the data is sent from the network communication system through the multiple wireless units to the recipient wireless unit. EX1018 at FIG. 5; *see also* EX2015 at ¶ 49.

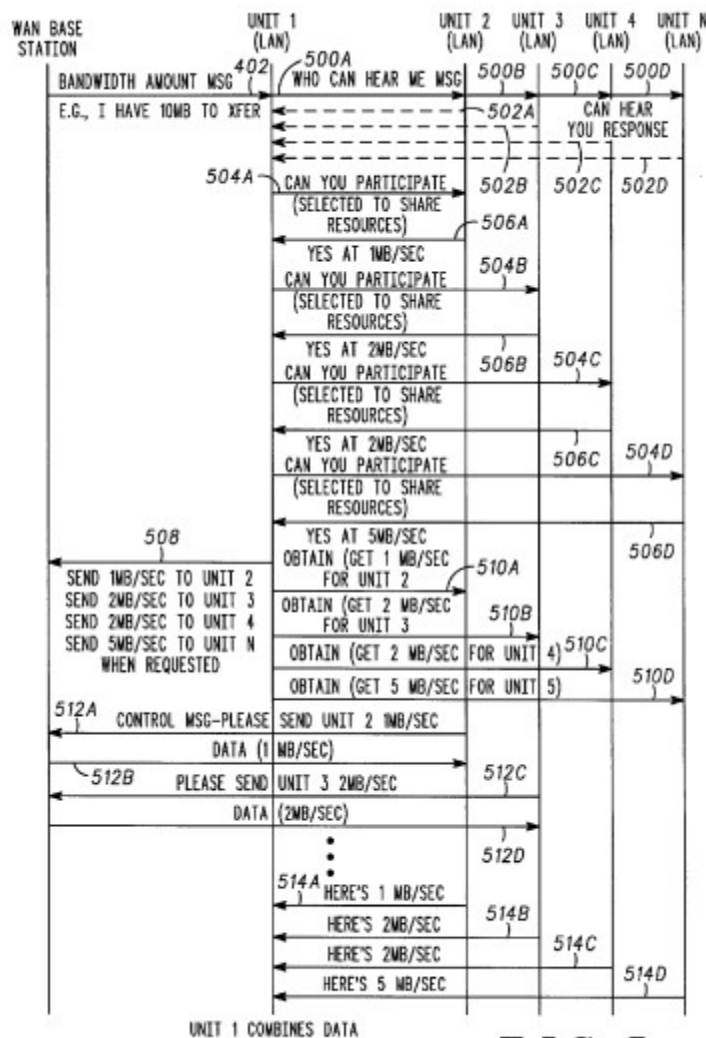


FIG. 5

IV. PRIORITY

A reference is prior art under Section 102(e) only if filed before the date of “the invention by the [Patent Owner].” 35 U.S.C. § 102(e) (Pre-AIA); *see, e.g., Sequenom v. Leland Stanford Junior Univ.*, IPR2013-00390, Paper 45 at 8 (PTAB Nov. 25, 2014); *Dynamic Drinkware LLC v. Nat’l Graphics, Inc.*, IPR2013-00131, Paper 42 at 7 (PTAB Sept. 12, 2014), *aff’d* 800 F.3d 1375 (Fed. Cir. 2015). As such, CAS may antedate and thereby remove both Challenger and Kotzin as prior art.

CAS may antedate Kotzin and/or Challenger by showing that Mr. Delangis either: (1) reduced the claimed invention before the prior art references' 35 U.S.C. 102(e) priority dates or (2) conceived the claimed invention prior to the references' respective 35 U.S.C. 102(e) priority dates “followed by a diligent reduction to practice.” *Purdue Pharma LP v. Boehringer Ingelheim GmbH*, 237 F.3d 1359, 1365 (Fed. Cir. 2001).

Conception—the “touchstone of inventorship”—occurs when the inventor formed in his mind “a definite and permanent idea of the complete and operative invention” such that “the idea is so clearly defined in the inventor’s mind that only ordinary skill would be necessary to reduce the invention to practice, without extensive research or experimentation.” *Burroughs Wellcome Co. v. Barr Labs., Inc.*, 40 F.3d 1223, 1228 (Fed. Cir. 1994) (internal quotation marks omitted). “Where a party seeks to show conception through oral testimony of an inventor, it must produce independent evidence corroborating that testimony,” and “[s]uch evidence is to be evaluated under a rule of reason.” *Purdue Pharma*, 237 F. 3d at 1365 (internal citations omitted).

Reduction to practice may be actual reduction to practice (*i.e.*, actually performing the claimed invention) or constructive reduction to practice (*i.e.*, filing a patent application). *Goeddel v. Sugano*, 617 F.3d 1350, 1353 (Fed. Cir. 2010). Like conception, to establish an actual reduction to practice, “an inventor’s testimony

must be corroborated by independent evidence,” with the evidence evaluated under a “rule of reason.” *Cooper v. Goldfarb*, 154 F.3d 1321, 1330 (Fed. Cir. 1998) (internal citation omitted).

“A patent owner need not prove the inventor *continuously* exercised reasonable diligence throughout the critical period; it must show there was *reasonably continuous* diligence.” *Perfect Surgical Techniques, Inc. v. Olympus Am., Inc.*, 841 F.3d 1004, 1009 (Fed. Cir. 2016) (emphasis in original). An inventor need “not record [his] progress on a daily, weekly, or even monthly basis” to demonstrate he did not abandon or unreasonably delayed his invention.” *Id.* “The same logic applies to the preparation of a patent application: the absence of evidence that an inventor and his attorney revised or discussed the application on a daily basis, standing alone is insufficient to determine that the invention was abandoned or unreasonably delayed.” *Id.* Instead, [o]ne must weigh the collection of evidence over the entire critical period to make such a determination.” *Id.*

As described in Eric Delangis’s declaration, he began developing an all-in-one communications device that would provide voice and data services in the late 1990s that CAS labeled the CopperJet™ systems. EX2023 at ¶¶ 5-19. Mr. Delangis conceived the idea which ultimately led to the invention claimed in the ’156 Patent in January 2001, when he came to the realization that while each of his neighbors had their own dial-up internet connection, that he could speed up his internet

connection if he could wirelessly connect to and simultaneously use his neighbor's dial-up internet connections. EX2023 at ¶12.

Upon conceiving of the idea of a remote communications gateway that sent broadband data using simultaneous multiple connections (*e.g.*, POTS and Wi-Fi) to increase bandwidth, he set about developing the protocols, software, and hardware to implement his idea, as well as attempting to raise capital for CAS to develop his concept into a commercial product. EX2023 at ¶13; EX2017 (Executive Summary corroborating some of the features of the invention that he conceived and his attempts to raise funding). Ultimately, he created a demo system. EX2023 at ¶¶16-31; EX2018 (photograph of the demo). By approximately January 2022, Mr. Delangis had completed the initial programing of the code for the demo to support the invention. EX2023 at ¶¶19-21.

Further, on April 23, 2002, Mr. Delangis transmitted a draft patent application and precursor to the provisional application that was ultimately filed to a patent attorney seeking assistance to file a patent application. EX2023 at ¶32. Within this draft are references to Broadband-Over-POTS. The draft is believed to have further included a number of drawings that ultimately became figures in the '343 Patent which are reproduced below:

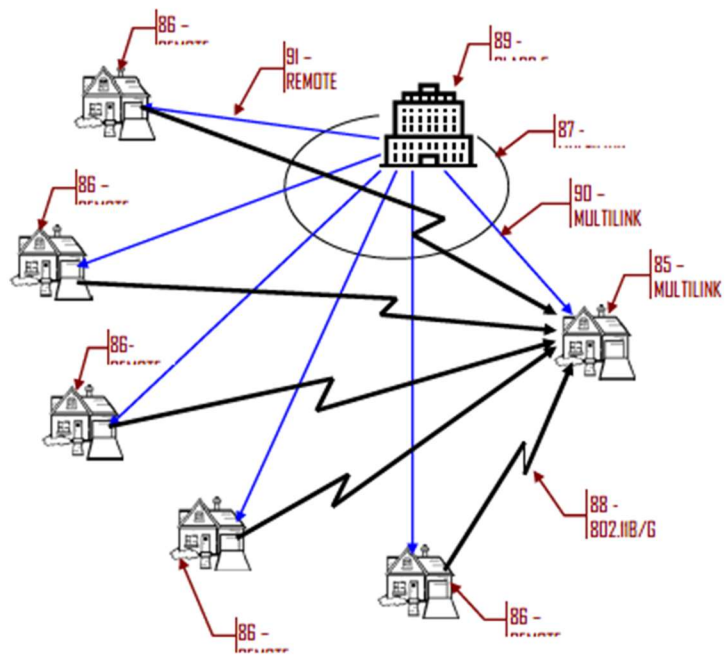


Figure 7 – Ad-hoc wireless LAN with broadband over POTS using 802.11b/g 11/54 Mbps wireless connections

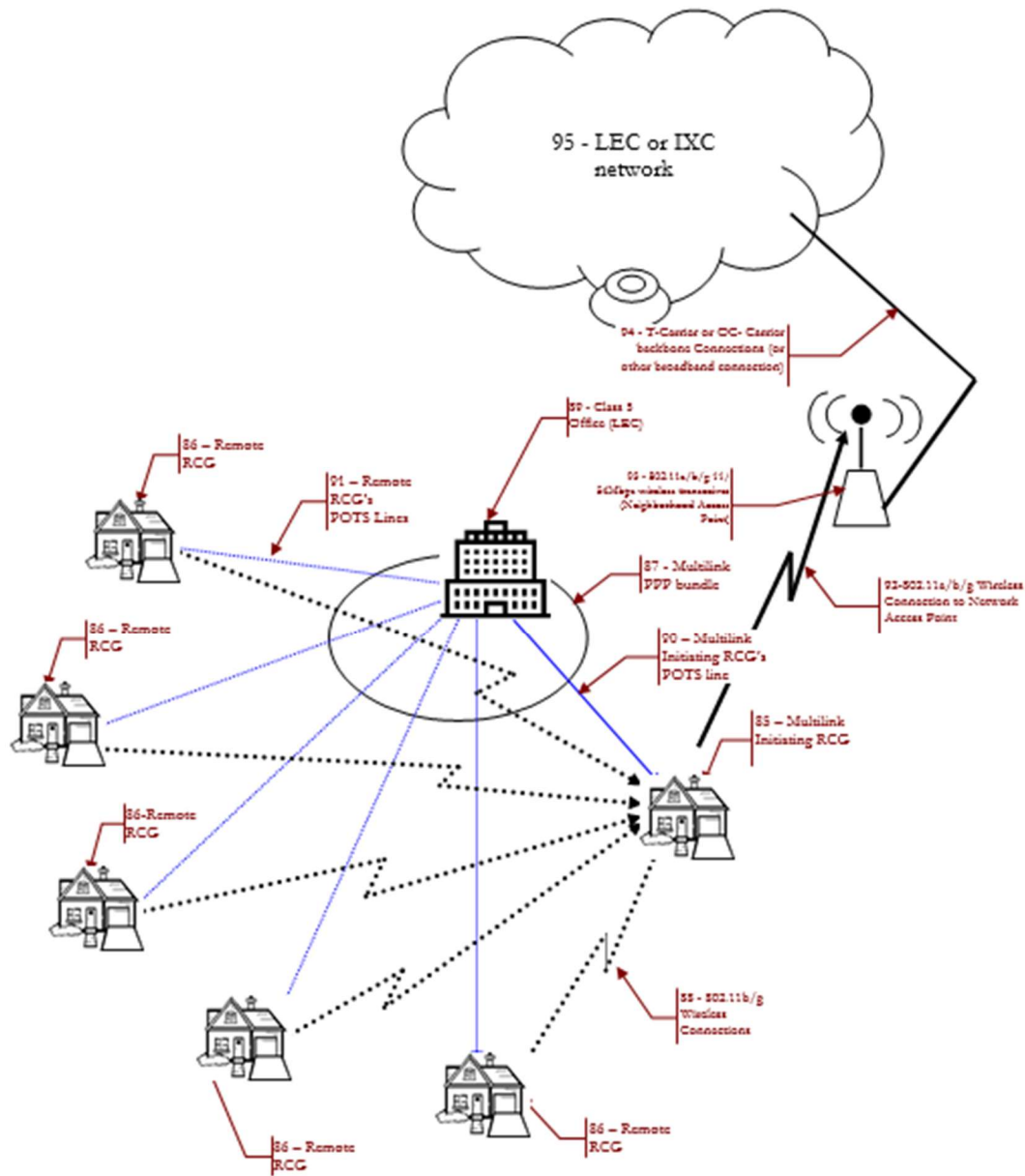


Figure 8 - Broadband over POTS w/ 802.11a/b/g 11/54Mbps wireless connections w/ broadband backbone connection to LEC or IXC

EX2023 at ¶¶33-34. Unfortunately, the actual filing of the application was complicated in that the attorney he reached out to was winding down his practice and failed to respond. EX2023 at ¶35. But upon learning of this complication, Mr.

Delangis proceeded to complete his draft application and filed it as a provisional application on October 15, 2002. EX2023 at ¶36.

Accordingly, there is evidence corroborating conception as of at least April 23, 2002, and diligent reduction to practice. Notably, Mr. Delangis continues to search decades-old files and hard drives, and Competitive Access Systems, Inc. (“CAS”) continues to identify and locate third parties looking for additional corroborating evidence.

V. RED HAT HAS FAILED TO CARRY ITS BURDEN TO PROVE THAT CLAIMS 1-20 OF THE ’343 PATENT ARE INVALID

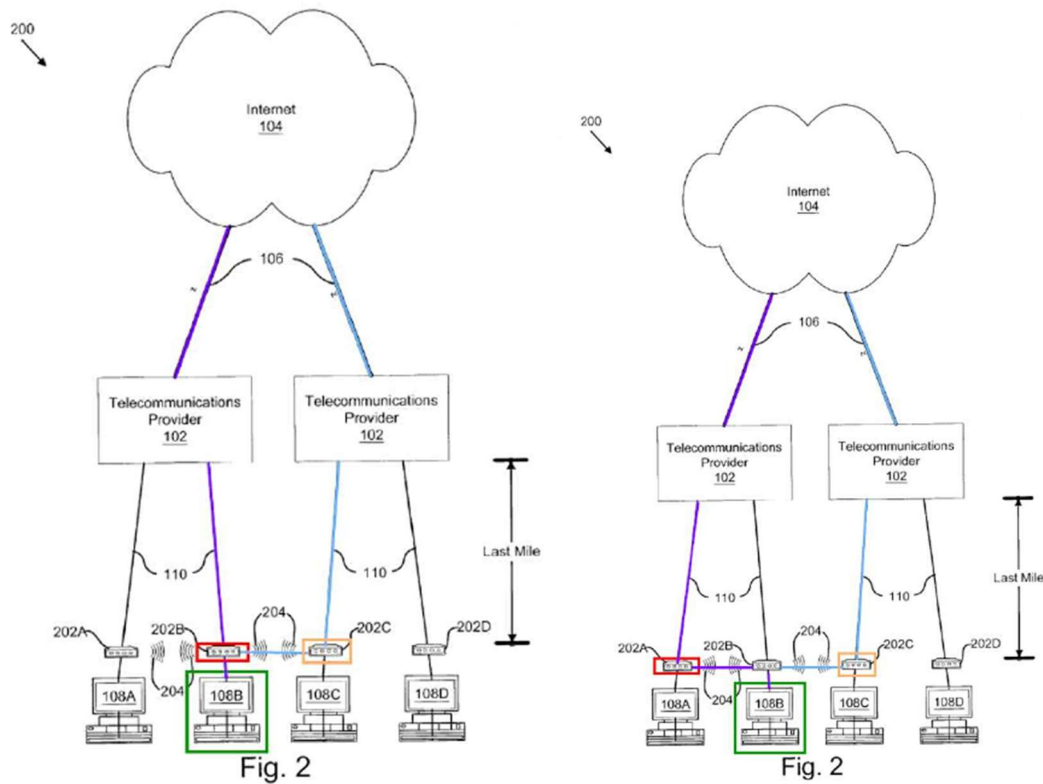
A. Red Hat’s Argument Under Ground 1 Fails to Demonstrate each Claim Limitation of Claim 1 is Disclosed or Rendered Obvious by Challenger Alone or in View of Peirce and Held

[1.3] “establishing a connection through which data may be transferred between the first device and a fourth device by concurrently using a first portion of the first bandwidth and a second portion of the second bandwidth, the connection having an effective bandwidth including the first portion of the first bandwidth and the second portion of the second bandwidth”

Contrary to Red Hat’s assertions, Challenger fails to meet this limitation in that it fails to expressly disclose the step of establishing an end-to-end connection between the first device and the fourth device that uses a first portion of the first bandwidth and a second portion of the second bandwidth. EX2015 at ¶¶ 50-51. While Challenger discusses establishing the individual connections between the master device and the slave devices, there is no discussion as to establishing a

connection with the remote server via the shared bandwidth connection. EX2015 at ¶ 52. Thus, while part of the limitation may be discussed, “establishing a connection,” the remaining portion of the limitation is not disclosed in Challenger: “through which data may be transferred between the first device and a fourth device by concurrently using a first portion of the first bandwidth and a second portion of the second bandwidth, the connection having an effective bandwidth including the first portion of the first bandwidth and the second portion of the second bandwidth.” EX2015 at ¶ 52.

Red Hat attempts to meet the whole limitation by referencing its three separate mappings of Challenger Figure 7. EX2015 at ¶ 53.



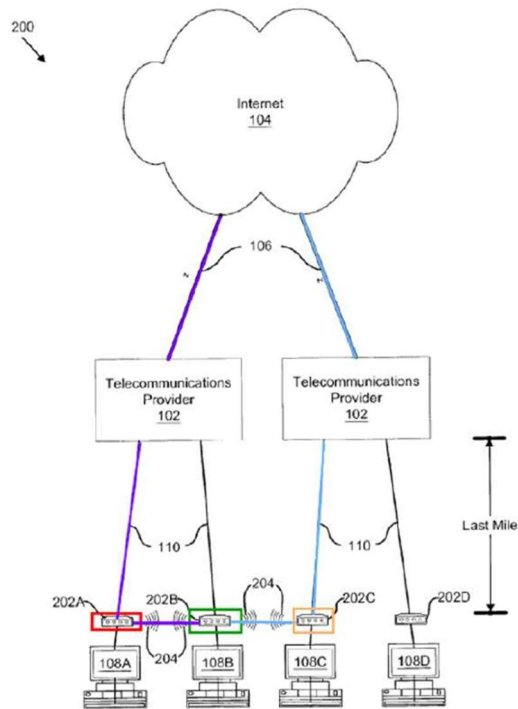
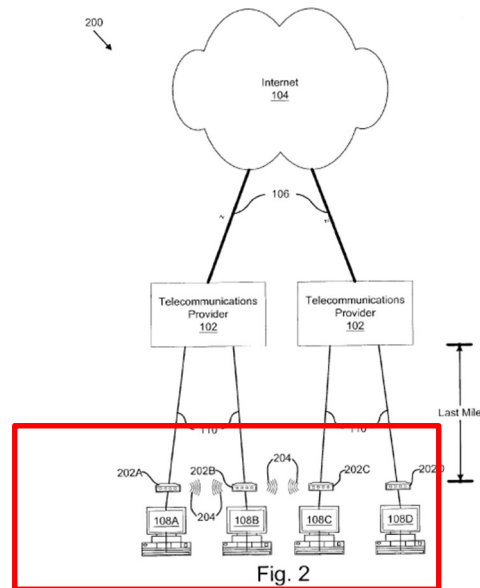


Fig. 2

Specifically Red Hat uses its MAPPING 1 to argue the limitation: “108B will connect to a remote Internet site via master BSD 202B, using all or some lesser portion of BSD 202B’s last-mile bandwidth (the claimed “first portion”)” and “108B will also connect to the remote Internet website via slave BSD 202C, using all or some lesser portion of BSD 202C’s last-mile bandwidth (the claimed “second portion”). EX2015 at ¶ 53. Red Hat further argues that the “sharing of bandwidth by BSD 202C is set up and managed by master BSD 202B.” citing Challenger at ¶¶[0038], [0046]. EX2015 at ¶ 53. The cited passages of Challenger merely address the connections between the master device and the slave devices (202A-202D). EX2015 at ¶ 53.



Challener never discusses the characteristics of the end-to-end data transfer in terms of multiple paths between two endpoints that are “connected” using higher-layer protocols. EX2015 at ¶ 54. For example, Challener is silent on how a “remote site” manages transmissions to the various “slave” devices. EX2015 at ¶ 54. This omission is telling in that managing multi-path transmission in a single, end-to-end connection, would necessarily involve knowledge and management by the remote system of the multi-path configuration. EX2015 at ¶ 54. To perform multiplexing of the individual slave connections into a single connection with the local node, the remote node necessarily needs to be aware of the multiple paths and multiple “connected” slave devices. EX2015 at ¶ 54.

In contrast, Challener suggest that each slave “connection” to the remote node is distinct, and no multiplexing of multiple paths for a single connection is required, in which case Challener did not need to address the issues associated with

the remote, communicating node on the Internet managing a multi-path connection. EX2015 at ¶ 55. For example, in Challenger’s architecture, the remote communicating endpoint would be unaware of the forwarding activity of the intermediate “slave” nodes. EX2015 at ¶ 56. The remote endpoint would be aware of the presence of the “slave” nodes because it would be communicating with them directly via conventional, independent “end-to-end sessions,” but it would be unaware of their status and responsibilities with respect to the “master” node. EX2015 at ¶ 56. The remote endpoint would also be aware of the presence of the “master” node for the same reasons. EX2015 at ¶ 56. The communications between the remote node and the “master” and “slave” nodes are carried out by “logical connections” that are completely independent from the aggregated session being managed by the “master” node using data forwarded between slaves. EX2015 at ¶ 56.

Challenger’s failure to address the complexity of a multi-path, end-to-end connection suggest that the “connections” between each of the “slave” nodes and the “remote system” are actually created via separate, conventional, end-to-end sessions with a single path between the slave and the Internet node. EX2015 at ¶ 57. The slave node simply acts on behalf of the master node, forwarding traffic as a silent pass-through. Challenger’s “connections” are local, link-layer interfaces between two devices, not end-to-end transport, session, or application layer

connections between communicating nodes. EX2015 at ¶ 57. Challenger’s use of multiple, local link-layer paths which use multiple end-to-end sessions to emulate a single end-to-end session through aggregation and forwarding at an intermediary is not equivalent to a single end-to-end session which leverages multiple end-to-end transport paths. EX2015 at ¶ 57.

Red Hat further argues that the “flow chart in Challenger’s Figure 7 demonstrates a method for the master BSD to receive communications from a remote Internet site in which the remote site sends a portion of packets directly to the master BSD and sends another portion of packets to the slave BSD(s), which in turn forward those packets to the master BSD to be assembled with the remaining packets.” *Also citing* Challenger at ¶¶[0065]-[0066]; *see* EX2015 at ¶ 58.

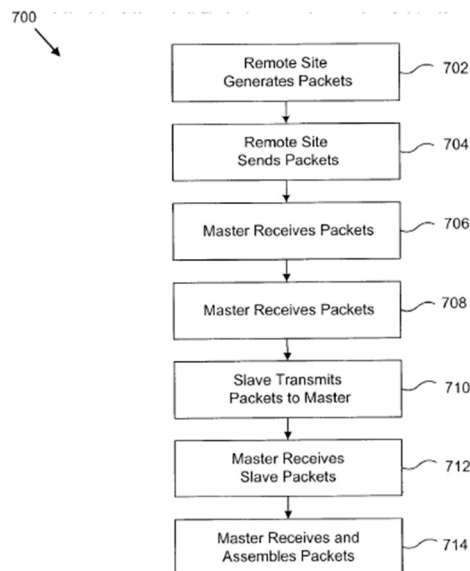


Fig. 7

The presence of step 710 is telling here. EX2015 at ¶ 59. The slave doesn't "reassemble" any packets, but instead is merely a simple pass-thru or relay device. EX2015 at ¶ 59. Only the master "reassembles" because the slaves aren't aware of any multipathing. EX2015 at ¶ 59. The slaves are setting up their own sessions on behalf of the master, and then just relaying data back and forth, as described above. EX2015 at ¶ 59.

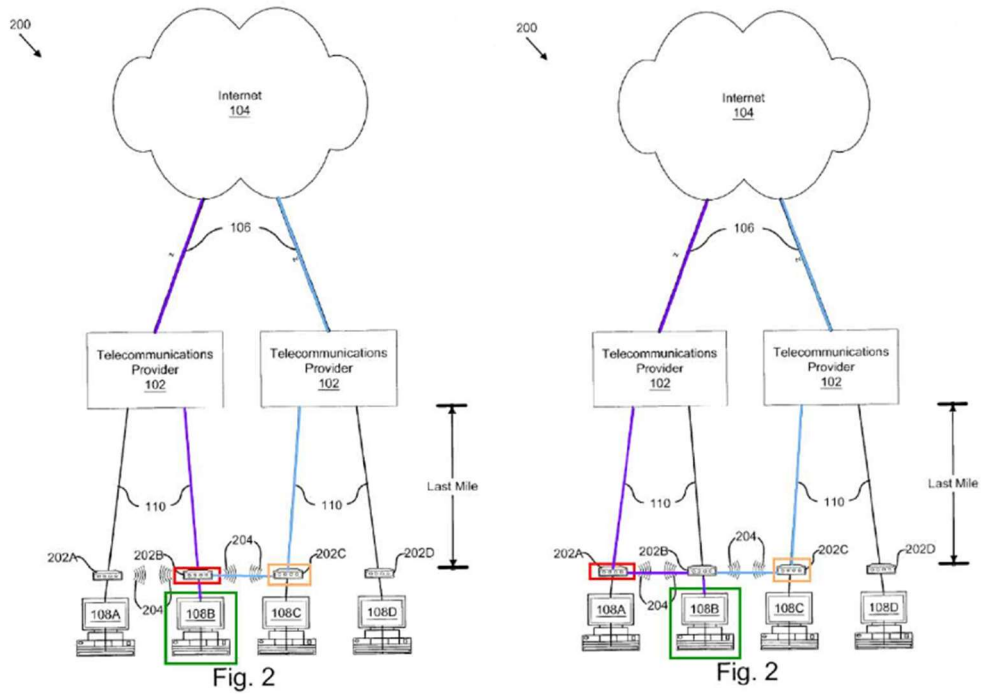
In Challenger, there is not an end-to-end connection where bandwidth of that single connection is used by the multiple link-layer paths concurrently. EX2015 at ¶ 60. Effectively, each link-layer path represents at least one, separate end-to-end connection where the bandwidths of these multiple connections are aggregated to increase the overall effective bandwidth perceived by the end-user (behind the master device). EX2015 at ¶ 60. This is very different than increasing the bandwidth of an *individual* end-to-end connection between the user and the remote site and does not meet the full claim limitation. EX2015 at ¶¶ 60-61.

B. Red Hat's Argument Under Ground 1 Fails to Demonstrate each Claim Limitation of Claim 12 is Disclosed or Rendered Obvious by Challenger Alone or in View of Peirce and Held

[12.p] "a communication device capable of providing broadband communications services ..."

As an initial matter, the preamble of Claim 12 should be treated as limiting in that it includes a limitation requiring the subject "communication device" to have the capability of "providing broadband communications services." EX2015 at

¶ 62. Red Hat attempts to argue that depending on the mapping of Challenger Figure 7 (see Mapping 1-3 below) either the terminal 108B or the BSD (202B) would meet the device. EX2015 at ¶ 63.



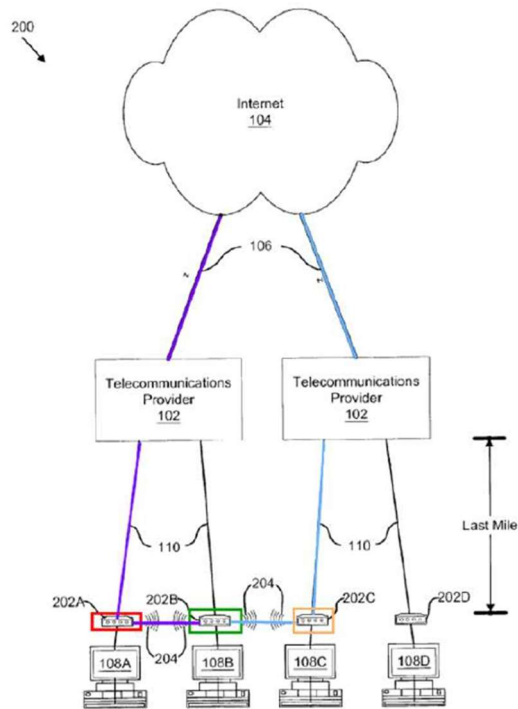


Fig. 2

Contrary to Red Hat’s assertion, the Challenger does not disclose the terminal 108B is capable of providing broadband communications services. EX2015 at ¶ 63. Rather the terminal 108B is reliant on the BSD 202B to provide broadband communications services. EX2015 at ¶ 63. Thus Red Hat’s arguments under Mapping 1 and Mapping 2 fail to meet the limitations presented in the preamble of Claim 12. EX2015 at ¶ 64-65

[12.4] “wherein, in response to transmitting a request to the remote device via the third connection ...”

Challenger fails to disclose sending a request to the remote device via the third connection. EX2015 at ¶ 66. In fact, Channeler is entirely silent on how any request is sent to the remote device. EX2015 at ¶ 66.

Red hat argues that the third connection “is a composite connection over both networks [the first network and the second network], where packets sent between the first and fourth devices are split over the two legs of this connection.” EX2015 at ¶ 65.

While the claim explicitly requires the “transmitting [of] a request to the remote device via the third connection,” Red Hat entirely misses this requirement and only asserts that “Challener’s first device (108B or 202B) requests a download from an Internet web.” EX2015 at ¶ 67.

Red Hat has entirely failed to address the requirement that the request be transmitted “via the third connection.”. EX2015 at ¶¶ 67-68.

C. Red Hat’s Argument Under Ground 2 Fails to Demonstrate each Claim Limitation of Claim 1 is Disclosed or Rendered Obvious Kotzin Alone or in View of Peirce and Held

[1.3] “establishing a connection through which data may be transferred between the first device and a fourth device by concurrently using a first portion of the first bandwidth and a second portion of the second bandwidth, the connection having an effective bandwidth including the first portion of the first bandwidth and the second portion of the second bandwidth” first portion of the first bandwidth and the second portion of the second bandwidth” second bandwidth”

Kotzin may discuss “establishing a connection through which data may be transferred between the first device and a fourth device,” but it does not disclose the remaining portion of this limitation “by concurrently using a first portion of the

first bandwidth and a second portion of the second bandwidth, the connection having an effective bandwidth including the first portion of the first bandwidth and the second portion of the second bandwidth.” EX2015 at ¶¶ 69-70.

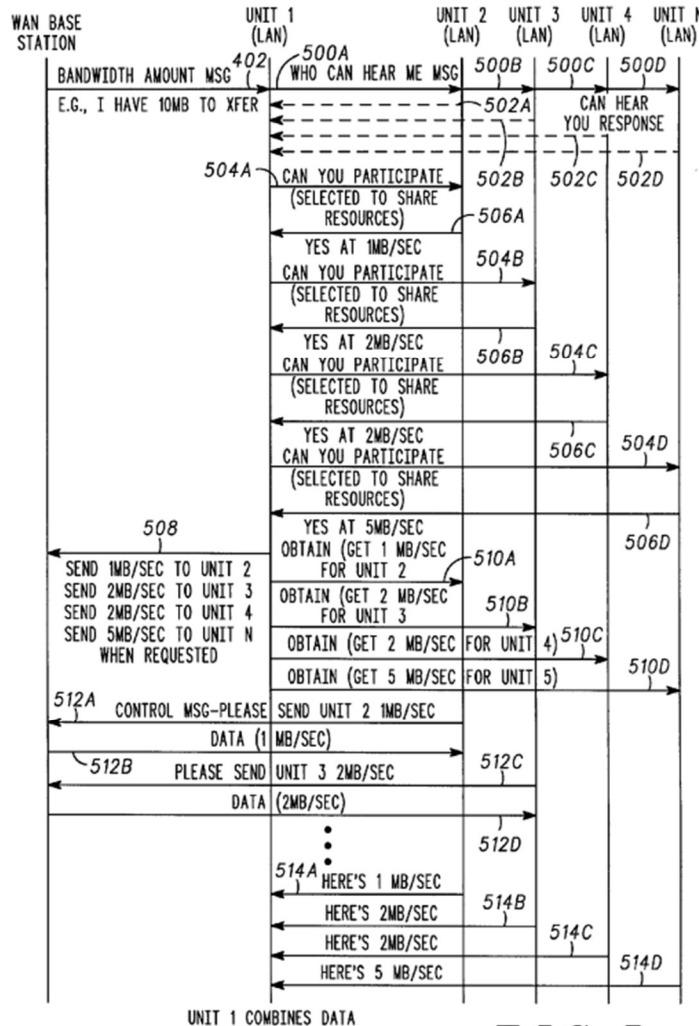


FIG. 5

The WAN system is establishing individual connections directly with the participating wireless devices (*e.g.*, 512A/B). EX2015 at ¶ 71. Unit 1 is just

recruiting the other wireless units and handing this configuration information to the WAN device so it knows which wireless devices to directly contact and how much data to send. EX2015 at ¶ 71.

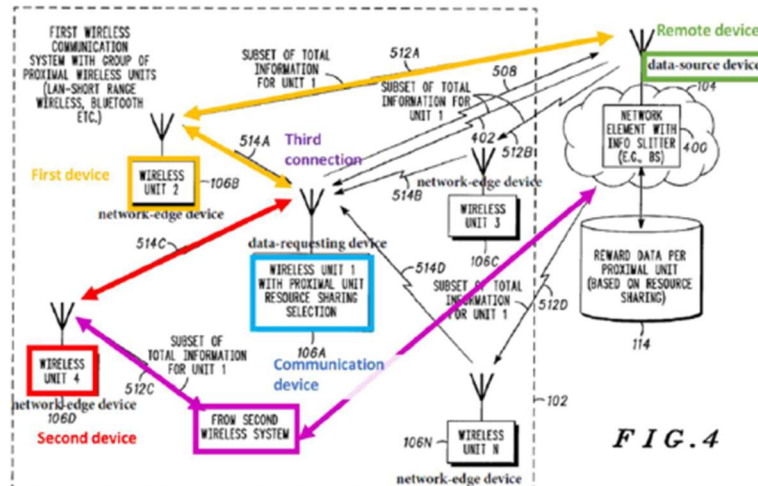
Kotzin does not disclose this limitation, because the WAN device is not using the connections to the individual wireless participants “concurrently” because they’re all independent. EX2015 at ¶ 72.

D. Red Hat’s Argument Under Ground 2 Fails to Demonstrate each Claim Limitation of Claim 12 is Disclosed or Rendered Obvious by Kotzin Alone or in View of Peirce and Held

[12.4] “wherein, in response to transmitting a request to the remote device via the third connection ...”

Kotzin fails to disclose sending a request to the remote device via the third connection. EX2015 at ¶¶ 77-78.

Red Hat argues that unit 1 transmits a request for data transmission to the Internet web server 400 after setting up the multi-link connection using messages 400, 500, 502, 504, 506, 508, 510, and 512 (orange). EX2015 at ¶ 73.



Notably, Red Hat fails to explain which request is allegedly made “setting up the multi-link connection using messages 400, 500, 502, 504, 506, 508, 510, and 512.” Nor does Red Hat explain how this request is “via the third connection.” EX2015 at ¶ 74.

Fig. 5 is explicit in demonstrating that the connections between the WAN system and the participating wireless systems are individual and unique (e.g. 512A/B). EX2015 at ¶ 75. Unit 1 is just recruiting participants (messages 500-506) and sending the list to the WAN system (message 508). EX2015 at ¶ 75. The messages (510) are essentially notifications telling the participants that they've been selected and to individually contact the WAN system directly (e.g. 512A, 512C). EX2015 at ¶ 75. The WAN system then responds to the participants individually to provide data (e.g. 512B, 512D). EX2015 at ¶ 75.

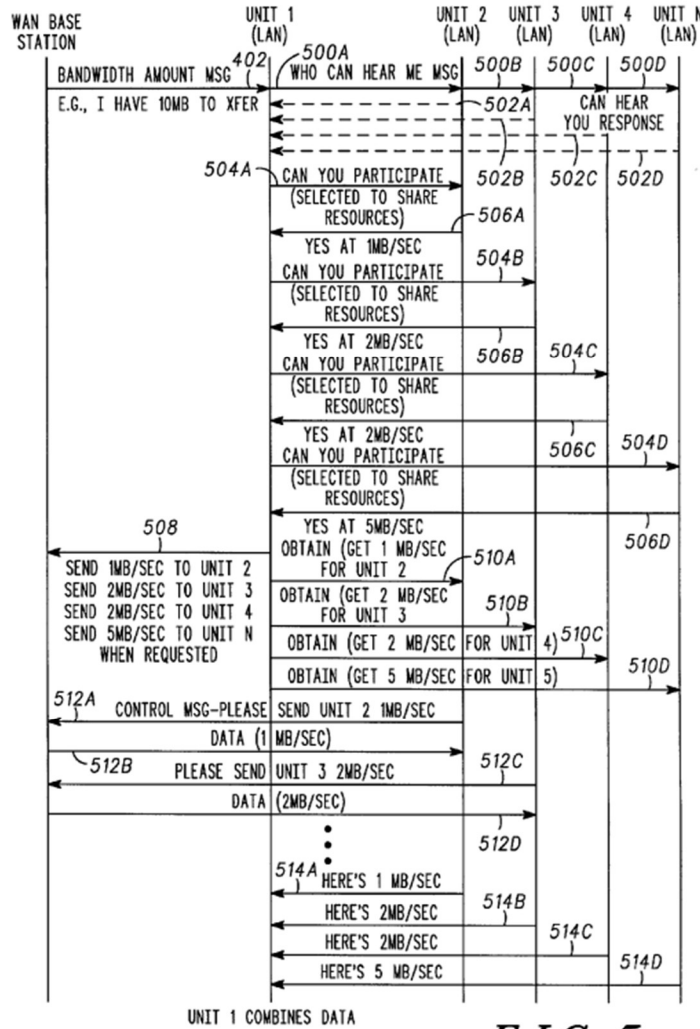


FIG. 5

Thus, rather than a request “via the third connection,” the sequence provided by Kotzin in Figure 5 discloses a series of individual requests over different connections (512A/B, 512C/D, etc.) from each unit. EX2015 at ¶¶ 76-78.

VI. CONCLUSION

For the reasons stated above and in CAS’s Motion for Discretionary Denial, Red Hat’s Petition for *Inter Partes* Review should be denied.

Dated: November 6, 2025

Respectfully submitted,

/s/ John R. Schroeder

John R. Schroeder, Reg. No. 63,573

STINSON LLP

7700 Forsyth Boulevard, Suite 1100

St. Louis, MO 63105

T: 314-345-7023; F: 314-863-9388

Email: john.schroeder@stinson.com

Counsel for Patent Owner,

Competitive Access Systems

CERTIFICATE OF SERVICE

Under 37 C.F.R. § 42.6(e), the undersigned certifies that on November 6, 2025, a copy of the foregoing PATENT OWNER'S PRELIMINARY RESPONSE, along with Exhibits 2016–2023, were served via email on the following:

Todd M. Friedman (Reg. No. 42,559)
tfriedman@kirkland.com
601 Lexington Ave.
New York, NY 10022
Phone (212) 446-4786
Fax: (212) 446-4900

James Marina (Reg. No. 41,969)
jmarina@kirkland.com
601 Lexington Ave.,
New York, NY 10022
Phone: (212) 446-4786
Fax: (212) 446-4900

Yimeng Dou (Reg. No. 69,770)
yimeng.dou@kirkland.com
695 Town Center Dr., Suite 1700
Costa Mesa, CA 92626
Phone: (213) 680-8283
Fax: (213) 680-8500

Brandon H. Brown (to seek *pro hac*
vice admission)
bhbrown@kirkland.com
555 California St., Suite 2700
Phone: (415) 439-1400
Fax: (415) 439-1500

W. Todd Baker (Reg. No. 45,265)
Todd.baker@kirkland.com
1301 Pennsylvania Ave., N.W.
Washington, D.C. 20004
Phone: (202) 389-3135
Fax: (202) 389-5200

/s/ John R. Schroeder

John R. Schroeder, Reg. No. 63,573

STINSON LLP

7700 Forsyth Boulevard, Suite 1100

St. Louis, MO 63105

T: 314-345-7023; F: 314-863-9388

Email: john.schroeder@stinson.com

Counsel for Patent Owner,

Competitive Access Systems

**CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME
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Under 37 C.F.R. § 42.24(d), the undersigned certifies that this Patent Owner's Preliminary Response complies with the type-volume limitation of § 42.24(b)(1) because it contains 5,303 words, excluding the parts exempted by § 42.24(a).

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Dated: November 6, 2025

Respectfully submitted,

/s/ John R. Schroeder

John R. Schroeder, Reg. No. 63,573

STINSON LLP

7700 Forsyth Boulevard, Suite 1100

St. Louis, MO 63105

T: 314-345-7023; F: 314-863-9388

Email: john.schroeder@stinson.com

*Counsel for Patent Owner,
Competitive Access Systems*