

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. IPR2025-01381
U.S. Patent No. 8,228,801

PATENT OWNER PRELIMINARY RESPONSE

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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

U.S. Patent No. 8,228,801 (the “’801 Patent”) (EX1013) was filed on October 19, 2009, and issued July 24, 2012, and claims priority as a continuation of a series of prior applications and issued patents to Application No. 10/686,375 filed on October 14, 2003 and Provisional Application No. 60/418,521 filed on October 15, 2002. In the field of multilink computer communications, the ’801 Patent’s priority is downright ancient.

Because of the ’801 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 ’801 Patent dates back to January 2001, well before either Challenger or Kotzin’s filing dates.

As explained below, the inventor of the ’801 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 Challener 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 November 12, 2025 Corrected Motion for Discretionary Denial or based on Red Hat's failure to demonstrate a reasonable likelihood that it will prevail on its unpatentability challenges.

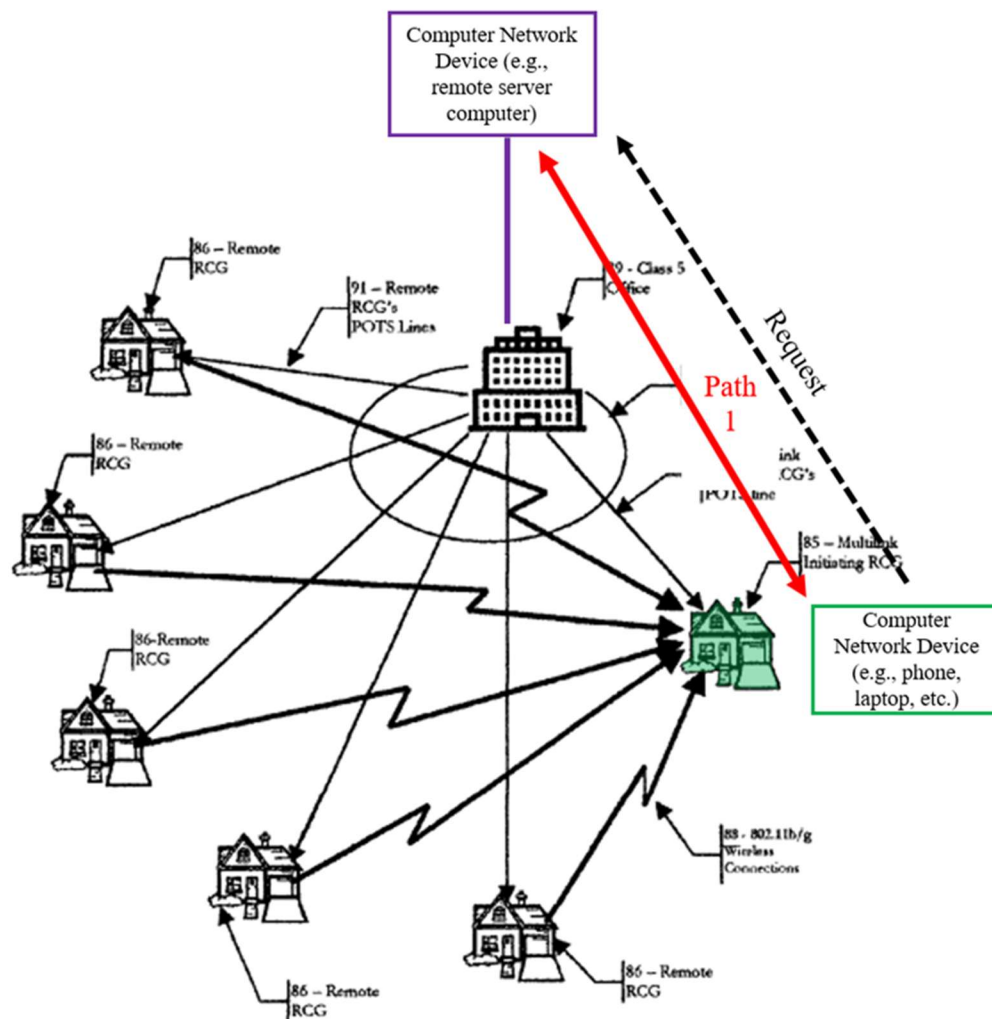
II. BACKGROUND

A. Background of the Invention

At its most basic level, the '801 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. EX2015 at ¶ 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 '801 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.

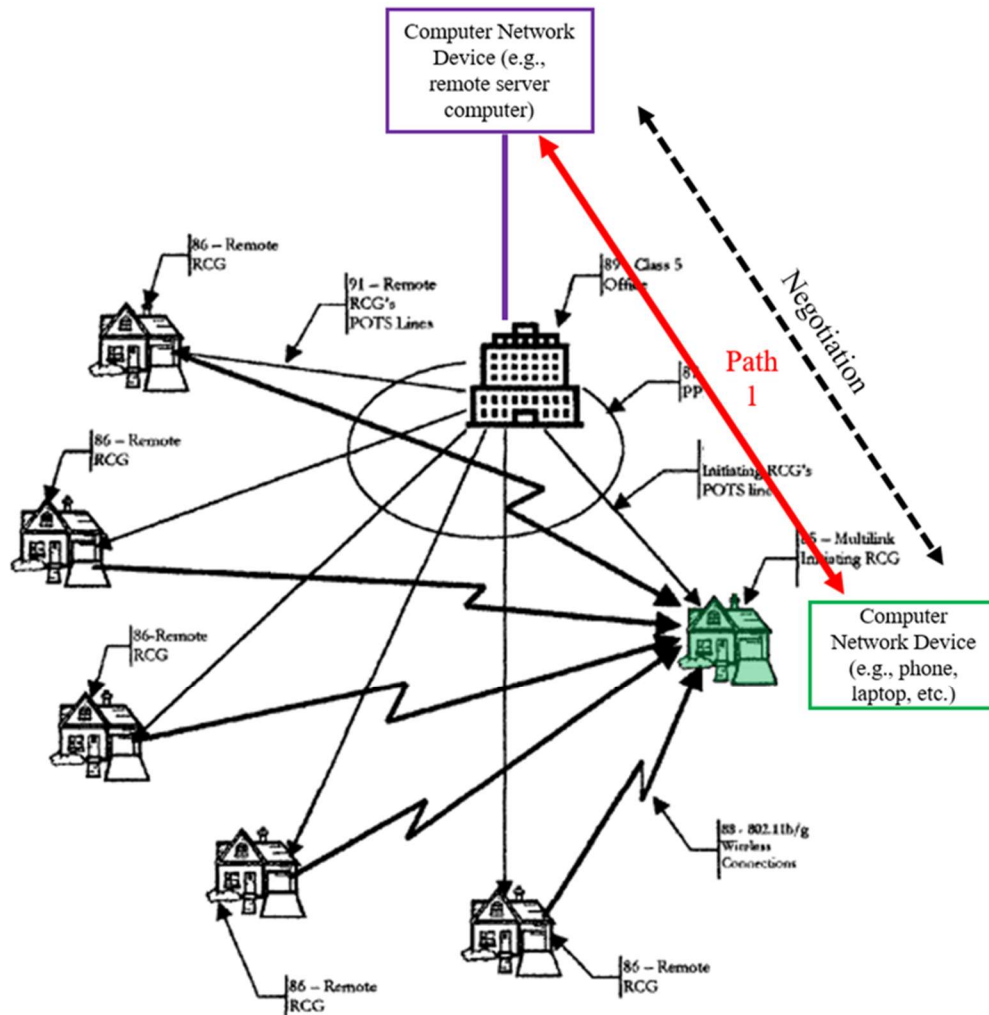
EX2015 at ¶ 26. For example, as depicted in turn in the annotated images below, the specification states: “Referring to FIG. 7, an RCG-85 that decides to initiate a multilink PPP session with a remote computer i.e. internet URL, requests a multilink PPP session with that URL resource via Link Control Protocol (LCP) session management[.]” EX1015 at 11:48-52; *see also* EX2015 at ¶ 26.



The two devices negotiate the pertinent multilink parameters. 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

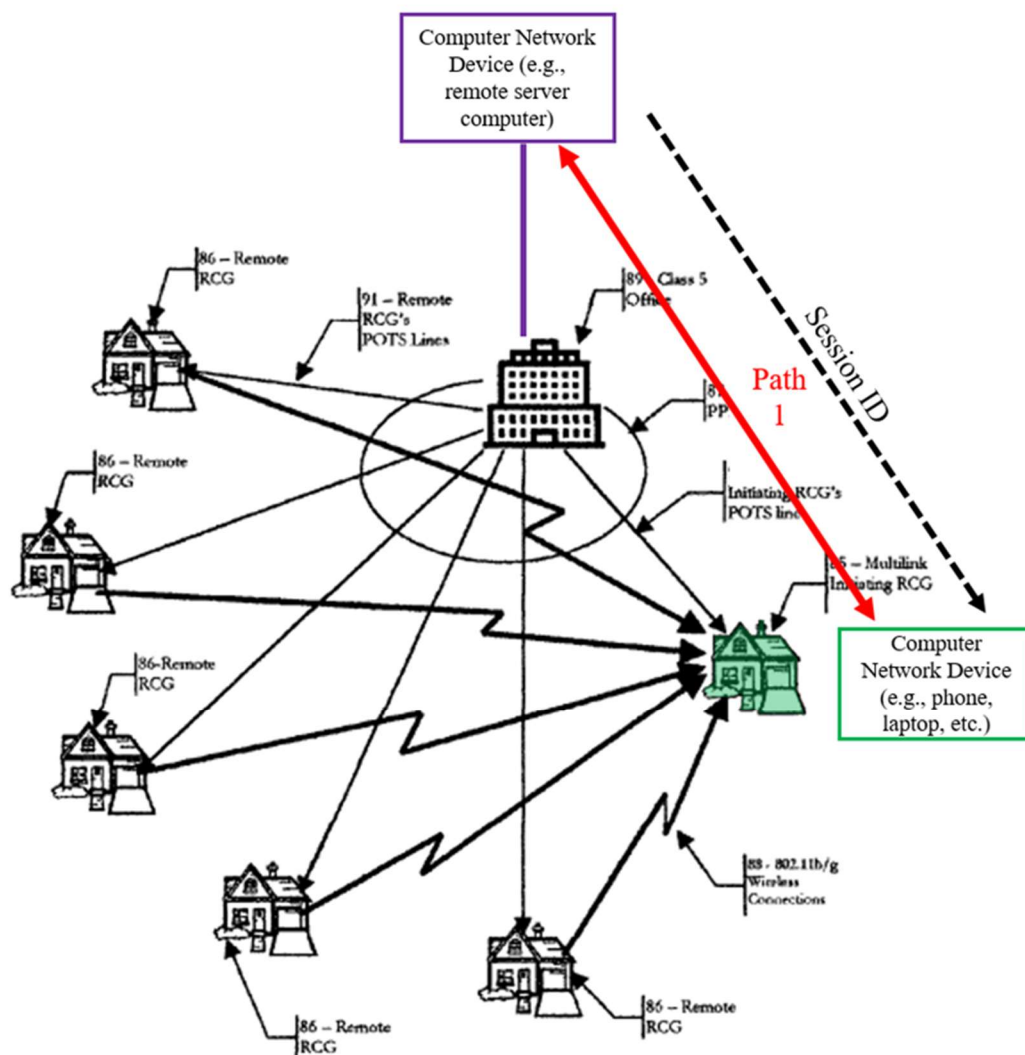
compression, packet size, sync/async, link quality monitoring, bit stuffing etc.”

EX1013 at 11:52-55; *see also* EX2015 at ¶ 27.



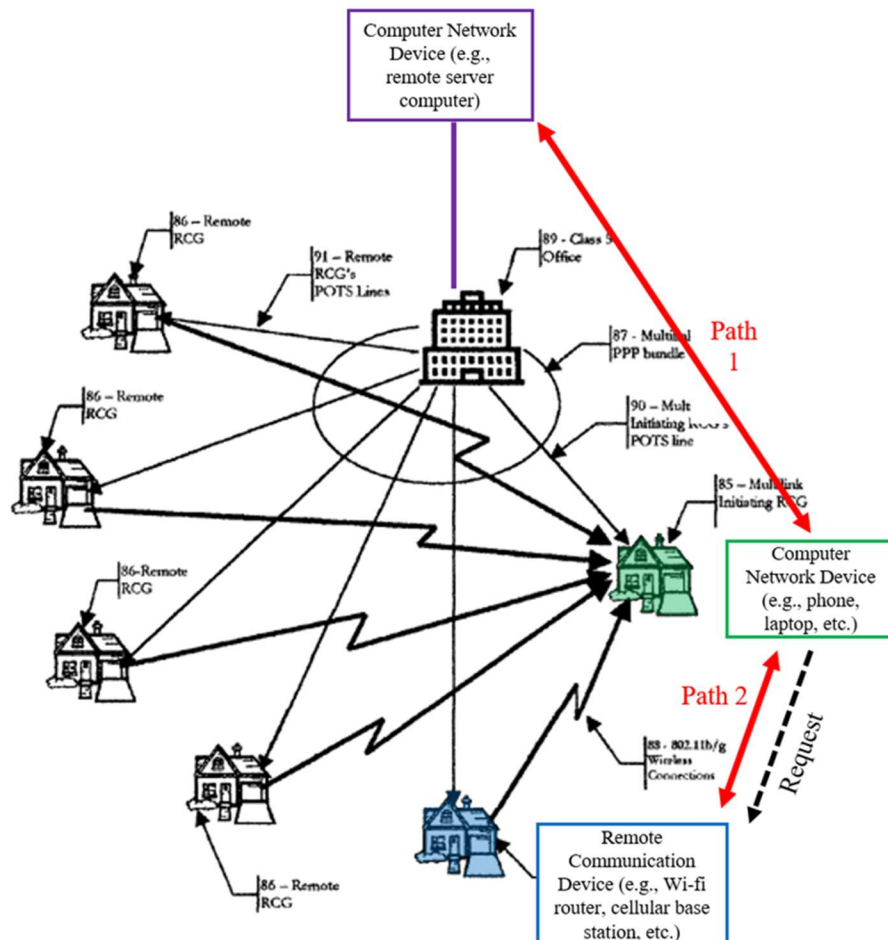
The multilink session setup is completed including that the remote server computer sends a multilink session ID to the computer network device (*e.g.*, phone, laptop, etc.), which is used to identify this particular multilink session and is also used for adding or removing links from the multilink session. 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.” EX1013 at 11:55-60; *see also* EX2015 at ¶ 28.

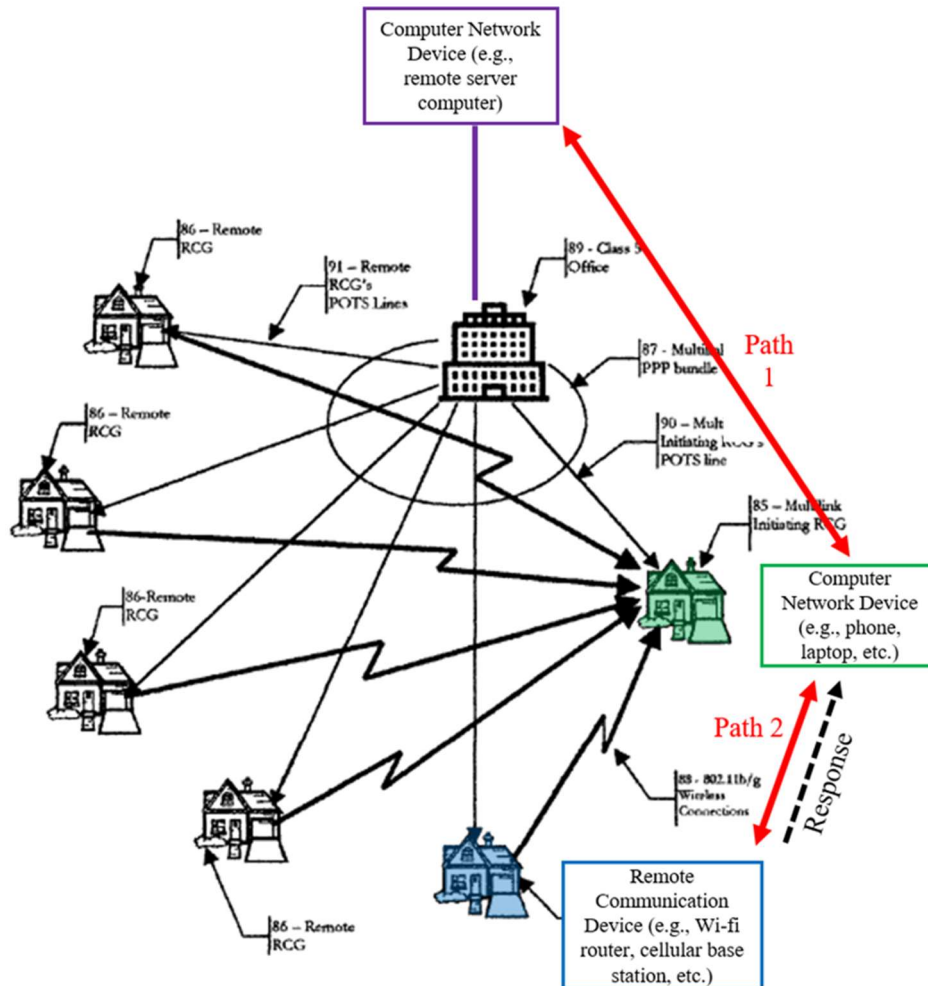


The computer network device (*e.g.*, phone, laptop, server etc.) then sends a multilink request to one or more remote communications devices such as, for example, a router or base station to participate in the multilink session. EX2015 at

¶ 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.” EX1013 at 11:62-12:4; *see also* EX2015 at ¶ 29.

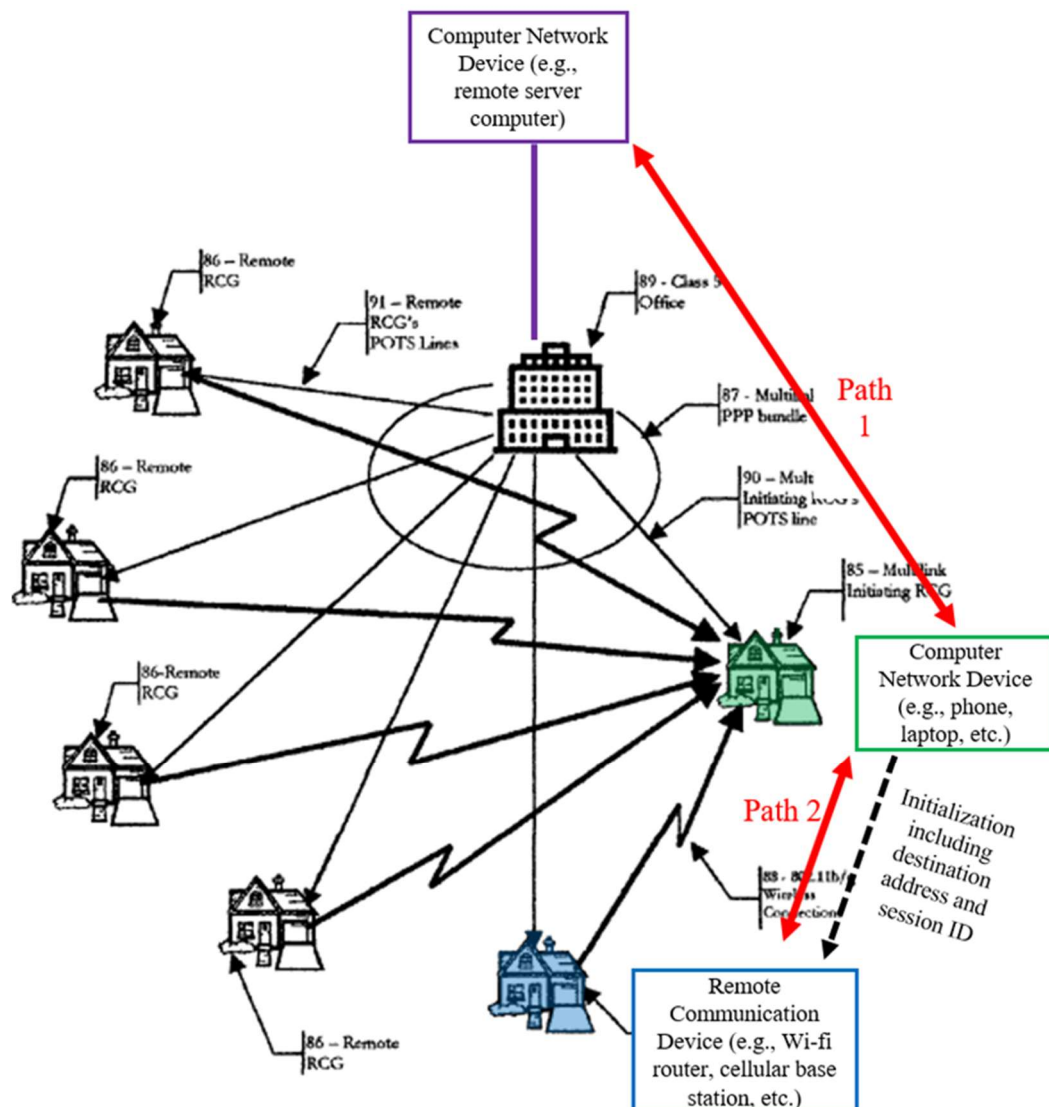


The remote communications devices respond back to the computer network device (*e.g.*, phone, laptop, etc.) with acceptance or denial. EX2015 at ¶ 30. For example, the specification states: “The selected remote RCGs-86 respond back to the initiating RCG with either an acceptance or denial of multilink 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.” EX1013 at 12:5-11; 12:24-29; *see also* EX2015 at ¶ 30.



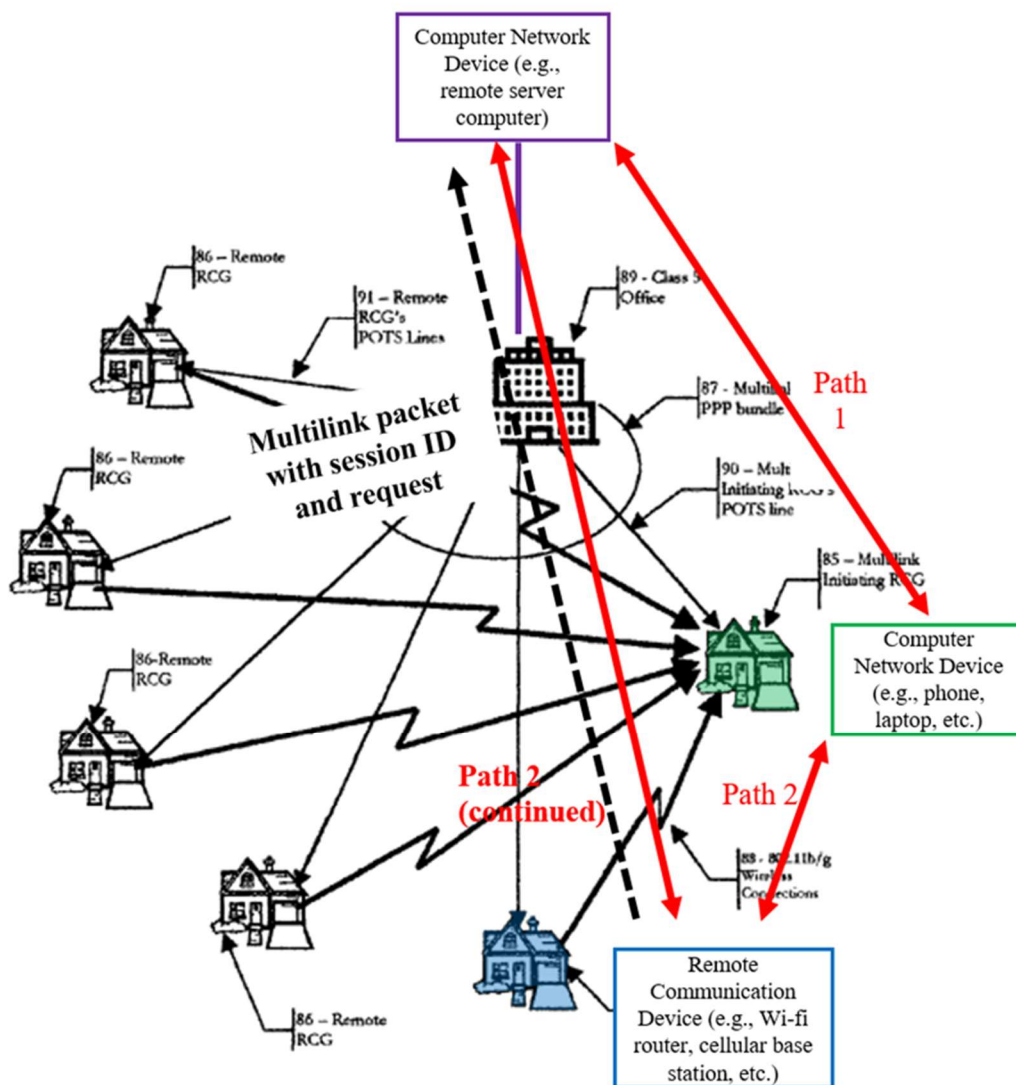
The computer network device (*e.g.*, phone, laptop, server, etc.) sends a multilink initialization packet containing the address of the destination as well as the multilink session ID (magic number) and any other pertinent information required for the remote communications device to join in the existing 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.” EX1013 at 12:29-38; *see also* EX2015 at ¶ 31.



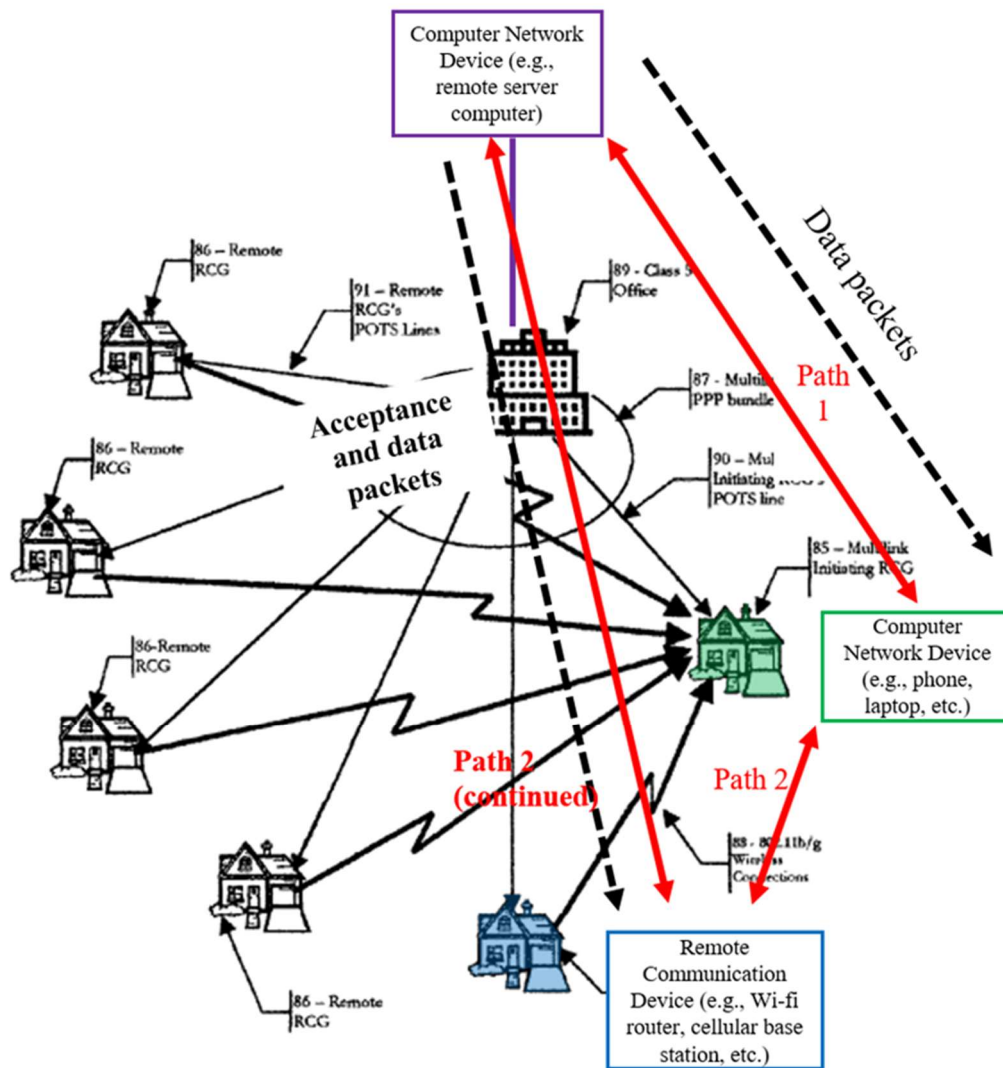
Each of the participating remote communications devices sends a multilink packet to the remote server computer with the multilink session ID and requests to

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.” EX1013 at 12:38-41; *see also* EX2015 at ¶ 32.



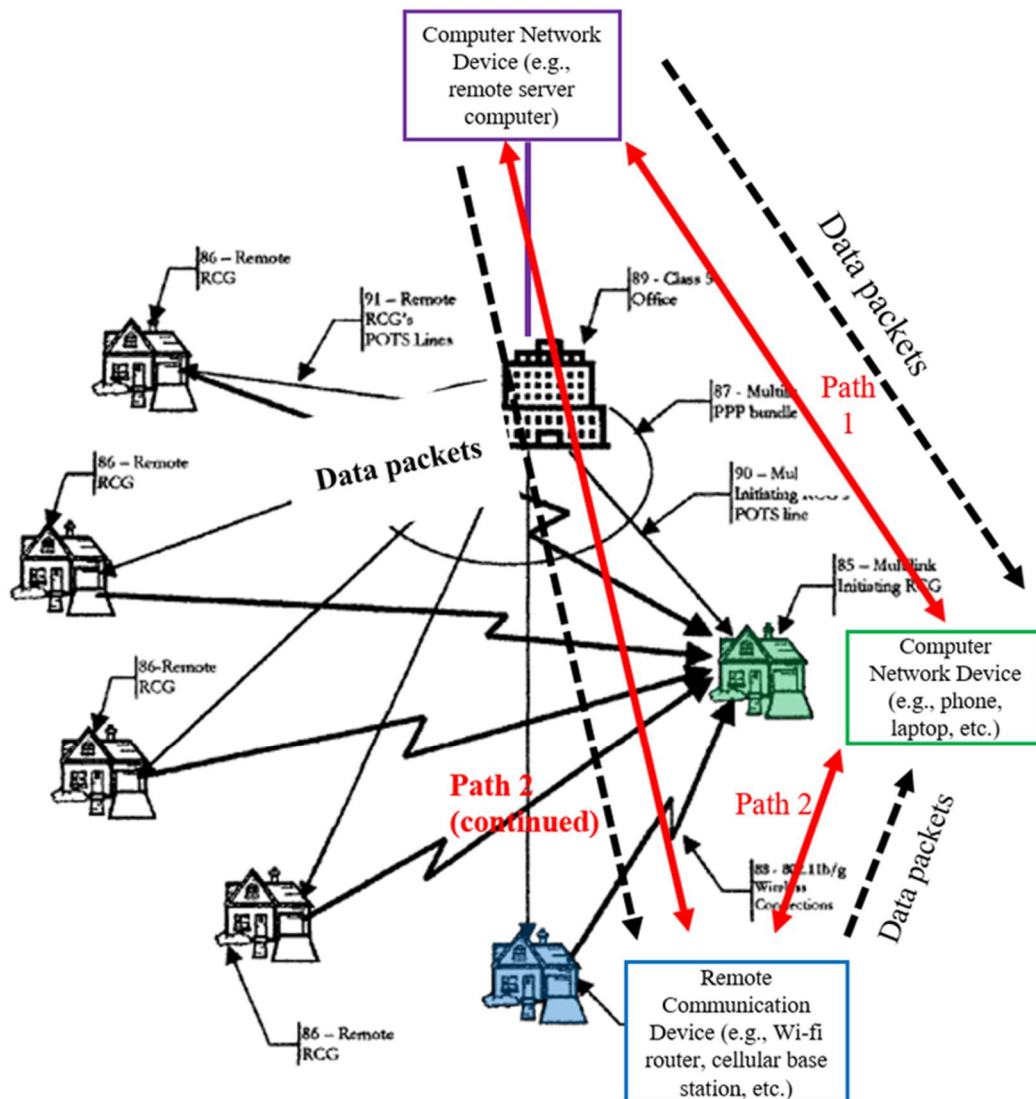
The remote server computer accepts the request and begins sending data

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.” EX1013 at 12:41-44; *see also* 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.” EX1013 at 12:44-48; *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.,* EX1013 at

11:26-35 (“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 '801 Patent and its family members improve upon the prior art. EX2015 at ¶ 41. Exemplary prior art configurations and operations of computer network devices involved in the exchange of data included the following: a 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 low bandwidth, data throughput, quality of service, and reliability and substantial costs. EX2015 at ¶ 42. For example, DSL and cable lines require tremendous infrastructure costs, suffer from high costs associated with purchase, installation, and maintenance, 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. For example, POTS lines had very limited bandwidth. EX1013 at 10:51-61 (“... 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. Similarly, DSL and cable lines required tremendous infrastructure costs, suffered from high costs associated with purchase, installation, and maintenance, and required expensive modems at the customer’s end, are difficult to deploy, are too complicated for the average user, and are not available to many customers. EX1013 at 1:62-64 (“DSL or Cable services [] require tremendous infrastructure costs on behalf of the CLEC.”); *id.* at 2:8-11 (“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. EX1013 at 2:12-15 (“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 ’801 Patent are limited to particular configuration and/or operation of 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.

Claim 1 of the ’801 Patent recites the following:

1. A communications device that is capable of providing broadband communications services, comprising:

at least one connection for connecting to a communications network;

at least one wireless interface for connecting wirelessly to at least one remote communications device; and

a processor that requests at least one remote communications device to assist in transferring data, sends a request to the at least one remote communications device for requesting use of a portion of unused bandwidth of the at least one remote communications device, receives a response from the at least one remote communications device, the response containing information about the portion of unused bandwidth, selects the at least one remote communications device with unused bandwidth, sends control information to the at least one remote communications device for participating in a multilink connection, receives packets from the at least one remote communications device and aggregates the data from the at least one remote communications device with data transfers from the at least one connection to increase data bandwidth for the communications device.

EX1013 at 16:31-52.

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

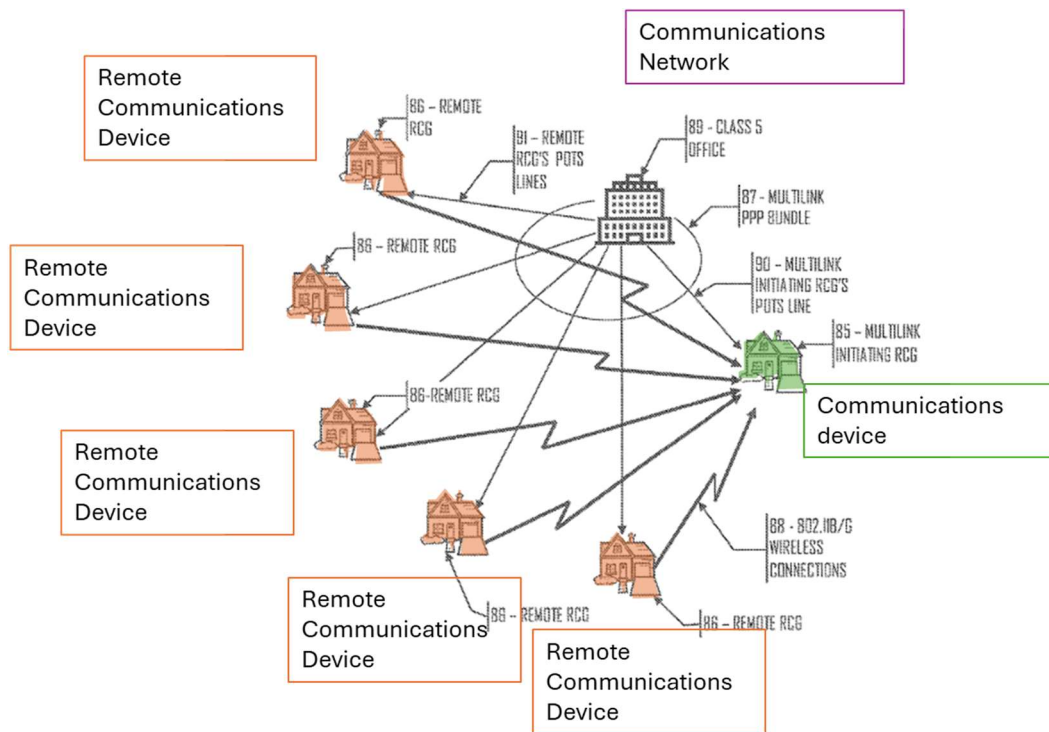


FIG. 7

EX2015 at ¶ 40.

Claim 10 of the '801 Patent recites the following:

10. A communications device that is capable of providing broadband communications services, comprising:

at least one connection for connecting to a network;

at least one wireless interface for connecting wirelessly to remote communications devices; and

a processor that requests the remote communications devices to transfer portions of data, sends a request to the remote communications devices for requesting use of a portion of unused bandwidth of each of the remote communications devices, receives a response from each of the remote communications devices, the response containing information about the portion of unused bandwidth for each of the remote communications devices, selects a group of the remote communications devices with a larger combined, unused

bandwidth, sends control information to the selected remote communications devices for participating in a multilink transfer, and receiving packets from the selected remote communications devices and combines and sequences the portions of the data from the remote communications devices with second data transferred from the at least one connection to increase data bandwidth for the communications device.

EX1013 at 17:21-43.

Claim 15 of the '801 Patent recites the following:

15. A communications device that is capable of providing broadband communications services, comprising:

at least one connection for connecting to a communications network;

at least one wireless interface for connection wirelessly to at least one cellular phone; and

a processor that requests the at least one cellular phone to assist in transferring data, sends a request to the at least one cellular phone for requesting use of a portion of unused bandwidth of the at least one cellular phone, receives a response from the at least one cellular phone, the response containing information about the portion of unused bandwidth, selects the at least one cellular phone with unused bandwidth, sends control information to the at least one cellular phone for participating in a multilink connection, receiving packets from the at least one cellular phone and aggregates the data from the at least one cellular phone with data transfers from the at least one connection to increase data bandwidth for the communications device.

EX1013 at 18:17-36.

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.

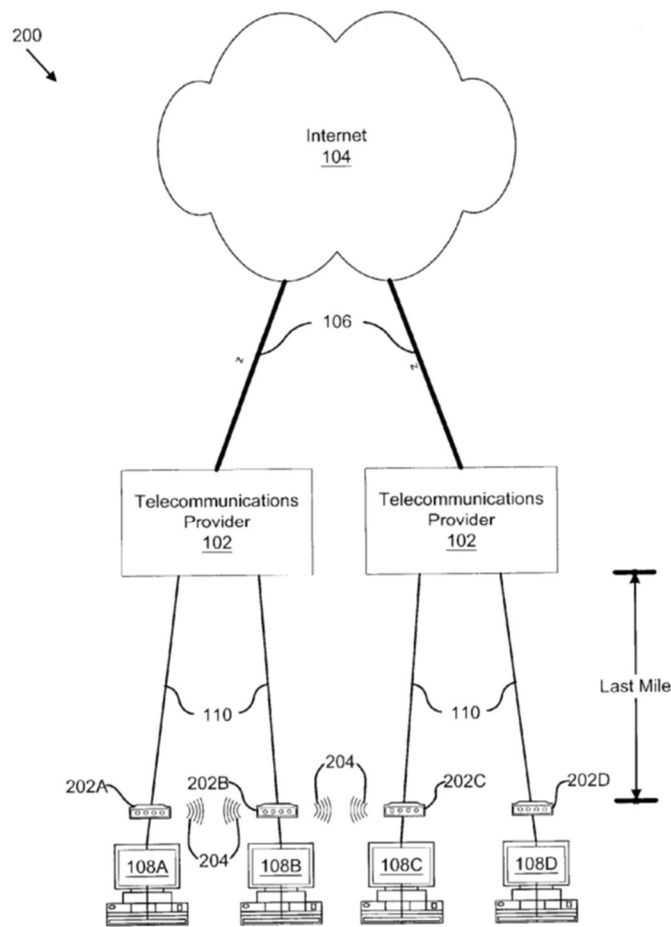


Fig. 2

Challener 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. EX2015 at ¶ 47.

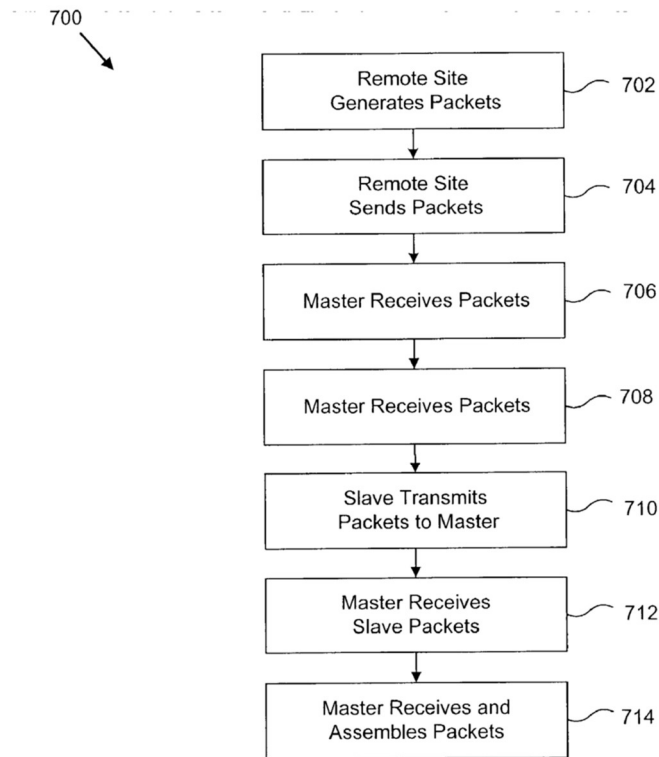
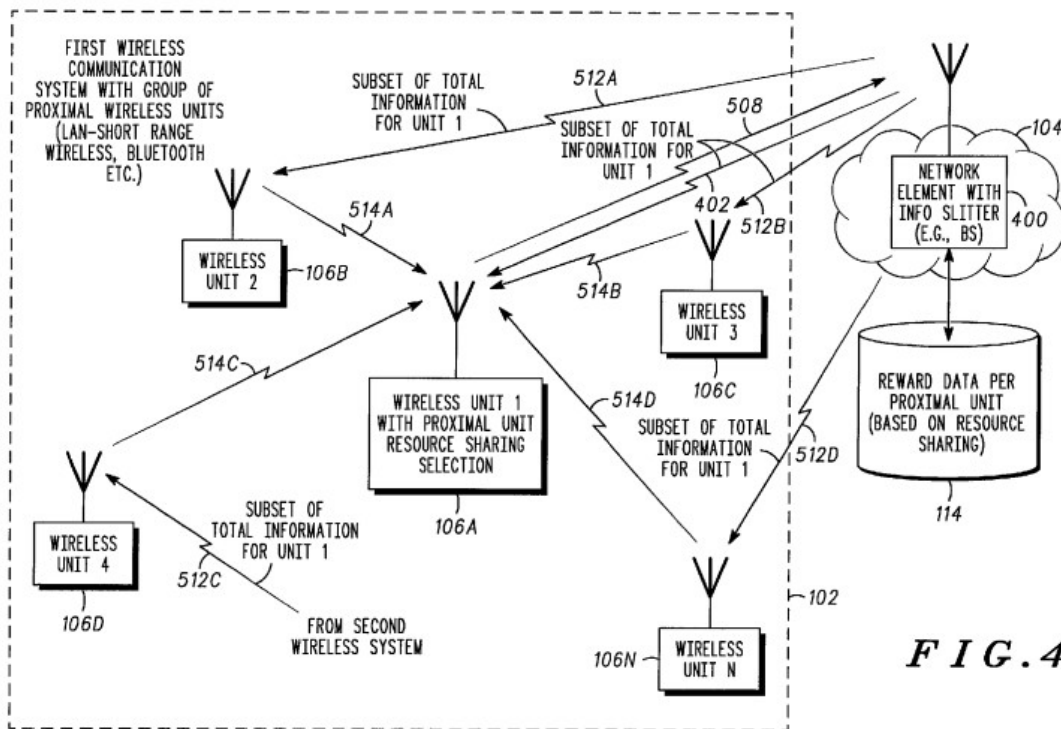


Fig. 7

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* EX2015 at ¶ 48.



EX1018 at FIG. 4.

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. EX2015 at ¶ 49.

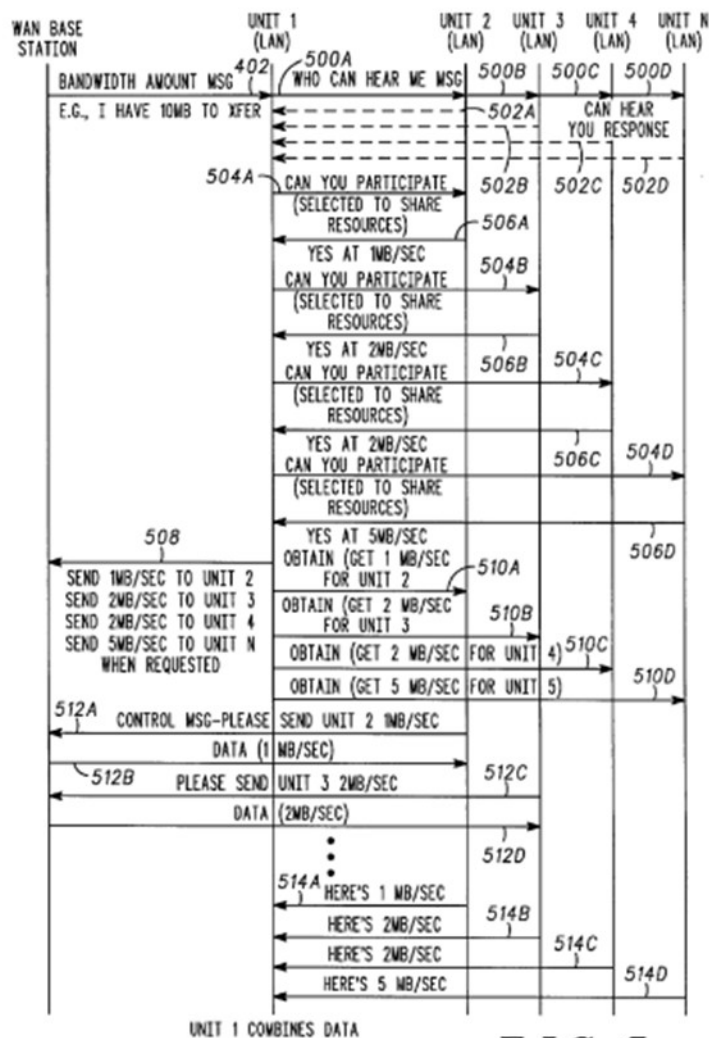


FIG. 5

EX1018 at Fig. 5.

IV. CLAIM CONSTRUCTION

A. “Multilink Connection”

In the context of the '801 Patent that claim term “multilink connection” should be construed to mean “a connection for a data transfer session using at least two network interfaces to form links between two devices, where each link is associated with the same session identification for assisting in the data transfer, and at least one

of the links connects the two devices through a remote communications device having available bandwidth to assist with the data transfer.” EX2015 at ¶¶ 50-57.

The claim language supports that “multilink connection” comprises “a connection for a data transfer session” portion of the proposed construction. EX2015 at ¶ 51. For example, in Claim 1, once control information is sent to the at least one remote communications device for participating in a multilink connection, the claimed method comprises “receives packets from the at least one remote communications device and aggregates the data from the at least one remote communications device with data transfers from the at least one connection to increase data bandwidth.” EX1013 at 16:48-52; *see also* EX2015 at ¶ 51.

The specification also supports this construction. EX1013 at 11:36-46 (“The multilink PPP connection-87 is initiated by an RCG when it determines that the file (or streaming service) that it is to download (receive) is of sufficient size or requires a minimum amount of bandwidth to justify the use of a multilink PPP connection. This determination can be made on many different criteria such as the file size, type of data being transmitted, the type of compression if any, a Quality-of- 40 Service requirement or any other pertinent information. (Since a certain amount of overhead is required to set up a Multilink PPP connection, it doesn't make sense to use it for small or low data rate transfers.)”); 11:48-51 (“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”); *see also* EX2015 at ¶ 52.

The claim language supports that “multilink connection” comprises “using at least two network interfaces to form links between two devices” portion of the proposed construction. EX2015 at ¶ 53. For example, in Claim 1 multiple interfaces are identified for the multilink communication. EX1013 at 16:31-52 (“1.A communications device that is capable of providing broadband communications services, comprising: at least one connection for connecting to a communications network[and] at least one wireless interface for connecting wirelessly to at least one remote communications device ... [to] receive[] packets from the at least one remote communications device and aggregates the data from the at least one remote communications device with data transfers from the at least one connection”); *see also* EX2015 at ¶ 54. Notably, the person of skill in the art would have recognized that the "at least one connection for connecting to a communications network" would have required a separate network interface from the "at least one wireless interface." EX2015 at ¶ 55.

The specification also supports this construction. EX1013 at 3:35-41 (“Broadband networking for home computers and appliances as well as wide area networking using a combination of a plurality POTS lines connected to a plurality of RCGS and/or a direct wireless connection to a wireless access point. (These

interfaces allow smart devices to communicate to other devices within the home, or over the Internet through the RCG.); 2:59-61 (“The 802.11b/g interface is for wireless communications between the RCG and PCs, other RCGs as well as any other types of compatible wireless devices.”); 11:10-15 (“An 802.11b/g interface-87 is shown as the preferred embodiment, since its 11/54 Mbps interface is considered sufficient bandwidth at this time also. its transmission distances are sufficient for implementation of this device, as opposed to other shorter ranged wireless transmission schemes”); 12:44-48 (“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 interface88 to the initiating RCG-85.”); 11:4–7 (“Referring to FIG. 7, the RCG implements broadband over POTS by employing an 802.11 b/g wireless interface to configure a multilink PPP bundle87 (per RFC 1990) comprised of the POTS lines connected to up to 32 RCGs.”); 11:60-65 (“Once the multilink bundle is setup, the initiating RCG-85 begins data transfer across its POTS interface 90 with the far end computer system. 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.”); 11:26-35 (“An RCG that is transferring a very large file can request the services of 31 (in 25 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 30 1.79 Mbps in the inbound direction (towards the RCG) and approximately 1.075 Mbps in the outbound direction (towards the PSTN).”); 12:35–38 (“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.”); *see also* EX2015 at ¶ 56.

The specification supports that “multilink connection” comprises “where each link is associated with the same session identification for assisting in the data transfer and at least one of the links connects the two devices through a remote communications device having available bandwidth to assist with the data transfer” portion of the proposed construction. EX1013 at Fig. 7; 11:26-35 (“An RCG that is transferring a very large file can request the services of 31 (in 25 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 30 1.79 Mbps in the inbound direction (towards the RCG) and approximately 1.075 Mbps in the outbound direction (towards the PSTN).”); 12:35-38 (“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.”); 11:48-50 (“Referring to FIG. 7, an RCG-85 that decides to initiate a multilink PPP session

with a remote computer i.e. internet URL,”); 11:55-60 (“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”); 12:29-35 (“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.”); *see also* EX2015 at ¶ 57.

B. “Multilink Transfer”

Similar to the “multilink connection” limitation of Claims 1 and 15, the claim term “multilink transfer” as used in Claim 10 should be construed to mean a “transfer of data during a data transfer session using at least two network interfaces to form links between two devices, where each link is associated with the same session identification for assisting in the data transfer, and at least one of the links connects the two devices through a remote communications device having available bandwidth to assist with the data transfer.” EX2015 at ¶¶ 58-63.

The claim language supports that “multilink transfer” comprises the “transfer of data during a data transfer session” portion of the proposed construction. For

example, in Claim 10 once the communications device selects a group of the remote communications devices with a larger, combined, unused bandwidth, it is described as “send[ing] control information to the selected remote communications devices for participating in a multilink transfer, and receiving packets from the selected remote communications devices and combines and sequences the portions 40 of the data from the remote communications devices with second data transferred from the at least one connection to increase data bandwidth for the communications device.” EX1013 at 17:36-44; *see also* EX2015 at ¶ 59.

As explained above with respect to the support for construing “multilink connection” to comprise “a connection for a data transfer session,” the specification likewise supports that “multilink transfer” comprises the “transfer of data during a data transfer session” portion of the proposed construction. EX1013 at 11:36-46, 11:48-51; EX2015 at ¶ 60.

The claim language likewise supports that “multilink transfer” comprises “using at least two network interfaces to form links between two devices” portion of the proposed construction. EX2015 at ¶ 61. For example, in Claim 10 the multilink transfer is described as using “at least one connection for connecting to a network” and “at least one wireless interface for connecting wirelessly to remote communications devices.” EX1013 at 17:23-25; *see also* EX2015 at ¶ 61.

As explained with respect to the support for construing “multilink connection” to similarly comprise “using at least two network interfaces to form links between two devices,” the specification also supports this portion of the proposed construction for “multilink transfer.” EX1013 at 3:35-41, 2:59-61, 11:10-15, 12:44-48, 11:4-7, 11:60-65, 11:26-35, 12:35-38; *see also* EX2015 at ¶ 62.

As explained with respect to the support for construing “multilink connection,” the specification supports that “multilink transfer” comprises “where each link is associated with the same session identification for assisting in the data transfer and at least one of the links connects the two devices through a remote communications device having available bandwidth to assist with the data transfer” portion of the proposed claim construction. EX1013 at Fig. 7; 11:26-35 (“An RCG that is transferring a very large file can request the services of 31 (in 25 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 30 1.79 Mbps in the inbound direction (towards the RCG) and approximately 1.075 Mbps in the outbound direction (towards the PSTN).”); 12:35-38 (“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.”); 11:48-50 (“Referring to FIG. 7, an RCG-85 that

decides to initiate a multilink PPP session with a remote computer i.e. internet URL,”); 11:55-60 (“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”); 12:29-34 (“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.”); *see also* EX2015 at ¶ 63.

V. 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.*, No. IPR2013-00390, Paper 45 at 8 (PTAB Nov. 25, 2014); *Dynamic Drinkware LLC v. Nat'l Graphics, Inc.*, No. 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 Challener and Kotzin as prior art.

CAS may antedate Kotzin and/or Challener 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 '801 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 further included a number of drawings that ultimately became figures in the '801 Patent which are reproduced below:

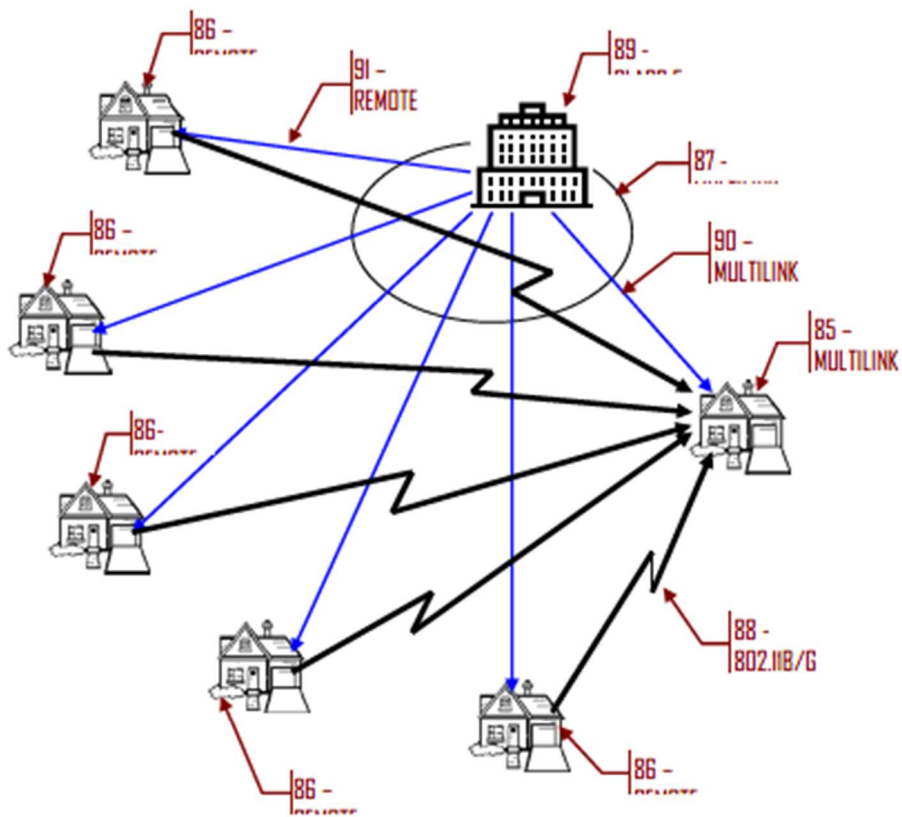
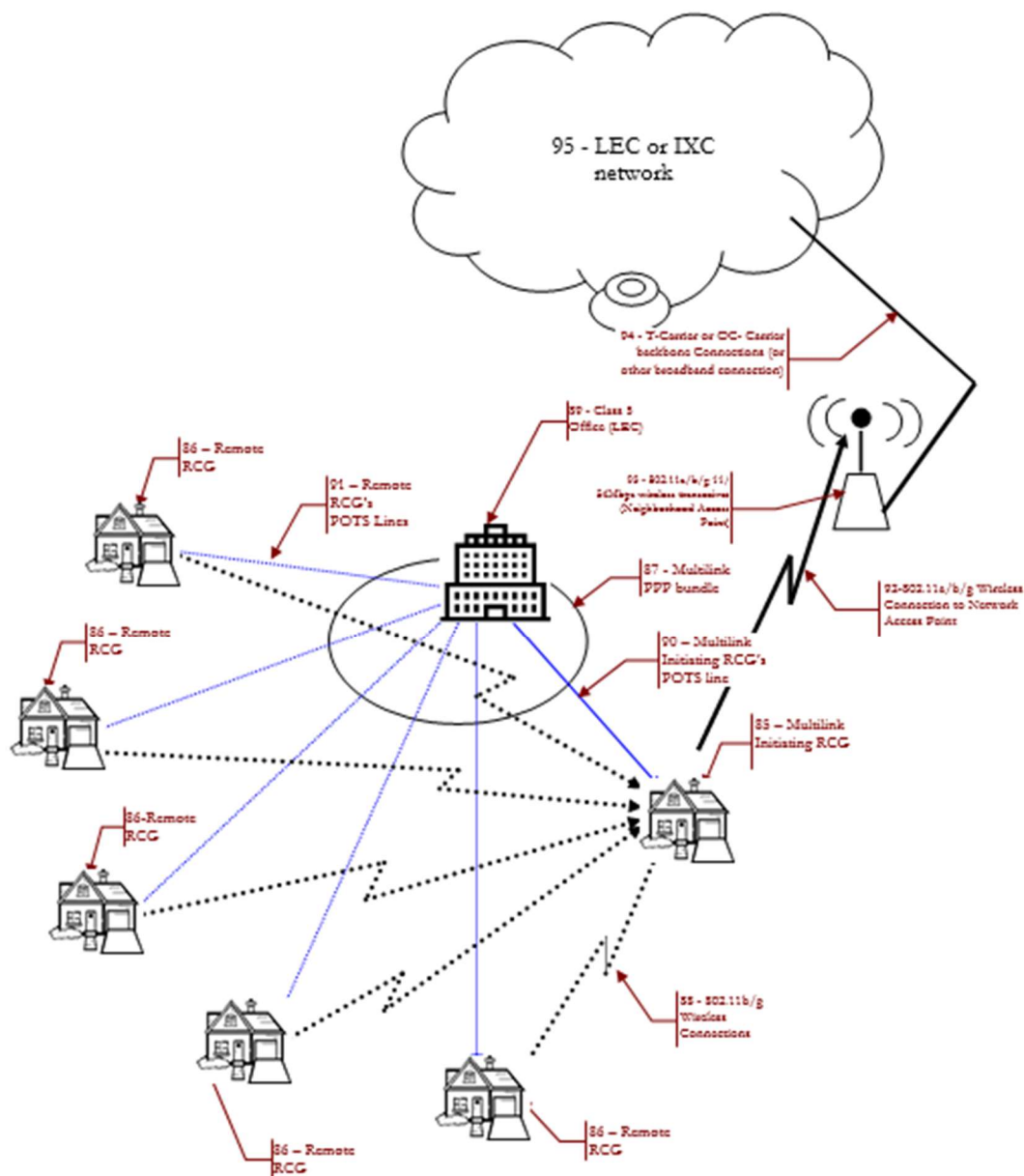


Figure 7 – Ad-hoc wireless LAN with broadband over POTS using 802.11b/g 11/54 Mbps wireless connections



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.

VI. RED HAT HAS FAILED TO CARRY ITS BURDEN TO PROVE THAT CLAIMS 1-17 OF THE '801 PATENT ARE INVALID

A. Red Hat’s Argument Under Ground 1 Fails to Demonstrate Each Claim Limitation of Claims 1-17 are Disclosed or Rendered Obvious by Challenger Alone or in View of Held

1. Challenger fails to disclose or render obvious "send[ing] control information ... for participating in a multilink connection"

[1.7] sends control information to the at least one remote communications device for participating in a multilink connection,

[10.7] sends control information to the selected remote communications devices for participating in a multilink transfer

[15.8] sends control information to the at least one cellular phone for participating in a multilink connection,

Red Hat argues that these limitations are met in that Challenger discloses that “the logic unit of the master BSD sends control information for participating in a multilink connection, e.g., commands and instructions, to the slave BSD to control its operations so that it shares bandwidth with the master BSD where the master BSD

is receiving data over a connection including multiple physical links.” Petition at 27; EX1017, ¶[0017] (“The operations of the slave devices are determined by the commands from the master device, which is connected to the end user terminal initiating the bandwidth sharing process.”). Regarding the “multilink connection,” Red Hat argues that Challenger “participates in a multilink connection with the master BSD where the connection is at least a physical link between the master BSD and the slave BSD and also the master BSD and the Internet. Petition at 28. Red Hat likewise argues that the claimed “multilink transfer” was met or obvious, “because multiple physical links are being used to transfer data.” Petition at 28.

As addressed above, "multilink connection" as used in each of the independent claims should be construed to a mean "a connection for a data transfer session using at least two network interfaces to form links between two devices, where each link is associated with the same session identification for assisting in the data transfer, and at least one of the links connects the two devices through a remote communications device having available bandwidth to assist with the data transfer." EX2015 at ¶¶ 50-57, 68. Similarly, “multilink transfer” (as used in claim 10) should be construed to a mean “transfer of data during a data transfer session using at least two network interfaces to form links between two devices, where each link is associated with the same session identification for assisting in the data transfer, and at least one of the links connects the two devices through a remote communications

device having available bandwidth to assist with the data transfer.” EX2015 at ¶¶ 58-63, 69.

Within the context of these constructions the slave BSD would be the “remote communications device” through which two devices would be linked (e.g. the remote server and master BSD in the context of Challenger). EX2015 at ¶¶ 70. Notably, there is no discussion within Challenger of establishing a “link” between the slave device and the remote server. EX2015 at ¶¶ 70. There is only a discussion of establishing the link between the master device and the slave devices, not the overall shared bandwidth connection with the remote server. EX2015 at ¶ 70.

The links between the master and each of the slave devices are all independent, point to point links. EX2015 at ¶ 71. They are not part of a "multilink connection" or provide “multilink transfers” which are end-to-end constructs. EX2015 at ¶ 71. From the perspective of the master devices, the connections—and data transfers—are “one to many” and point-to-point. EX2015 at ¶ 71. From the perspective of each slave devices, the connection—and data transfer—is “one to one” and point-to-point with the master as well as “one-to-one” with the remote host. EX2015 at ¶ 71. From the perspective of the remote host, each connection—and each data transfer—with a slave is “one-to-one” with that specific slave. EX2015 at ¶ 71. The remote host is completely unaware that each slave device is a relay because each slave device is creating an independent end-to-end connection with the remote

host, and then acting as a transparent relay on one end of that connection. EX2015 at ¶ 71. A multilink connection—which provides for a multilink transfer—requires each end of the logical connection to be “one to many” in terms of physical links or constituent logical paths, which then effects an end-to-end “one to one” logical connection. EX2015 at ¶ 71.

Further, the “commands from the master device” in Challenger would not be understood to satisfy the “control information” recited in the ‘801 Patent claims. In Challenger, each slave device is simply a “relay” between the master and a remote node. EX2015 at ¶¶ 72. This is described concisely by Fig. 6 and Fig. 7 where the slave devices “receive” (606, 708 [sic]) and “send” (608, 710) packets. EX2015 at ¶ 72. As a result, the master doesn’t need to distribute “control information” to the slave devices because the slave devices already know to whom they have offered their spare bandwidth (*i.e.*, the master device who is making the request). EX2015 at ¶ 72.

Additionally, “multilink connection” and “multilink transfer” as properly construed require that “each link is associated with the same session identification for assisting in the data transfer.” EX2015 at ¶ 73. Red Hat’s Petition does not address if or how session identifications are used for assisting in the data transfer. EX2015 at ¶ 73. Accordingly, even if the disclosures of Challenger are sufficient to establish “links” between the master BSD, slave BSD, and the remote server, Red

Hat still failed to meet its burden of demonstrating the establishment of a “multilink connection” or “multilink transfer” as required by each of the independent claims. EX2015 at ¶ 73.

Accordingly, Red Hat has failed to meet its burden to demonstrate a prima facie case obviousness case with respect to these claim limitations.

B. Red Hat’s Argument Under Ground 2 Fails to Demonstrate each Claim Limitation of Claim 1-17 are Disclosed or Rendered Obvious by Kotzin Alone or in Combination with Held

1. Kotzin fails to disclose or render obvious "send[ing] control information ... for participating in a multilink connection"

[1.7] "sends control information to the at least one remote communications device for participating in a multilink connection"

[10.7] "sends control information to the selected remote communications devices for participating in a multilink transfer"

[15.8] "sends control information to the at least one cellular phone for participating in a multilink connection"

Red Hat argues that these limitations are met in that “Messages 510A, B, C, and D depicted in Figure 5 are control messages sent by UNIT 1 that tell the UNITS 2, 3, 4, and N the amount of bandwidth they are to share with UNIT 1” and “messages 510A, B, C, and D set up a multilink transfer, because the multiple links to external network 104 will be used to transfer data to and from UNIT 1.” Petition at 60.

As addressed above, “multilink connection” (as used in both Claims 1 and 15) should be construed to mean “a connection for a data transfer session using at least

two network interfaces to form links between two devices, where each link is associated with the same session identification for assisting in the data transfer, and at least one of the links connects the two devices through a remote communications device having available bandwidth to assist with the data transfer." EX2015 at ¶¶ 50-57, 78.

Similarly, “multilink transfer” (as used in claim 10) should be construed to mean “transfer of data during a data transfer session using at least two network interfaces to form links between two devices, where each link is associated with the same session identification for assisting in the data transfer, and at least one of the links connects the two devices through a remote communications device having available bandwidth to assist with the data transfer.” EX2015 at ¶¶ 58-63, 79.

Contrary to Red Hat's assertions, messages 510A, B, C, and D do not establish open links between Unit 1, Units 2-N, and the WAN Base Station throughout the multilink session, but rather a series of separate one-off requests and responses. EX2015 at ¶ 80.

The messages 510 from Unit 1 to Units 2-N are essentially acknowledgements from Unit 1 to Units 2-N that they have been included in the pool, and may begin direct contact with the WAN to set up individual channels. EX2015 at ¶ 81. This direct contact is indicated by message pairs 512A/B, 512C/D and so on. EX2015 at ¶ 81. The blue arrows in the figures below highlight message sequence 5121A/B—

the direct connection between Unit 2 and WAN for the "first tranche" of data—and Message 514A—Unit 2's "offer" to Unit 1 for the "second tranche" of data. EX2015 at ¶ 82.

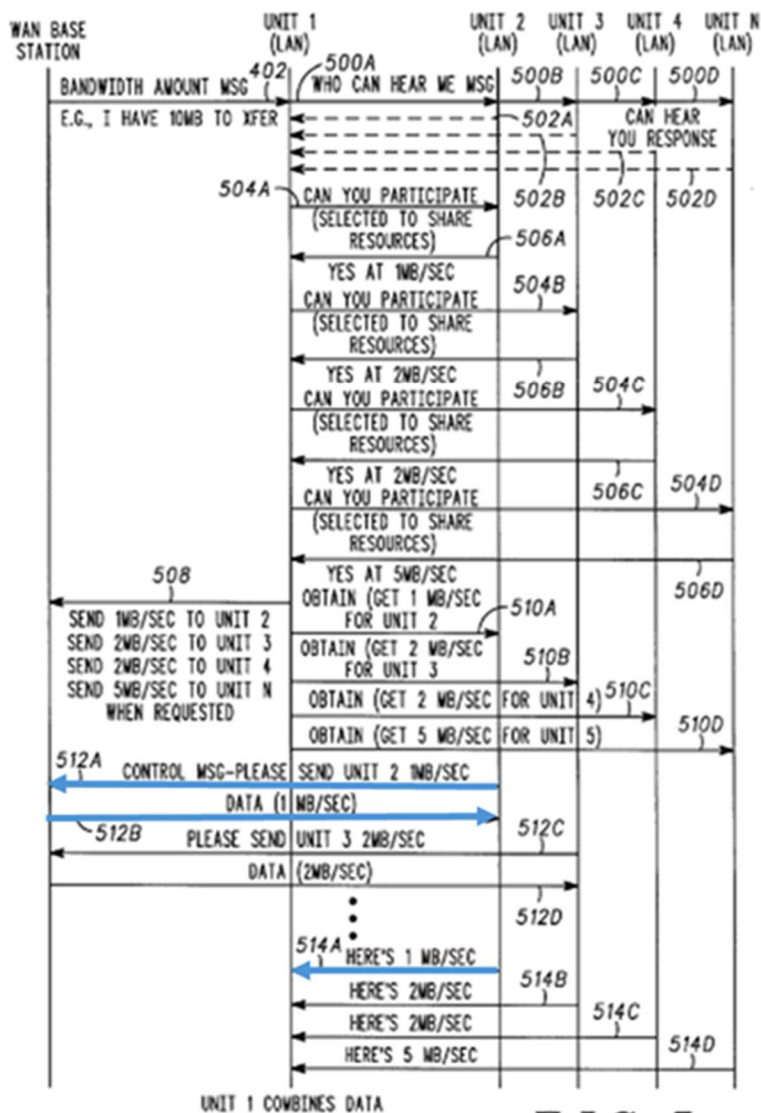


FIG. 5

This is contrasted by the teachings of Challener (EX1017) in which the lines between the bandwidth sharing devices are connected at 506 and later released at 518 within the Challener Fig. 5—notably, while Challener discloses establishing

connections between the bandwidth sharing devices, it does not similarly disclose establishing connections between the bandwidth sharing devices and the web server.

EX2015 at ¶ 81.

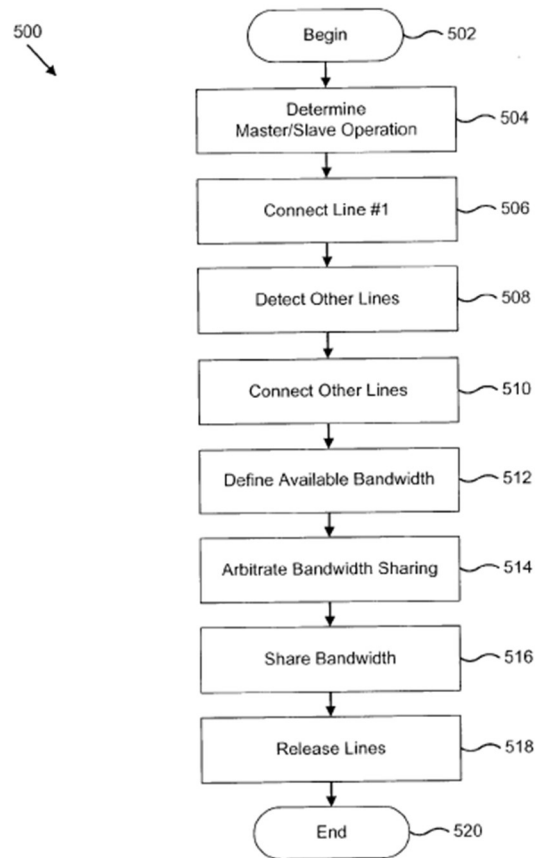


Fig. 5

EX1017 at Fig. 5.

Accordingly, Red Hat has failed to meet its burden to demonstrate a prima facie case obviousness case with respect to these claim limitations.

VII. 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 12, 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 12, 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
REQUIREMENTS UNDER 37 C.F.R. § 42.24**

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 6,962 words, excluding the parts exempted by § 42.24(a).

This paper also complies with the typeface requirements of 37 C.F.R. § 42.6(a)(2)(ii) and the type style requirements of 37 C.F.R. § 42.6(a)(2)(iii) and (iv).

Dated: November 12, 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*