

POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS	Application Number	
	Filing Date	October 19, 2009
	First Named Inventor	Eric Delangis
	Title	A Broadband Comm. Device
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ED 1020

I hereby revoke all previous powers of attorney given in the above-identified application.

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Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		A BROADBAND COMMUNICATIONS DEVICE		
First Named Inventor/Applicant Name:		ERIC M. DELANGIS		
Filer:		Harold C. McGurk		
Attorney Docket Number:		ED 1040		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	95	95
Utility Search Fee	2111	1	310	310
Utility Examination Fee	2311	1	125	125
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				530

Electronic Acknowledgement Receipt	
EFS ID:	13088357
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	A BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	ERIC M. DELANGIS
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	22-JUN-2012
Filing Date:	
Time Stamp:	18:43:43
Application Type:	Utility under 35 USC 111(a)

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Payment was successfully received in RAM	\$ 530
RAM confirmation Number	6069
Deposit Account	
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Application Data Sheet	ED_1040_ADS_SB14.pdf	964862 994b809e8ab79f008ced20a4786029a6ad91515d	no	4
Warnings:					
Information:					
2	Specification	ED_1040_Specification.pdf	127710 9d78162e00499dbb19104e104893367a609fa47d	no	24
Warnings:					
Information:					
3	Claims	ED_1040_Claims.pdf	17096 62a2b380d046f41dae2b531506aefb6c6199137a	no	2
Warnings:					
Information:					
4	Abstract	ED_1040_Abstract.pdf	20260 542efa0be03a29d2c0933feaba3be7f1152889f9	no	1
Warnings:					
Information:					
5	Drawings-only black and white line drawings	ED_1040_Drawings_1-9.PDF	2620724 5f2c2bc1b63f197728e97df396e67ff589f976b	no	9
Warnings:					
Information:					
6	Oath or Declaration filed	ED_1040_Declaration_Signed.pdf	398549 d945819a4f69fab8f66765c8ae10280935f804a4	no	1
Warnings:					
Information:					
7	Power of Attorney	ED_1040_POA_Signed.pdf	339143 cf2ef6fce40d38f7356ef8acb6dc546139f96174	no	1
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	32726 a6e20e5597cf3feb69a24e5174c8dd7762b1e804	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			4521070		

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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ED 1040
		Application Number	
Title of Invention	A BROADBAND COMMUNICATIONS DEVICE		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

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☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
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Applicant 1					Remove	
Applicant Authority		☒ Inventor		☐ Legal Representative under 35 U.S.C. 117		☐ Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Eric	M.	Delangis			
Residence Information (Select One)		☒ US Residency ☐ Non US Residency ☐ Active US Military Service				
City	Huntsville	State/Province	AL	Country of Residence i	US	
Citizenship under 37 CFR 1.41(b) i		US				
Mailing Address of Applicant:						
Address 1		231 Brevard Blvd				
Address 2						
City	Huntsville	State/Province	AL			
Postal Code	35811	Country i	US			
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.						
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☐ An Address is being provided for the correspondence information of this application.	
Customer Number	64828
Email Address	claymcgurk@cox.net
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Application Information:

Title of the Invention	A BROADBAND COMMUNICATIONS DEVICE		
Attorney Docket Number	ED 1040	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter			
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	9	Suggested Figure for Publication (if any)	6

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ED 1040
		Application Number	
Title of Invention	A BROADBAND COMMUNICATIONS DEVICE		

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

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Prior Application Status	Pending		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
	Continuation of	12581852	2009-10-19		
Prior Application Status	Patented		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12581852	Continuation of	10686375	2005-10-14	7606156	2009-10-20
Prior Application Status	Expired		Remove		
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)		
10686375	non provisional of	60418521	2002-10-15		
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					Add

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ED 1040
		Application Number	
Title of Invention	A BROADBAND COMMUNICATIONS DEVICE		

			Remove
Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			☒ Yes ☐ No
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

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Assignee ¹					Remove
If the Assignee is an Organization check here. ☐					
Prefix	Given Name	Middle Name	Family Name	Suffix	
Mailing Address Information:					
Address 1					
Address 2					
City		State/Province			
Country ⁱ		Postal Code			
Phone Number		Fax Number			
Email Address					
Additional Assignee Data may be generated within this form by selecting the Add button.					

Signature:

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Signature	/H C MCGURK, REG.NO. 34964/		Date (YYYY-MM-DD)	2012-06-22
First Name	HAROLD	Last Name	MCGURK	Registration Number
				34964

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8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
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A BROADBAND COMMUNICATIONS DEVICE

RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application Serial No. 12/581,852 filed October 19, 2009, which is a continuation of U.S. Patent Application Serial No. 10/686,375 filed October 14, 2005, which claims priority to U.S. Provisional Application Serial No. 60/418,521, filed October 15, 2002, all which are incorporated by reference herein.

BACKGROUND OF INVENTION

[0002] The primary function of the RCG is to provide a platform for Competitive Local Exchange Companies (CLECs) to compete with the Local Exchange Companies (LECs) for residential voice and data services. The LECs have a strangle hold on the “last mile” of copper over which almost all residential customers receive their communications services. Today, most CLECs resell the existing services that are offered by the LECs. CLECs make their money by purchasing these services from the LECs at a discount and marking them up to the customer. Since these services are regulated and controlled by the Public Utilities Commission (PUC) the pricing for these services to the CLECs is set. The monthly CLEC discount is approximately \$5 to \$6 per line per month for basic rate services. This means, in practicality, that a CLEC can only charge an additional \$5 or \$6 to the residential customer for basic rate services otherwise they would be more expensive than the LEC, and no one would buy the services from them; telephone customers would simply stay with the LEC.

[0003] To be competitive then, CLECs try to sell additional services such as call waiting, caller ID, etc. where they have as much as a 50% margin. Some CLECs also bundle long distance services with their packages as additional incentive to get residential customers to buy local telephone service from them. Since long distance fees are as low as pennies per minute to the customer, there is little profit in long distance for the CLECs. As it is, the pricing structure is such that the LECs will stay in control of the residential market, and the CLECs are nothing more than a marketing arm of the LEC. This structure also keeps the CLECs at an equal competitive advantage, or disadvantage, with respect to each other. The only thing that one CLEC could do to gain more customers is to be a better marketier. Since the CLECs are unable to discount their services because their margins are too slim as it is, the net effect is that the

consumer loses by not really getting competition in the residential markets, and prices are kept artificially high.

[0004] For the CLECs to be truly competitive in the local telecommunications markets, they must be able to do more than simply resell the LECs services. CLECs must be able to offer many more features or services than those that the LEC provides, and they must be able to do this at a lower cost, in order to attract new customers.

[0005] So, what new services can the CLECs offer? As things stand today there are none, with the exception of DSL or Cable services which require tremendous infrastructure costs on behalf of the CLEC. However, by deploying an RCG in a residence, CLECs can offer advanced new calling features and services over the existing POTS line. Their costs for the POTS line from the LEC remains the same, but they can now charge for high bandwidth data services as well as additional calling and messaging features that the LECs cannot offer. This is their competitive advantage.

Competition:

[0006] Many companies are currently trying to provide VoIP services to residential customers over high-speed or broadband backbones such as DSL and cable modems, over Internet connections via a computer. 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. These services are also difficult to deploy and too complicated for the average user. Internet based VoIP services suffer from Internet delays caused by a lack of true Quality of Service (QOS) capabilities across the Internet. Existing VoIP services also require access to a computer and a technical knowledge to be able to make it work. Because of these problems, VoIP services are primarily targeted at the corporate market place where private IP networks that can carry VoIP services with a true guaranteed QOS exist, or can be controlled.

[0007] The only available alternatives for the residential user for high speed services are DSL and cable modems. DSL and Cable based communications reach only a small segment of the population, and growth has failed to live up to initial expectations. The recent collapse of the internet boom has led to the failure of many DSL service providers and has effectively eliminated DSL as a potential service for most POTS users for the immediate future.

SUMMARY OF THE INVENTION

[0008] The RCG combines the capabilities and features of IP routers, Class 5 circuit switches and wireless LANs in a small stand-alone external modem like device. Additional capabilities for a hands-free speakerphone device with a large touch display are also detailed. The RCG can employ a large display with sufficient resolution to provide a functional user interface to access all of the advanced features offered by the RCG, but also to be able to provide video telephone services.

[0009] The device is placed in a residence and connected to the primary POTS line coming from the LEC. Up to three standard telephones or FAX machines (or any combination) are typically connected into the RCG. It also has a Universal Serial Bus (USB) and/or a 10-100 Ethernet interface for connection to a computer or a Local Area Network (LAN). In addition, it has an 802.11b/g wireless interface for wireless home networking as well as broadband-to-the-home services.

[0010] The system is installed in a customer's home by simply plugging it into the existing incoming telephone line that provides POTS services from the LEC. One or more standard telephones are then plugged into its three line-output jacks. This is the simplest and most basic usage. In this implementation, the user only is interested in gaining additional telephone lines into the household. No computer connection is required in order to use the system. However, if data communications are desired, then there are three additional interfaces for computer connectivity. Typically either an Ethernet port, USB port or firewire (IEEE 1394) port is used to connect to a PC or LAN. 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. A version of the RCG includes a speakerphone and video camera to provided for video telephone services.

Services provided by the RCG:

[0011] The following discussion refers to figure 1. The RCG has a main system processor that is responsible for all house keeping and traffic routing tasks. The Main CPU 19 routes data to and from the Ethernet Port 11, USB Port 12, Modem/DAA 41, DSP Engine 33, 802.11b/g Module 36 and the Display and Keypad 10.

[0012] The RCG provides a total telecommunications communications services package for residential and small business customers. With the RCG, a CLEC can offer its customers dialtone for up to three separate telephone numbers per residence (the limit of three telephone numbers is an arbitrary number based upon typical residential usage and is not a limit imposed by the system), all local and long distance services, 24/7 always-on Internet access, a host of custom messaging and calling features, as well as Broadband access and lifeline service. All of these services can be offered over a customer's existing POTS line, and it doesn't require any network infrastructure build out like DSL and Cable services. Because there is no expensive network equipment required, it can be readily deployed throughout the country to expand the CLECs customer base quickly.

[0013] The RCG is designed to enhance, not replace, the existing telephone line, enabling it to provide new combined packetized voice and data services. Meanwhile, all existing telecommunications infrastructure and equipment will continue to work seamlessly with the RCG. Aside from simply installing the low cost RCG device in the home telephone wiring, no other equipment needs to be purchased by either the home owner or telephone companies. This eliminates the tremendously expensive infrastructure costs for communications companies that are trying to provide voice services using DSL or cable modems.

The RCG VIP Home Gateway features:

[0014] Up to three telephone lines i.e. numbers, over a single POTS line and/or wireless connection.

[0015] Ethernet, USB and IEEE 1394 computer interfaces.

[0016] Full G1, G2 and G3 FAX support.

[0017] Full support for all CLASS services.

[0018] 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.)

[0019] Automated, remote upgradability and configuration. (Requires the customer to do nothing.)

- [0020]** Transparent user operation. (User doesn't have to know that any new technology is being employed)
- [0021]** 100% compatible with existing public telephone system.
- [0022]** Video Telephone capabilities.
- [0023]** No local or long distance usage charges.
- [0024]** No Internet access fees.
- [0025]** Lower monthly communication costs.
- [0026]** Multiple telephone calls at the same time.
- [0027]** Voice messaging, follow me features, call forwarding, automatic call back, conferencing, custom call routing. Home networking capabilities, all CLASS calling features, high speed broadband networking, continuous 24/7 internet access. and many others.
- [0028]** All of these features are available even while connected to the Internet.
- [0029]** Very low cost of entry into the market, especially as compared to broadband alternatives.
- [0030]** New calling features that are not currently available to home users.

BRIEF DESCRIPTION OF THE DRAWINGS

- [0031]** Figure 1 shows the RCG functional block diagram with the preferred embodiment of an 802.11 wireless connection.
- [0032]** Figure 2 shows the network topology for native RCG to RCG communications.
- [0033]** Figure 3 shows the network topology for an RCG to PSTN call.
- [0034]** Figure 4 shows the RCG top view with associated functions.
- [0035]** Figure 5 shows the RCG rear view and associated connections.
- [0036]** Figure 6 shows a typical application with peripheral equipment connections.
- [0037]** Figure 7 shows an ad-hoc wireless LAN configuration with ppp multilink data distribution and wireless connectivity.
- [0038]** Figure 8 shows an ad-hoc wireless LAN configuration with ppp multilink data distribution and wireless connectivity with connection to a broadband neighborhood access point (Wi-Fi hot spot).

[0039] Figure 9 shows an ad-hoc wireless LAN configuration with ppp multilink data distribution and wireless connectivity with wireless data hopping with POTS connections through numerous different Class 5 offices.

DETAILED DESCRIPTION OF THE INVENTION

[0040] The preferred embodiment is detailed herein using the ubiquitous 802.11 wireless protocol. It is by no means insinuated that this is the only wireless scheme that can be used by this device; rather, it is intended that any wireless transmission scheme can be used for wireless communications between this device and other wireless devices as various applications may dictate.

System Initialization

[0041] Refer to figures 1, 2 and 3 for the following discussion. When the RCG is first plugged into an AC power outlet the Main CPU 19, performs a Power-on Self Test (POST) routine. Once the POST completes and the RCG is connected to an active POTS line, connected to the LEC, by means of the Incoming POTS Port 40, the RCG automatically initiates a modem connection via the Modem/DAA 41, to a registration service via a toll free 800 telephone number. The registration service connects directly to the service provider's sales or customer service offices via a VoIP connection. An operator or an automated service answers the call and sets up a new account for the customer. Once the account is set up, the service provider's network automatically sends control information to the device to store the required routing and feature/service information in its non-volatile memory of its Main CPU 19. As part of this information, a local dialup telephone number is sent to the device that it will use for local network access in the same fashion as a standard ISP connection is made from a home computer. The URL of the Softswitch/SIP Proxy Server and Registrar 51 that will be controlling this particular device is also stored at this time. During the service activation and configuration process, the customer service operator can send test requests to the device, as well as call into it on another telephone number (assuming an additional telephone number is part of the users class of service) or the speakerphone to verify that it is configured and working properly. The final step of the configuration and initialization process is to register the device with the appropriate

Softswitch/SIP Proxy Server and Registrar 51 so that the Softswitch/SIP Proxy Server and Registrar 51 knows that it is the controlling SIP Proxy for this RCG. Also configured at this time is the username/password verification server (this is a standard network device and is not shown) that is used to allow the RCG's modem to make a connection onto the service provider's network. Once the RCG configuration is completed, it disconnects the call by hanging up the Modem/DAA 41, then dials the new local network access number that had been sent during the configuration process and establishes a constant local network connection. This connection is maintained continuously on a 24/7 basis, and is immediately reestablished whenever it drops. Should the RCG become unable to reestablish this connection after several tries, it will switch over to failsafe mode and inform the user via the Display and Keypad 10. The RCG will try to reestablish the connection every few minutes until it finally succeeds.

[0042] By default, the first telephone port, POTS 1 Port 30, is assigned as the termination port for the existing POTS service that is connected to Incoming POTS Port 40. This is the existing telephone service that the user already has as his primary telephone service from his LEC. POTS 1 Port 30, typically has connected to it a standard telephone set that does not require any power (other than that derived over the POTS interface) to operate properly. POTS 1 Port 30 is the Lifeline telephone port for the user. In the case that all power is lost to the RCG, POTS 1 Port 30 will fail to a direct connection to the Incoming POTS Port 40 telephone line that comes into the RCG from the LEC to provide uninterrupted telephone services to the user. In this state, however, none of the enhanced VoIP services of the RCG are available to the user since the user simply has a stand POTS telephone service to the LEC.

[0043] Two additional and unique telephone numbers can be assigned to the other two telephone ports, POTS 2 Port 29 and POTS 3 Port 28, by the service provider at any time. These numbers are drawn from a pool of available telephone numbers assigned to the service provider. POTS 2 Port 29 and POTS 3 Port 28 must have standard telephone numbers assigned to them so that the PSTN is able to route calls from its network to these ports. For calls originating from IP based telephones, these numbers are not necessarily needed since POTS 1 Port 30, POTS 2 Port 29 and POTS 3 Port 28 are uniquely identifiable to IP networks via their IP addresses assigned through the Dynamic Host Configuration Protocol (DHCP) at the time that the RCG establishes a connection to the service provider's network. Since POTS 2 Port 29 and POTS 3 Port 28 must have a telephone number assigned to them, it is a matter of convenience to use the

assigned telephone numbers as part of their SIP address for IP routing of their data. In this way, all three user POTS ports, POTS 1 Port 30, POTS 2 Port 29 and POTS 3 Port 28 are all addressed the same manner.

[0044] At this point, the user is able to take advantage of all of the RCG's features that have been activated according to his service agreement. The user can at any time connect additional telephones, a computer or a computer network to the RCG. The user will only be able to use those telephone ports (POTS 1 Port 30, POTS 2 Port 29 or POTS 3 Port 28) that have been activated, and assigned unique telephone numbers by the service provider. Any type of standard telephone can be connected to the three POTS ports, POTS 1 Port 30, POTS 2 Port 29 and POTS 3 Port 28. In the event that a cordless telephone or a telephone that derives its power from an AC outlet is connected to POTS 1 Port 30, the lifeline functionality of this port will be ineffective since the telephone itself will not operate once power is lost.

[0045] The speaker phone feature of the RCG, comprised of Speakerphone Drivers 22, Microphone 24, Speaker 25 and DSP Engine 33, can be used on any of the activated telephone numbers and is by default enabled to operate on POTS 1 Port 30. Once either of the other two telephone ports, POTS 2 Port 29 or POTS 3 Port 28, is activated, the speakerphone function is activated for those lines as well. To use the speakerphone for any assigned telephone number, the user simply presses either the Line Select Button 79-81 for Line 1, Line2 or Line 3 on the face of the RCG, and the speakerphone function is activated on that line. This is convenient for answering any call directly at the RCG. The RCG may or may not have a number keypad for originating calls. This feature may be added or removed based upon the target market price points.

[0046] The determination as to which Inter Exchange Carrier (IXC) the RCG will route its data through is determined by any of a number of criteria including, but not limited to, whether the RCG is a private labeled product, or which carrier has the lowest cost routing, or if a specific carrier is specified by the customer, or and number of other considerations. The RCG can be programmed to change its routing path to any IXC at any time by the service provider. Complicated routing algorithms can be programmed into the RCG to control which IXC it will use at any time.

Failsafe Mode

[0047] During any time that the RCG is in failsafe mode i.e. Lifeline failsafe logic 39 is activated, the RCG will only be able to receive or initiate telephone calls via the telephone connected to its primary telephone port, POTS 1 Port 30 or through its speakerphone feature. In this condition, all activated telephone numbers are ported via the PSTN to the primary (first) telephone number for delivery to the user's telephone that is connected to POTS 1 Port 30. While in failsafe mode, the modem is not activated, and the RCG appears to the local Class 5 office as a standard telephone, and the PSTN will route all incoming calls to the RCG as it normally would to any standard telephone.

Call Flow 1:

[0048] Dialed call origination from a telephone connected to an RCG POTS port and terminating at another user's RCG POTS port:

[0049] When a user picks up a telephone connected to any of the three POTS ports, POTS 1 Port 30, POTS 2 Port 29 and POTS 3 Port 28, an off hook condition is detected by the SLIC/CODEC Interface 27 that is connected to the DSP Engine 33 by way of the DSP Audio Interface 31. The DSP Engine 33 responds by sending digitally generated dialtone to the appropriate POTS interface over the DSP Audio Interface 31. (Note: all BORSCHT telephony functions are performed by the DSP Engine 33 and the SLIC/CODEC Interface 27.) Upon hearing the dialtone, the user enters the desired telephone number on his telephone keypad. The Dual Tone Multi-Frequency (DTMF) digits that the user dials are decoded within the DSP Engine 33. The dialed digits are transferred to the Main CPU 19 via the CPU/DSP Communications Path 34. The Main CPU 19 polls the DSP Engine 33 approximately every two milliseconds looking for data. The Main CPU 19 polling rate varies according to the process that is being performed. The CPU/DSP Communications path 34 also can generate an interrupt to force data transfer between it and the Main CPU 19.

[0050] The Main CPU 19 generates a SIP Invite IP packet using the dialed digits as the called destination address and the URL of its local controlling SIP Proxy Server which was programmed into the RCG during the configuration process. The Main CPU 19 passes this SIP packet off to the Modem/DAA 41 for transmission over the network. The RCG Modem/DAA 41 is connected to and communicating with a modem in a modem bank located in the Inter

Exchange Carrier's (IXCs) facility. This facility may actually be located in the LEC's physical plant or it may be physically located at another location.

[0051] Referring to Figure 2, User A RCG 44 is connected via its modem to the LEC's local Class 5 Office A 47. In this example, the service provider's connections to the IXC A Modem Bank & Router 48 are through IXC A Inter-Office Trunks 46. The service provider may or may not be the IXC. If the service provider does not have its own network, then it will purchase capacity from an IXC and route its traffic to that IXC's facilities. The SIP Invite IP Packet that is sent from User A RCG 44 transits the LEC's Class 5 Office A 47 facilities and is routed to the IXC A Modem Bank/Router 48 via the IXC A Inter-Office Trunks 46. It is the job of the router to take the IP packet and route it on to its intended destination, in this case the appropriate SIP proxy server 51. The router uses the URL for the Softswitch/SIP Proxy Server and Registrar 51 contained in the SIP Invite to know where to route the packet. (Note: The Softswitch, SIP Proxy Server and Registrar are logical devices that may reside in a single computer system, or may be implemented as completely separate devices. In this example, the Softswitch, SIP Proxy Server and Registrar are all shown as a single physical device running these three separate processes.) The IXC A Modem Bank/Router 48 sends the SIP Invite IP packet on to Softswitch/SIP Proxy Server and Registrar 51 via an IP based network route 52.

[0052] The SIP Proxy Server process running on Softswitch/SIP Proxy Server and Registrar 51 performs a look up to determine the termination destination for the call using the dialed digits passed along in the SIP Invite IP packet. In this example, the terminating device for User B RCG 56 is via IXC B's Modem Bank/Router 49 then through Class 5 Office B 50 and over User B POTS line 55 and finally to User B RCG 56. Not covered in detail here is the SIP message handling since it is completely covered in IETF RFC2543. This example shows that both the originating and terminating ends of this call are controlled by the same Softswitch/SIP Proxy Server and Registrar 51 device. Where the originating and terminating ends of a call are controlled by different Softswitch/SIP Proxy Server and Registrar devices, an additional level of SIP messaging is used between the two SIP Proxy Server processes of each of the Softswitch/SIP Proxy Server and Registrar devices to locate and control the terminating location of the call. Again, that information is covered in IETF RFC2543 and is repeated here.

[0053] After the call routing is setup using SIP, and User B answers the call, the Softswitch/SIP Proxy Server and Registrar 51 device sends IP address of the originating User A

RCG 44 to the User B RCG 56 and the IP address of User B RCG 56 to User A RCG 44. Once both RCG's have the other's IP address, they then communicate directly to each other using Real Time Protocol (RTP), and the Softswitch/SIP Proxy Server and Registrar 51 device is no longer part of the connection. This direct communication is shown as IP based RTP Stream 57 between IXC A Modem Bank/Router 48 and IXC B Modem Bank/Router 49.

[0054] On the receiving end of the call, referring back to Figure 2, User B RCG 56 receives the SIP Invite data stream through its Modem/DAA 41 and passes it on to the Main CPU 19. The Main CPU 19 reassembles the SIP IP packet and interrogates the header information to determine which POTS port, POTS 1 Port 30, POTS 2 Port 29 and POTS 3 Port 28 the call is destined for based upon the dialed number contained in the SIP Invite message. The Main CPU 19 commands the DSP Engine 33 to control the SLIC/CODEC Interface 27 to apply ringing voltage to the selected POTS port to ring the phone. A corresponding SIP 180 (ringing) message is sent back to User A RCG 44 in the reverse direction. When the phone attached to the selected POTS port is answered, the off hook condition detected by the SLIC/CODEC Interface 27 is sent through the DSP Engine 33 to the Main CPU 19 that sends the SIP 200 OK message back to User A RCG 44 to let the RCG know that the call was answered by User B RCG 56 and to turn off the audible ringing tone for User B. Once the call is established, User A RCG 44 sends an ACK F12 SIP message to User B RCG 56 indicating that User A RCG 44 understands that the call setup has been completed.

[0055] The two RCGs now exchange SIP messages that include the type of voice encoding that will be used such as G.729, G.723.1, G.711 etc to configure their RTP streams so that they can reliably transfer the user information between them. At this point the call (voice data) is sent between both RCGs and a normal telephone conversation takes place between the user A and user B.

[0056] Call teardown is accomplished by either user hanging up their telephone. The RCG of the terminating end (the end that hangs up the phone first) detects the on-hook condition and sends a SIP Bye message to the other end. The other end upon receiving the SIP Bye message responds with an OK 200 SIP message and disables the appropriate POTS port that the user was using.

[0057] The Speakerphone interface can be used for either end of a telephone conversation in exactly the same way as described above except that the corresponding POTS port that the call was intended for is disabled if the call is answered via the speakerphone.

Call Flow 2:

[0058] Calls between an RCG device and a PSTN telephone:

[0059] Refer to figure 3 for the following discussion.

[0060] In the previous call example, the PSTN network had nothing to do since the call was over a previously established modem connection between two RCGs. In the cases where a call originates or terminates to a standard telephone serviced by a Class 5 office, the process is a bit more complicated.

[0061] When a call originates from a user via an RCG, such as User A RCG 44, the call handling practices are exactly the same up to the point that the SIP Proxy Server process in the Softswitch, SIP Proxy Server and Registrar 51 performs a lookup to determine how to route the call. In this case, the SIP Proxy Server process determines that the call terminates at a standard PSTN telephone attached to the Class 5 Office B 50. Since the call originates as a native VoIP service, it must be converted to a standard switched circuit based service to be able to be delivered to User B's telephone 61. The conversion is performed by the IXC's Media Gateway 60 device. In this example, the SIP Proxy Server process routes the call via the IXC's Media Gateway 60 device instead of through the IXC B Modem Bank/Router 49 as before. The SIP Proxy Server process sends a SIP Invite to the IXC's Media Gateway 60 device, as well as other control information, to direct the Media Gateway 60 device to terminate the call and to apply the appropriate voice compression algorithm to the media stream to convert it between switched circuit PCM format and the selected VoIP protocol. At the same time, the Softswitch process of the Softswitch, SIP Proxy Server and Registrar 51 device sends commands to the Media Gateway 60 device to cause it to route the call's PCM data to a specific channel on the IXC B Interoffice Trunk 54. The Softswitch process then generates an SS7 ISUP message that is sent over the PSTN SS7 signaling network to the Class 5 Office B informing it of the incoming call and on which circuit the call has been placed. It is up to the PSTN at this point to ring the User B telephone 61 and process the call between the IXC's Media Gateway and the User B Telephone 61. The Softswitch process handles the signaling conversion between the PSTN's

SS7 network and the IXC's SIP messaging, as well as any other proprietary signaling schemes utilized by the IXC to control its network. The standard SS7 call control messages, such as ringing, busy, ring back etc., all have a comparable SIP call flow control messages. The Softswitch simply maps the SS7 messages into SIP messages and visa-versa while routing the messages to the appropriate network equipment.

[0062] As in the case of a call between two RCGs, the RTP media stream (the actual call data) is routed directly by the IXC A Modem Bank/Router 48 and the IXC's Media Gateway 60 via an IP based RTP Stream 57.

[0063] Again, call teardown is accomplished by either user hanging up their telephone. Depending which end hangs up the phone first, the associated network will generate the appropriate messages which will eventually make it back to the Softswitch process. The Softswitch process will relay the appropriate call control messages between the PSTN and the IXC's SIP based control system.

[0064] A telephone call originating from a PSTN telephone is configured and setup in the same fashion as the above description except that the originating messaging begins within the PSTN network instead of the IXC's network.

Personal Computer based communications:

[0065] Where the RCG is connected to a Personal Computer (PC) through either its USB Port 11 or Ethernet Port 12, the RCG operates exactly as a cable or DSL type modem device. The RCG is simply a pass through for the computer's data. The RCG receives the IP packets (of whatever type) from the computer and sends the information unchanged to the Modem/DAA 41 interface for transmission over the Internet. Received information from the Internet is processed in the reverse way.

Dynamic Bandwidth Allocation:

[0066] When a modem connection is established between the RCG and the "Network", the total available bandwidth of this connection is used in a shared/prioritized fashion. Voice services (calls) take precedence over data services. Therefore, when no calls are in progress all of the available bandwidth is used by data type services such as surfing the Internet or uploading/downloading files. However, when a call is to be passed through the RCG, the

required bandwidth for the call is deallocated from the data services and prioritized for the telephone call. This necessary because the Quality Of Service (QOS) is important for effective communications over electronic networks. Since the voice data is carried over a “data centric” network topology (an IP based network), call quality can suffer greatly. Every effort must be taken to eliminate or reduce the packet delay through every network element to be able to provide the best call quality. For data applications such as surfing the Internet or downloading files packet delay is acceptable and expected, and it does not affect the “quality” of the data.

[0067] Since all voice and data is transmitted as packets, there are no “time slots” or other type of “channelization” associated with the transmission of this data over either the POTS line or the wireless interface. Channelization of the voice data does occur within the SLIC/Codec Interface – 27 but is converted into IP packets by the DSP engine – 33 and is handled as packets from that point on.

[0068] Regardless of whether the call is originating or terminating at the RCG, the bandwidth allocation process is the same. When the SIP call setup messages are processed, the type of voice compression that will be used is defined. The RCG Main CPU 19 handles the IP packet flow between the DSP Engine 33, USB Port 12, Ethernet Port 11, 802.11b/g Module 36 and the Modem/DAA 41 devices giving priority to the voice packets to and from the DSP Engine 33 and the Modem/DAA 41 interfaces. Voice compression algorithms create IP packets at a specified number of packets per second. These packets are handled by a timed process in the RCG. This process is started during call setup so that the packets are handled at the correct rate based upon the compression algorithm’s packet generation rate. There is no priority assigned between the voice packets of each of the three different POTS Ports 28-30. When more than one voice call is in progress, they are handled in a round robin fashion based upon the packet rate for the compression algorithm used. If, for example, two calls are using a compression scheme that generates packets every 2 milliseconds, and the third generates packets every 4 milliseconds, then the calls utilizing the faster packet rate will be polled at twice the rate as the call using a slower packet rate but they are not given priority “over” the other call. Only when there are no voice packets ready for transmission to the Modem/DAA 41, i.e. during the approximately 2 to 4 millisecond packetization period between packets, will any pending data packets received from the USB Port 12, Ethernet Port 11 or the 802.11b/g Module 36 be sent to the Modem/DAA 41 for transmission over the network.

[0069] Thus, the POTS bandwidth is allocated on a per packet basis, not on a “time slot” or “channelization” or even a “frequency” basis as it the case with T-Carrier, DSL or channelized DSL systems. The same is true for the wireless interface, whether it is carrying pure data or voice.

[0070] Security is currently a big concern in today’s networks, and especially with wireless 802.11 transmissions. For this reason, the RCG defaults to route voice data over the users POTS connection via Incoming POTS Port 40. As security concerns regarding wireless communications transmissions are addressed and alleviated, voice call data can, and will, be routed over the wireless interface via the 802.11 b/g Module 36.

FAX Transmission:

[0071] Group 1, 2 and 3 fax transmission is completely supported by the RCG. Fax transmission has the same priority as other voice communications. That is to say that FAX transmission is treated the same as a voice call and takes precedence over native IP data traffic.

Broadband Over POTS:

[0072] One of the primary functions of the RCG is to be able to transfer large files such as video files over the POTS lines to a residence. The ability to do this is limited by the maximum of 56Kbps due to the design of the digital Class 5 office linecards and network transmission schemes based upon T carriers. Typical Class 5 linecard design samples the POTS lines at a rate of 8,000 samples per second. Typically, each sample is digitized into 12 to 16 bits by a codec device. The digitized sample is then companded to an 8 bit sample (1 byte) which makes up the PCM data stream that is transferred over the PSTN. Therefore, each POTS line is sampled at an effective rate of 64Kbps. Since legacy T1 transmission equipment uses robbed-bit signaling, the maximum guaranteed transmission rate for the PSTN as a whole is 56Kbps. Because of this limitation, standard POTS lines can only guarantee a maximum of 56Kbps transfer rate under the best conditions. DSL equipment gets around this problem by installing DSL Access Multiplexing (DSLAM) equipment at the Class 5 office end of the POTS line. By routing around the linecard, as well as routing the data directly over the Internet or other private IP based networks, and therefore the 64Kbps sampling rate, DSL is not bandwidth limited like PSTN traffic is. DSL, however, suffers from the very high costs associated with the purchase,

installation, maintenance, floor lease costs, etc. DSL also suffers from very high deployment costs resulting from the labor intensive process to turn up each line. Each DSL “POTS” line must be inspected, conditioned and all load coils removed.

[0073] The RCG gets around the 56Kbps POTS limitation as well as the DSL problems by using the standard POTS lines as they are, and not requiring any additional equipment to be installed at the Class 5 end of the POTS line. This technique simplifies deployment and drastically cuts costs.

Multilink PPP connections:

[0074] Referring to figure 7, the RCG implements broadband over POTS by employing an 802.11 b/g wireless interface to configure a multilink PPP bundle – 87 (per RFC 1990) comprised of the POTS lines connected to up to 32 RCGs. The limitation of 32 RCGs in a multilink PPP bundle is an arbitrary number and can be scaled up or down as required to support changes in network equipment capabilities. 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. However as time goes on, some other wireless interface may be more desirable. There is nothing special or specific to the 802.11 wireless interface that makes it particularly suited to this application. Any wireless interface scheme can be used to implement this device.

[0075] The 802.11b/g interface – 88 on an individual RCG is also used to provide a peer-to-peer wireless home networking environment to other 802.11 compatible wireless component within the residence (such as a hand-held computer device) while acting as an always on dialup Internet gateway over the POTS line – 40 for the other wireless devices. 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 56Kbps each to transfer information. This is roughly equivalent to a transfer rate of 1.79Mbps in the inbound direction (towards the RCG) and approximately 1.075Mbps in the outbound direction (towards the PSTN).

[0076] 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-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.)

Multilink PPP bandwidth allocation and initialization:

[0077] Referring to figure 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. 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. 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 . 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. (If a Neighborhood Access Point is available the RCG could request service through it instead of setting up a Multilink PPP connection – see figure 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 802.11 b/g wireless connections – 88 to the selected remote RCGs - 86. 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 its POTS line – 91 has a current average bandwidth utilization of less than some arbitrary limit such as 8Kbps to 16 Kbps. This 8Kbps to 16Kbps bandwidth utilization represents about two concurrent voice conversations using standard voice

compression techniques, or some small amount of data transmission occurring on the remote RCG's POTS interface - 91 or a combination thereof. Assuming that the remote RCG - 86 has a modem connection speed somewhere between 33Kbps to 56Kbps, this would leave approximately 17Kbps to 40Kbps of POTS bandwidth that the remote RCG - 86 could offer to the initiating RCG - 85 for use in its multilink PPP bundle - 87. Of course, if there is no activity on the remote RCG - 86 POTS line, then the entire bandwidth will be used for the multilink transfer. 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. 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. 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. 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. 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. It is the responsibility of the initiating RCG - 85 to perform all housekeeping tasks associated with the multilink transfer such as detection of lost packets and data packet reassembly, if those functions are required. Typically, lost packet detection and retransmission and reassembly are performed at higher OSI layers by the requesting software such as a browser. The remote RCGs - 86 are simply data transport nodes and do not perform any data processing on data received over a multilink PPP bundle destined for another RCG.

[0078] The initiating RCG- 85 of the multilink PPP bundle - 87 continually monitors the bandwidth of each remote RCG's - 86 multilink link which together comprise its multilink bundle - 87. When the available bandwidth for the multilink PPP link of an individual remote RCG - 86 falls below an arbitrary minimum set by the initiating RCG - 85, the initiating RCG - 85

instructs the offending remote RCG, via its 802.11b/g wireless interface – 88, to remove itself from the multilink bundle. The remote RCG – 86 will then notify the remote computer (URL) to be removed as a link in the current multilink bundle on which it is participating. Alternatively, a remote RCG – 86 can inform the initiating RCG – 85 of local demands on its POTS bandwidth, and request that the initiating RCG – 85 remove it (the remote RCG – 86) from the participation in the initiating RCG's multilink bundle – 87. The remote RCG – 86 will not unilaterally remove itself from participation in a multilink bundle without prior notification to the Initiating RCG – 85. The remote RCG – 86 must get authorization from the initiating RCG – 85 to remove itself from the bundle, since the initiating RCG – 85 will have no way of knowing if the loss of data from that remote RCG is due to some sort of failure or from the remote RCG simply removing itself from participation in the multilink bundle – 87. Also, for services that require a minimum Quality of Service (QOS) such as streaming video, the initiating RCG – 85 needs to control the multilink bundle – 87 bandwidth, and it can not do that if remote RCGs – 86 drop out of the multilink bundle – 87 at will. When a remote RCG – 86 requests to be removed from participation in a multilink bundle – 87, the initiating RCG – 85 must immediately grant the request. If the initiating RCG – 85 were to not grant the request, then the remote RCG – 86 could, in worst case, delay or drop incoming multilink packets destined for the initiating RCG – 85. If this were to happen, the initiating RCG – 85 will have missing packets and could over run its reassembly buffer (if reassembly is being performed by the RCG) causing catastrophic data loss and potentially have to restart the entire transmission. In the least case, the initiating RCG – 85 would have to initiate retransmission of potentially many packets which it assumes to be lost, but may simply be delayed by the remote RCG – 86. Once a remote RCG – 86 has been removed from participating in a multilink bundle – 87, the initiating RCG – 85 will then look up another remote RCG in its router tables that can be used to participate in the multilink PPP bundle – 87, and request that the new remote RCG – 86 to join the existing multilink bundle – 87. This is necessary to maintain a minimum Quality of Service. Since RCGs prioritize their bandwidth requirements based upon their own “local” service requirements, their participation in any multilink PPP service is available only to bandwidth that is not required for its own current local demands. Therefore, a remote RCG's – 86 bandwidth that is available for multilink services can change at any time. The dynamic reassignment of remote RCGs that participate in a multilink bundle is also required to prevent a remote RCG – 86 from receiving packets so slowly

that the originating RCG – 85 interprets this delay as lost packets. When the initiating RCG – 85 determines that a packet has been lost, and it is performing packet reassembly, it will, itself, request that the remote computer retransmit the lost packet. The initiating RCG will not ask any remote RCG – 86 to perform retransmissions or any other kind of data computations or manipulations.

[0079] Refer to figure 8 for the following discussion. In areas where there are existing 802.11 network equipment such as Neighborhood Access Point - 93, or where there is sufficient bandwidth requirements from an installed base of RCGs to warrant the deployment of a Neighborhood Access Point - 93, the RCGs will automatically detect the presence of the compatible neighborhood access points and register with that equipment for transport services. In this case, an RCG has an alternative broadband service route in addition to the multilink option. An RCG can communicate directly with a local 802.11 Network Access Point - 93 that is connected to the PSTN or another carrier's network via some sort of high bandwidth backbone such as a T-Carrier or optical carrier connection (T1, T3, OC3, OC12 etc.). The RCGs can communicate directly with neighborhood access points at their full 11/54 Mbps data rates to provide up to that full bandwidth to the user. This functionality is, of course, subject to the Network Access Point – 93 allowing access to its resources to the RCG according to the 802.11 wireless protocol.

[0080] This architecture is important since it provides an avenue to relieve the local class 5 offices of congestion that can be caused by a wide spread deployment of RCGs within the class 5 service area. Since each RCG requires a constant 24/7 modem connection, this ties up the class 5 switch in a fashion that it was not designed for. This could lead to wholesale class 5 office expansions which would be extremely expensive, and potentially prohibitive for the Local Exchange Carriers (LECs). By deploying neighborhood access points that operate at 54Mbps (802.11a/g), in areas where the RCG concentration starts placing too high of a demand on the local class 5 office, the bandwidth from the RCGs can be aggregated by the neighborhood access points into large capacity backbones to relieve the switch congestion. In this case, the RCG POTS interface – 40 can be used solely as a lifeline connection, or when the 802.11 wireless LAN in which the RCG resides is congested. With this implementation, voice calls will be carried over the wireless interface as opposed to the POTS interface on which they would normally be carried. Also, the RCG modem - 41 connected to the POTS interface – 40 would

not need to maintain a constant always on connection, it could be a dialed on demand connection and thereby relieving the local class 5 office switch.

Bouncing or Hopping traffic:

[0081] Refer to figure 9. In areas where the density of RCGs is less than the arbitrary number of 32 RCGs within its transmission radius for multilink connections, the RCGs can bounce, or relay, the data traffic between each other to reach other RCGs located farther than the RCGs wireless transmission area. Since the POTS data rate of 56Kbps is miniscule as compared to the 11/54 Mbps 802.11b/g transfer rate, the overhead associated with bouncing data traffic is not a concern. This will allow for the fastest possible data transfer across POTS lines for every RCG user.

[0082] RCGs can also communicate directly with an 802.11a Neighborhood Access Point - 93 device (such as that used in WI-FI networks) that is connected to a data network connection such as a DS3 or OC3 service via a Metro Access Point. Where an RCG has access to a broadband device such as an 802.11a type device, either directly or via a bounced signal across several RCGs, a direct high speed data connection can be used to transfer large files. When an RCG is communicating directly with an 802.11a device, data transfer speeds up to the full 11/54 Mbps can be achieved to speed video transfers for such applications as video on demand.

RCG Router Tables:

[0083] The RCG continually monitors its 802.11b/g wireless interface for transmissions from other RCGs or 802.11a Access Points as well as other 802.11b/g wireless devices within the residence. The RCG provides a means to identify and store the addresses of other RCGs and Neighborhood Access Points within its local area. The RCG creates routing tables, much like an IP router device, so that it knows which RCGs are local to itself, and how many hops will be needed to reach the maximum of 32 POTS lines or a Neighborhood Access Point. The RCG can then determine how to route its data transfers to gain the most efficient routing and network efficiencies.

[0084] The router tables in each RCG are continually updated by monitoring the 802.11 frames received from other RCGs or Network Access Points. The number of entries in the router tables can be limited to an arbitrary number of other RCGs but contains room for at least 32

entries. For each RCG listed in the router tables, certain information is kept such as signal strength, if the other device is another RCG or some other 802.11 compatible device, if the other RCG is reachable directly, or if it is accessed via another RCGs by hopping. In the case there RCG hopping is used, the address of each RCG that is hopped is stored in the routing table. When an RCG is first powered up, it monitors its 802.11 interface for a period of time to identify other RCGs or Neighborhood Access Point devices, or other Wi-Fi devices within its transmission area. When first deployed, the RCG will not have any entries in its routing tables. This condition can persist for some time, until another RCG or other 802.11 device is deployed within the former RCGs transmission range. In this state, the RCG can be used for wireless networking within the residence, connecting the local computer to the RCGs always on Internet connection as well as to other wireless devices within the home. When an 802.11 frame is received by an RCG that contains the address of an RCG whose address does not exist in the receiving RCG's router table (as is the case when a new RCG is first installed), the receiving RCG polls the transmitting RCG for its router table information. The received router information is reviewed for other RCG's or other 802.11 compatible devices that are not listed in its own router tables. A decision is made to use some, all, or none of the new route information in its router tables. There is no real limitation on the number of RCGs that can be "hopped" in order to build a complete router table or to reach many more RCGs, Neighborhood Access Points or Metro Access Points.

Equipment and Services Priorities:

[0085] Just as voice has priority over data transfers within a single RCG, local RCG traffic (both voice and data) has priority over remote transfer requests by other RCGs. If an RCG is currently using all of its available POTS bandwidth for its own purposes, it will deny any remote RCG's request for access to its POTS line. Only when there is available POTS bandwidth available will an RCG allow other RCGs access to its POTS line. It will, however, bounce the traffic to other RCGs within its transmission area if requested by the originating RCG. In this case, available wireless bandwidth of any RCG (that amount of the 11/54 Mbps not currently used for its own traffic) can be used to relay traffic between other RCGs that do have available POTS bandwidth. In the same fashion, excess wireless bandwidth of any RCG can be by other RCGs to access high speed backbones via Neighborhood or Metro Access Points.

[0086] RCGs can also access other 802.11 wireless networks (Wi-Fi for example) that happen to be deployed within their service areas. In this case, access agreements between the RCG service provider and the wireless network operator must be put into place. By remaining compatible with the 802.11 standards, the RCGs capabilities will benefit by the growing WI-FI network infrastructure, and the WI-FI network will benefit by the RCG network.

Voice Over POTS and Data Over Wireless:

[0087] Normally, all communications from an RCG will be transmitted over the local POTS line, or a multilink bundle made up of many remote RCG POTS lines. By default, all voice calls will be carried over the “local” POTS line – 40 to alleviate security/privacy concerns and only “data” will be transmitted via multilink bundles. Generally, since voice “data” is compressed locally by the RCG, the required bandwidth for a voice call is so small that it does not make for a good choice to route it over a multilink connection. However, it is possible to route voice calls entirely over another RCGs POTS line. It is also possible for an RCG to transmit voice data over POTS lines connected to other RCGs via multilink bundles or directly over its 802.11 wireless interface, and since the 802.11 specification does support the Wired Equivalent Privacy (WEP) specification, a secured connection can be made in this fashion.

Remote Upgradability

[0088] The RCG is designed with the capability for unassisted remote upgradability. The remote upgradability feature is not the same as the storing of operational parameters during the configuration process. This feature allows the system operator to add new features as they are developed, or to correct bugs remotely and without the users knowledge or involvement. This feature can also be used to install a complete new operating system (OS).

[0089] Key to the successful implementation of the Remote upgradability feature is that a completely fail-safe routine be implemented that can recover from any failure during the upgrade process and to re-initiate and monitor the upgrade process until it has successfully completed. This process is carried out by loading a boot loader program that is stored in non-volatile memory. The boot loader program provides the minimum capabilities to start up the RCG and connect into the system operator’s diagnostics network to download fixes or a new OS. The boot loader program is technically part of the OS, but it cannot be over written by any upgrade

process. It is responsible for detecting failure of the RCG and initiating a connection to the diagnostics network. Once connected with the diagnostics network, the boot loader will provide diagnostics support to help correct the RCG's operation and reconfigure the OS.

CLAIMS

What is claimed is:

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

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

a processor that requests the at least two remote communications devices to assist in transferring data and aggregates the data from the at least two remote communications devices.

2. The communications device of claim 1, wherein the processor allocates the at least two remote communications device into a multilink group transfer.

3. The communications device of claim 1, wherein the processor creates and updates routing tables with the at least two remote communications devices.

4. The communications device of claim 3, wherein the processor uses the routing tables to determine routing efficiencies based on at least one of quality of service, total connection speed of the at least two remote communication devices, a number of data hops, available unused bandwidth of the at least two remote communication devices, wireless transfer speeds and signal strength between the at least two remote communication devices.

5. The communications device of claim 1, wherein the processor determines how many remote communications devices are located in a transmission range.

6. The communications device of claim 1, wherein the processor sends a request to the at least two remote communications devices for requesting use of a portion of unused bandwidth of the at least two remote communications devices, receives a response from the at least two remote communications devices, the response containing information about the portion of unused bandwidth, sends control information to the at least two remote communications device for participating in a multilink connection, and receiving packets from the at least two remote communications devices.

7. 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, 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.

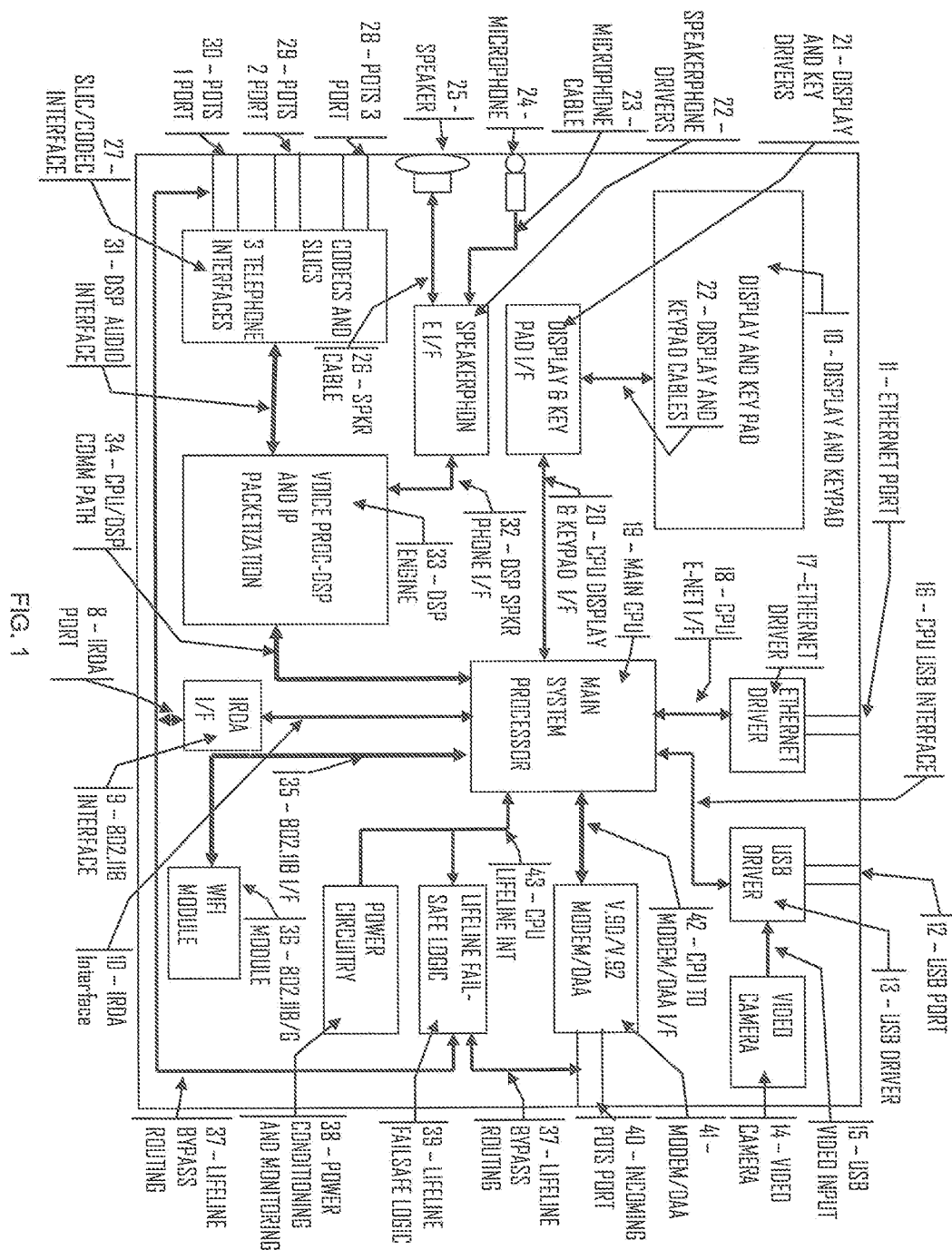
8. A communications device that is capable of providing broadband communications services, comprising:

a wireless interface for connecting wirelessly to at least two wireless devices; and

a processor that requests the at least two wireless devices to assist in transferring data and aggregates the data from the at least two wireless devices.

ABSTRACT

The Residential Communications Gateway (RCG) is a broadband communications device that combines all voice, data and video communications to and from a typical residence or small business for transmission over a single, or a plurality of Plain Old Telephone Service (POTS) lines separately or in conjunction with, a wireless broadband backbone. The RCG does this by employing packetized data with Voice over Internet Protocol (VoIP) technologies combined with RF communications technologies. A key consideration to the design of the RCG is that no additional or special transmission equipment must be installed at the Central Office or anywhere else in the network to enable new calling features provided by the RCG as is the case with DSL and Cable systems. By eliminating the requirement for costly infrastructure enhancements, ubiquitous high speed communications and services can be deployed to every POTS subscriber.



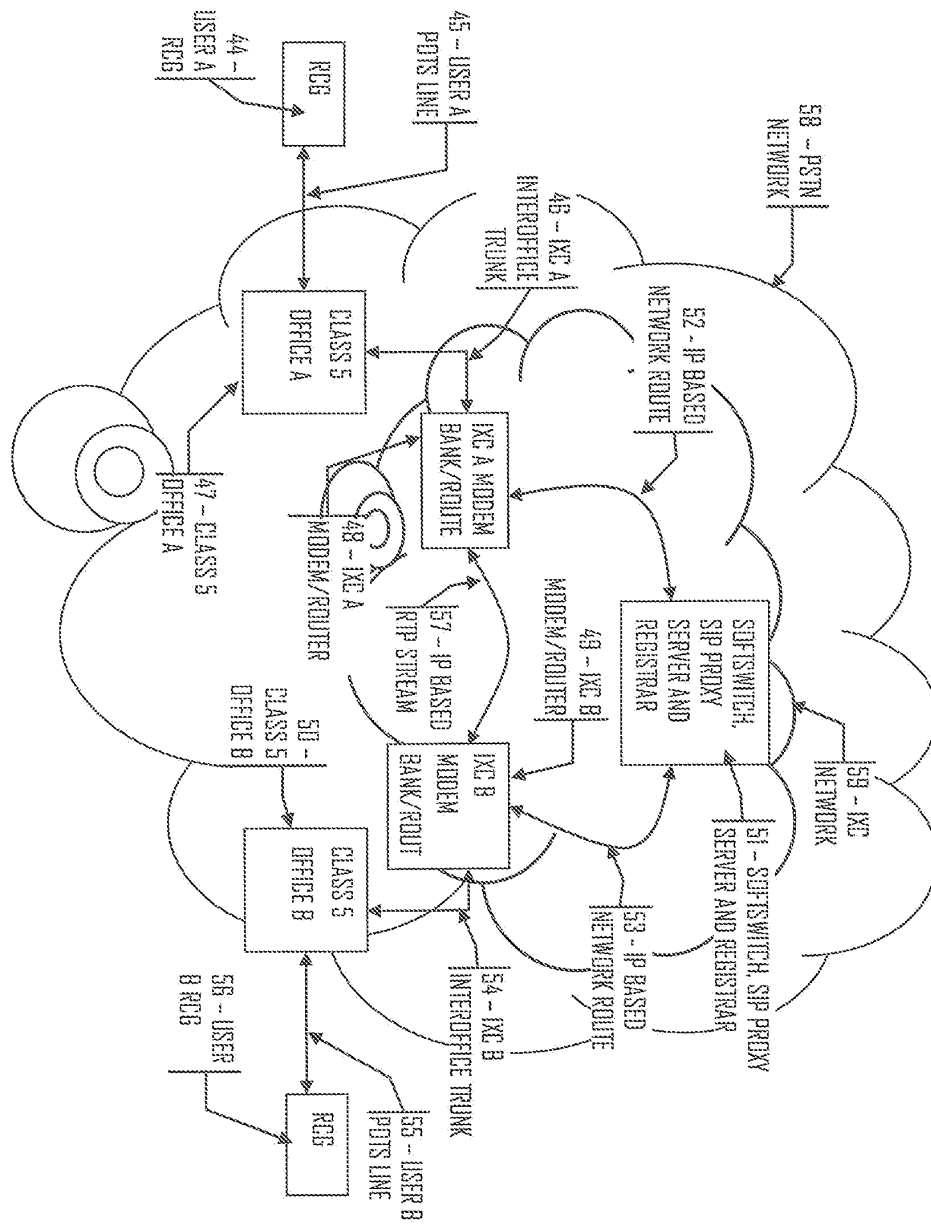


FIG. 2

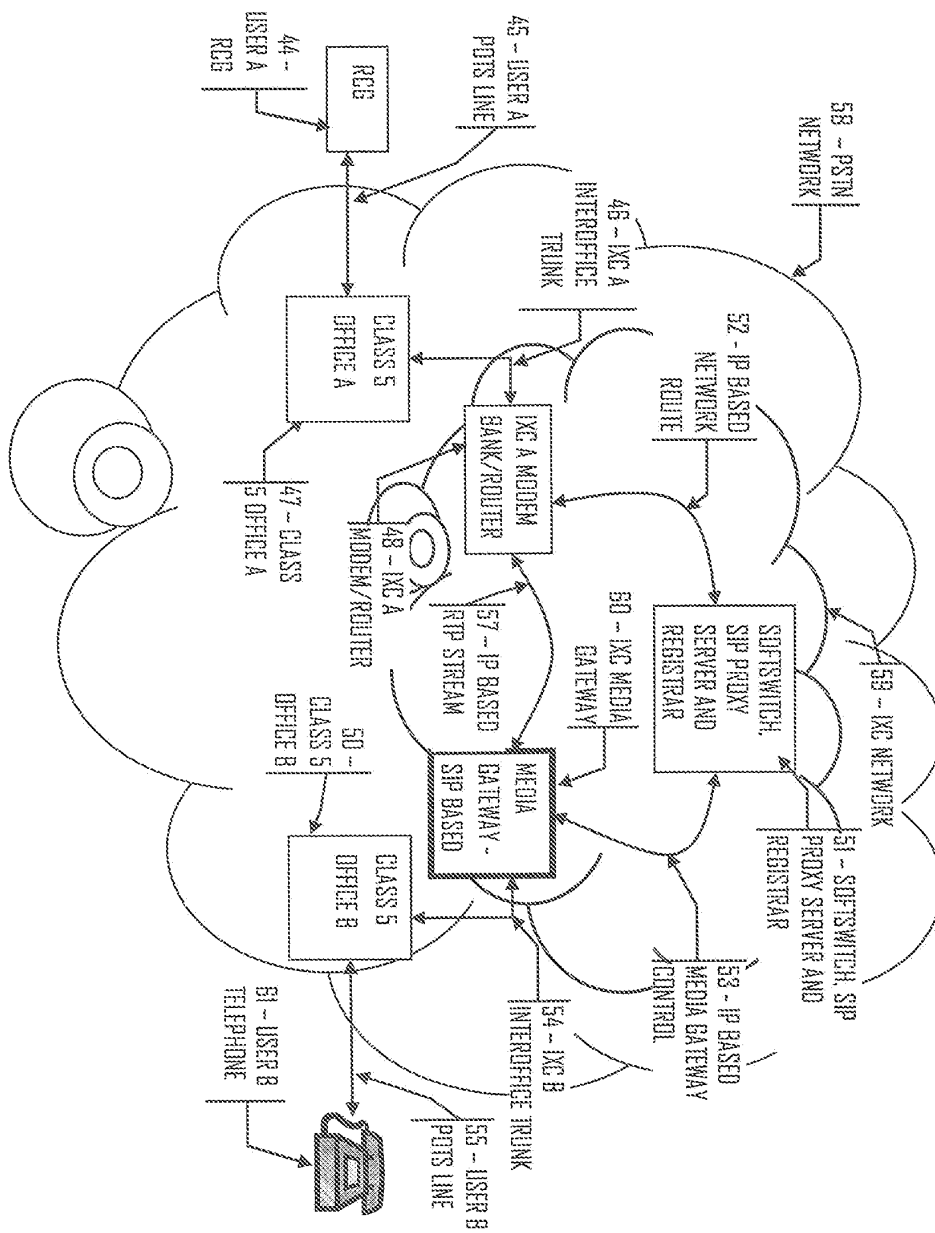


FIG. 3

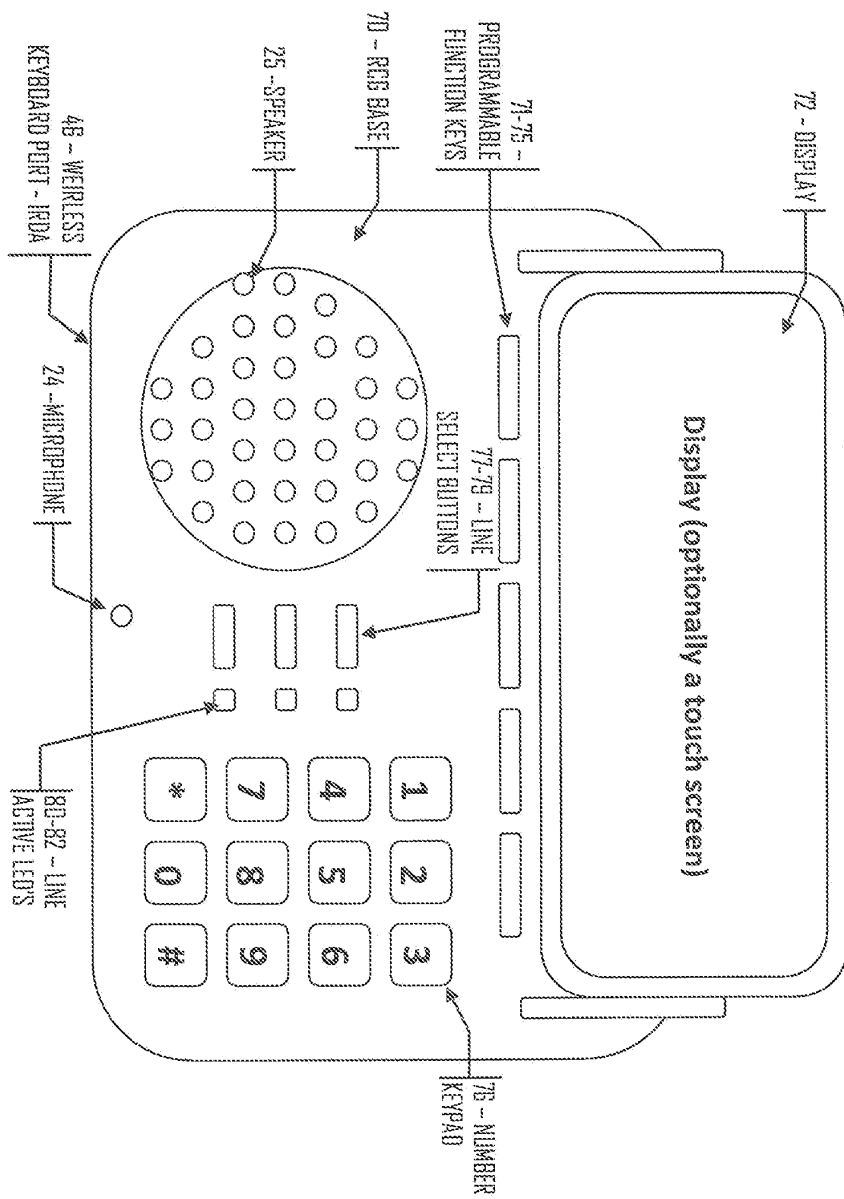


FIG. 4

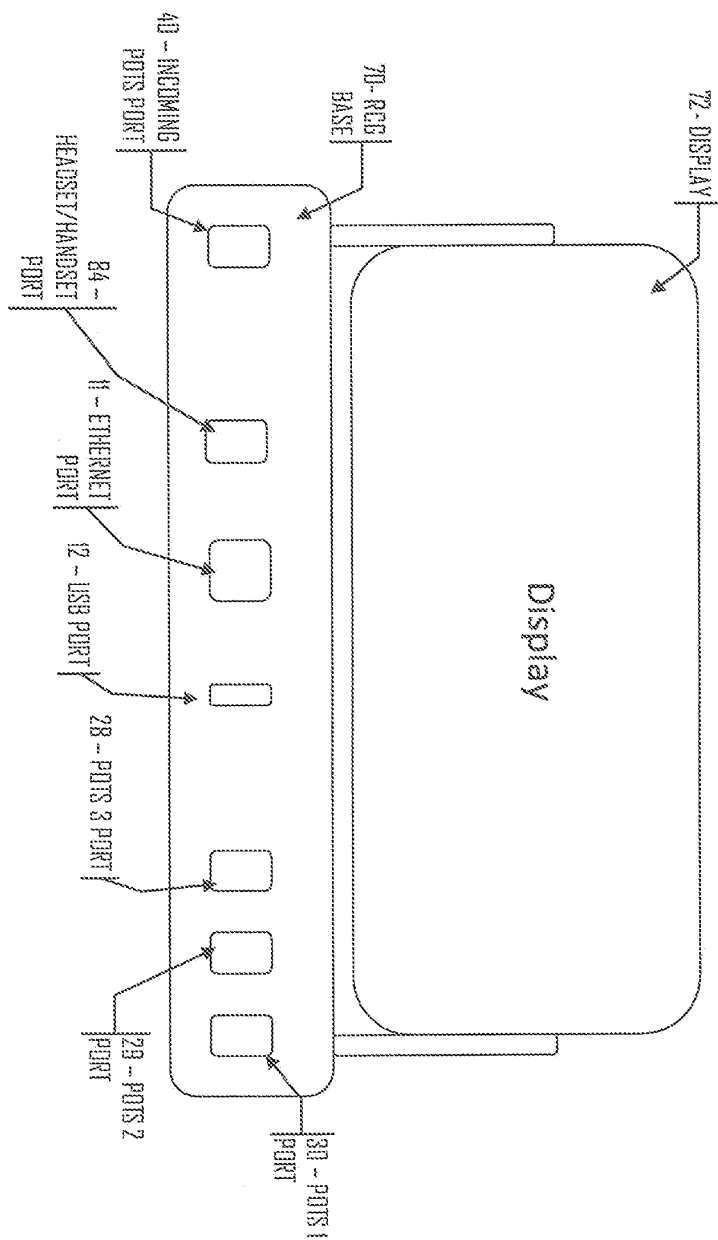


FIG. 5

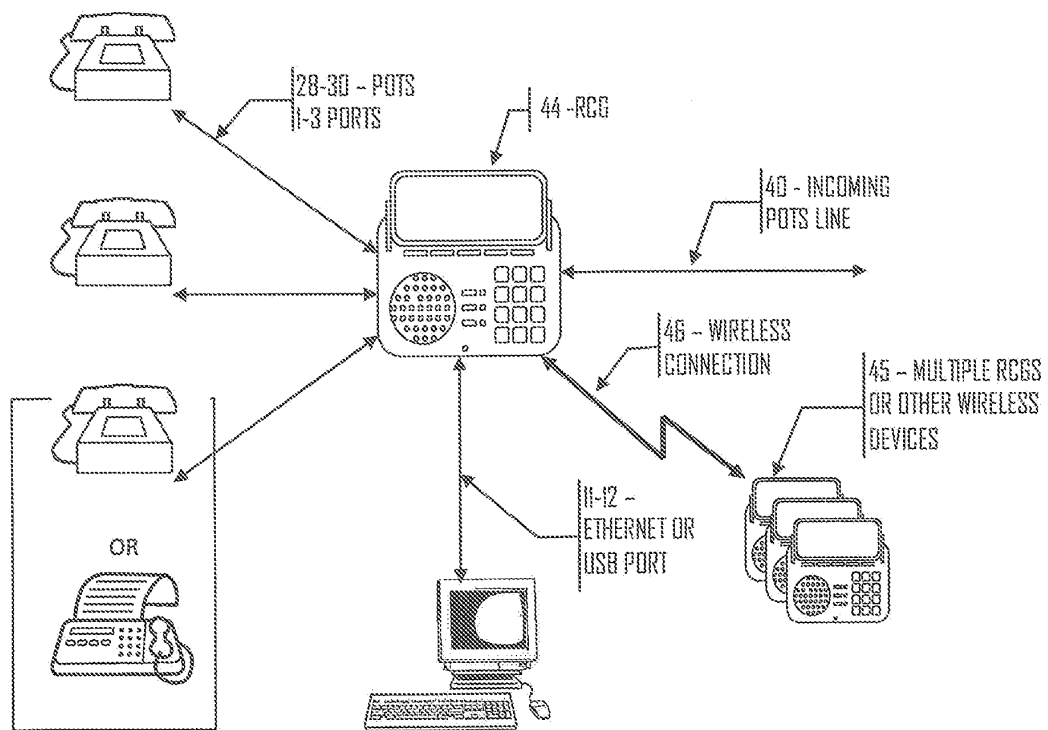


FIG. 6

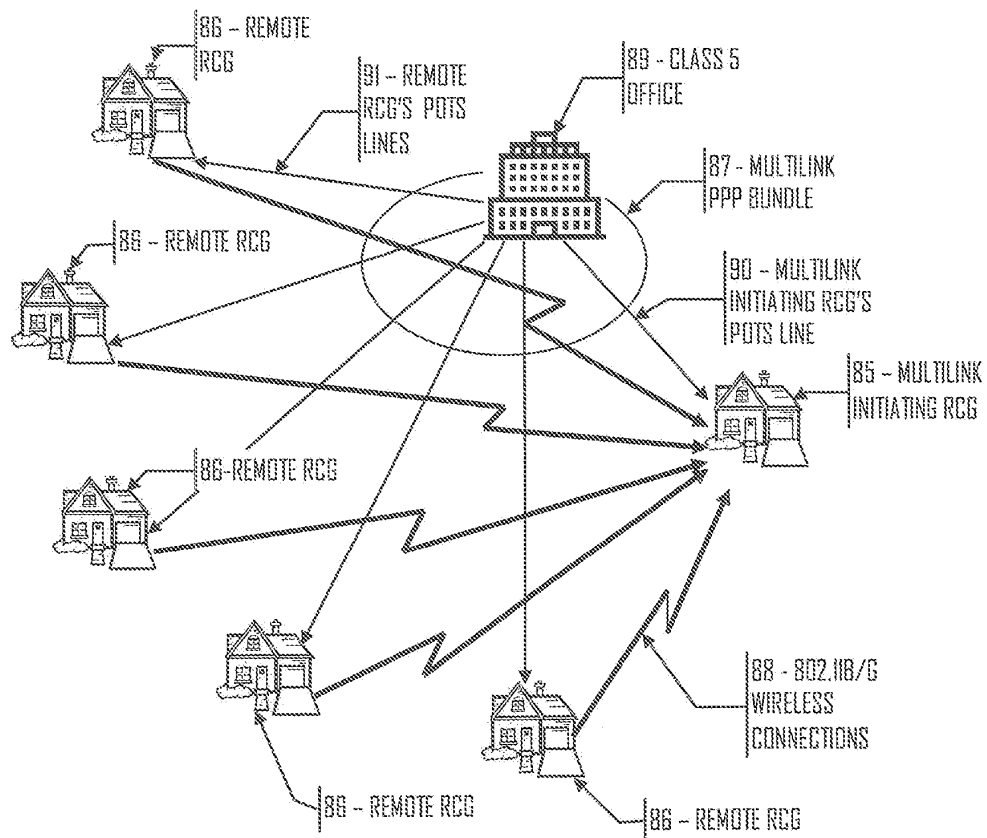


FIG. 7

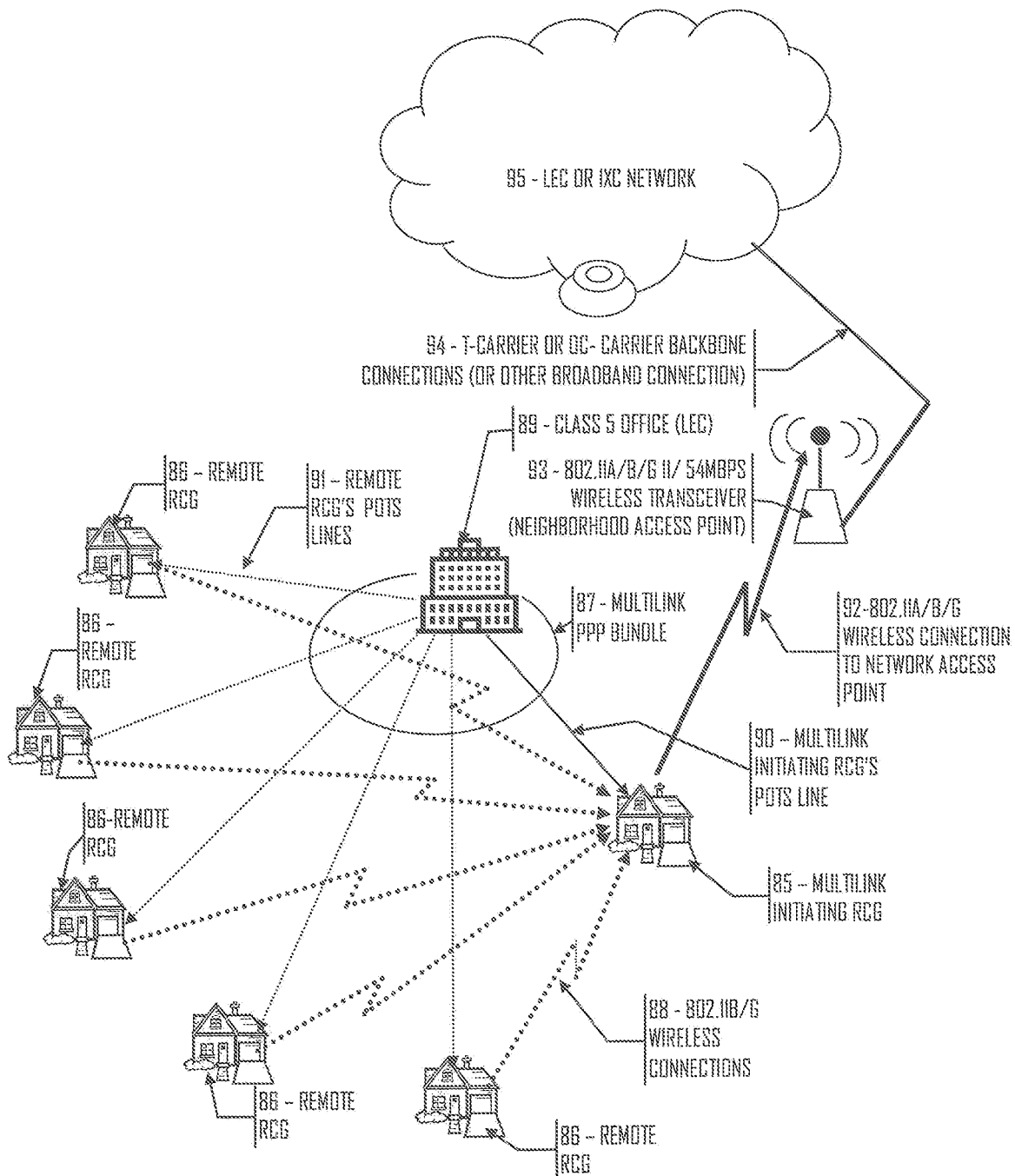


FIG. 8

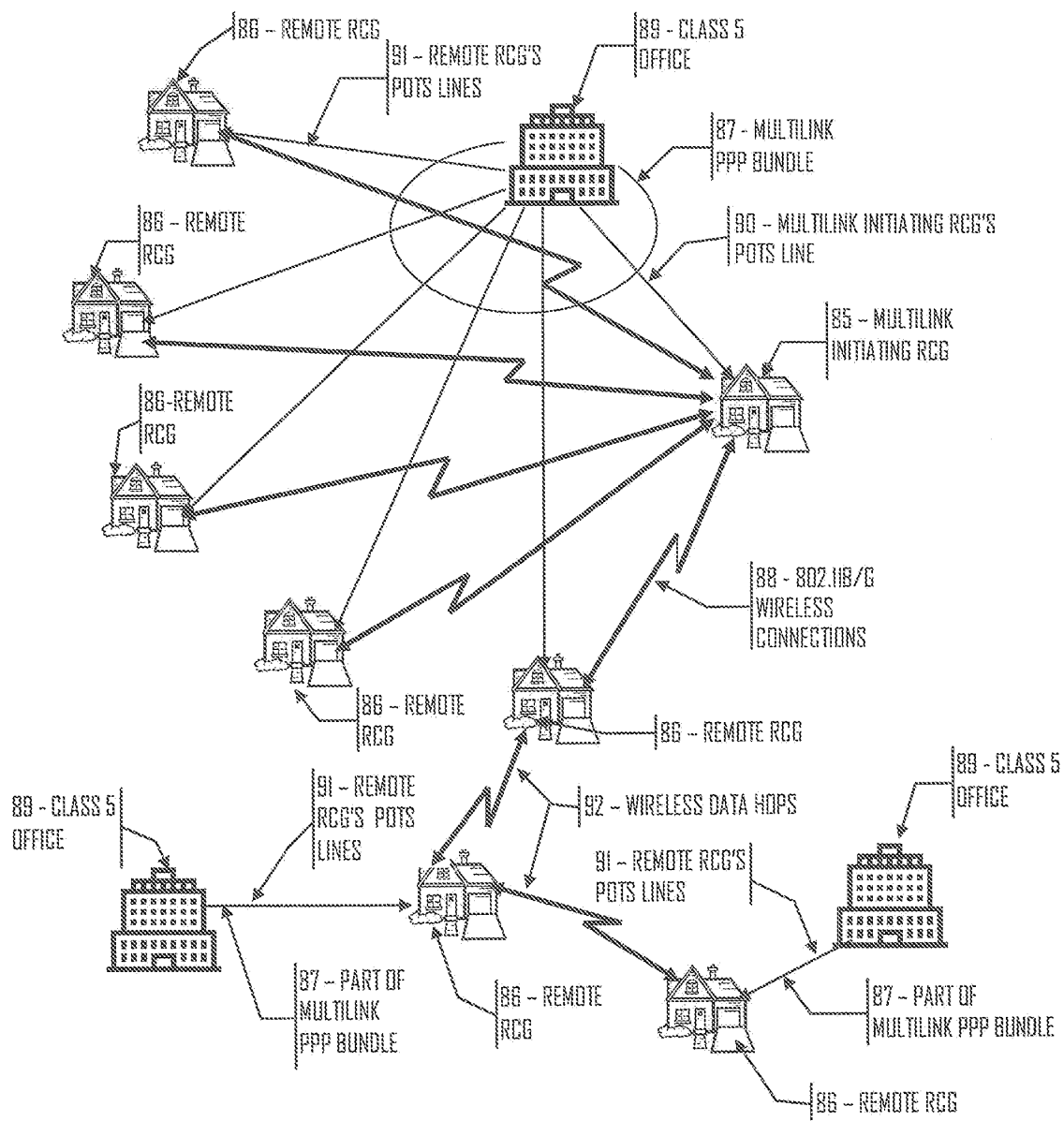


FIG. 9

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention: **A BROADBAND COMMUNICATIONS DEVICE**

As the below named inventor(s), I/we declare that:

This declaration is directed to:

- ☒ The attached application, or
☐ Application No. _____ filed on _____
☐ As amended on _____ (if applicable);

I/we believe that I/we am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/we acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.

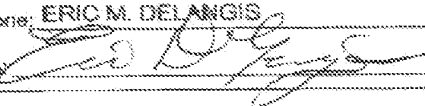
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FULL NAME OF INVENTOR(S)

Inventor one: **ERIC M. DELANGIS** Date: **10/19/2009**

Signature:  Citizen of **USA**

Inventor two: _____ Date: _____

Signature: _____ Citizen of: _____

☐ Additional inventors or a legal representative are being named on _____ additional form(s) attached hereto.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 13/531,294			
APPLICATION AS FILED - PART I									
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY			
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)		
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	95		N/A			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	310		N/A			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	125		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))	8	minus 20 = *		x 30 = 0.00	OR				
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *		x 125 = 0.00					
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00					
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00					
			TOTAL	530		TOTAL			
* If the difference in column 1 is less than zero, enter "0" in column 2.									
APPLICATION AS AMENDED - PART II									
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))					OR			
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR			
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE			
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=	x	=	OR	x	=
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x	=	OR	x	=
	Application Size Fee (37 CFR 1.16(s))					OR			
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR			
			TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.									



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/531,294	06/22/2012	Eric M. Delangis	ED 1040

64828
Harold McGurk
The Law Office of Clay McGurk
P.O. BOX 1488
Orange, CA 92856

CONFIRMATION NO. 9530
POA ACCEPTANCE LETTER



Date Mailed: 07/05/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/22/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/tnguyen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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13/531,294	06/22/2012	2614	530	ED 1040	8	3

CONFIRMATION NO. 9530

FILING RECEIPT



0000000055180073

64828
Harold McGurk
The Law Office of Clay McGurk
P.O. BOX 1488
Orange, CA 92856

Date Mailed: 07/05/2012

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Eric M. Delangis, Huntsville, AL;

Power of Attorney: The patent practitioners associated with Customer Number 64828

Domestic Priority data as claimed by applicant

This application is a CON of 12/581,852 10/19/2009
which is a CON of 10/686,375 10/14/2003 PAT 7606156 *
which claims benefit of 60/418,521 10/15/2002
(*)Data provided by applicant is not consistent with PTO records.

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If Required, Foreign Filing License Granted: 07/03/2012

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/531,294**

Projected Publication Date: 10/11/2012

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

BROADBAND COMMUNICATIONS DEVICE

Preliminary Class

379

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page 2 of 3

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/531,294	06/22/2012	Eric M. Delangis	ED 1040

CONFIRMATION NO. 9530

PUBLICATION NOTICE



OC000000057012483

64828
Harold McGurk
The Law Office of Clay McGurk
P.O. BOX 1488
Orange, CA 92856

Title:BROADBAND COMMUNICATIONS DEVICE

Publication No.US-2012-0258673-A1

Publication Date:10/11/2012

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publicly available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828	7590	11/29/2012		
Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			EXAMINER CHO, HONG SOL	
			ART UNIT 2467	PAPER NUMBER
			NOTIFICATION DATE 11/29/2012	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CLAYMCGURK@COX.NET

Office Action Summary	Application No. 13/531,294		Applicant(s) DELANGIS, ERIC M.	
	Examiner HONG CHO		Art Unit 2467	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on ____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) 1-8 is/are pending in the application.

5a) Of the above claim(s) ____ is/are withdrawn from consideration.

6) ☐ Claim(s) ____ is/are allowed.

7) ☒ Claim(s) 1-8 is/are rejected.

8) ☐ Claim(s) ____ is/are objected to.

9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

10) ☒ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on 22 June 2012 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892) 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date ____	4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ 5) ☐ Notice of Informal Patent Application 6) ☐ Other: ____
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DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informality:

The Applicant is required to provide the status (if patented or abandoned) of the applications, 10/686375 and 12/581852.

Claim Rejections - 35 USC § 112, First paragraph

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
3. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Re claim 2, the specification fails to explain how to allocate devices into a multilink group transfer.

Claim Rejections - 35 USC § 112, Second paragraph

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2467

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 2, it is not clear what is meant by allocating the device into a multilink group transfer. The specification fails to describe what the multilink group is.

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 2 and 5-7 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 4 and 7 of U.S. Patent No. 8228801.

Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claim 6 of the instant application merely broadens the scope of the claim 1 of the Patent by eliminating the element and its function of the claim (selects the at least one remote communications device with unused bandwidth). It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA).

Claims 2 and 5 correspond substantially to patent claims 4 and 7.

Claim 7 of the instant application merely broadens the scope of the claim 10 of the Patent by eliminating the element and its function of the claim (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

Art Unit: 2467

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). It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 2 and 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Barany et al (US 7068623), hereinafter referred to as Barany.

Re claims 1, 7 and 8, Barany discloses a communication device with a wireless interface for connecting to wireless devices and requests the remote communications devices to transfer portions of data, 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 (figure 2).

Re claim 2, as best understood, Barany discloses multiplexing of traffic transmitted by first and second mobile stations.

Re claim 6, Barany discloses requesting use of a portion of unused bandwidth of the at least two remote communications devices, receiving a response containing information about the portion of unused bandwidth (column 5, lines 1-12; lines 19-26), sending control information to the at least two remote communications device for participating in a multilink connection, and receiving packets from the at least two remote communications devices (figure 3).

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barany in view of Cain et al (US 20030202468), hereinafter referred to as Cain.

Re claims 3 and 4, Barany discloses all of the limitations of the base claim, but fails to disclose using routing tables to determine routing efficiencies based on one of

QoS, connection speed, unused bandwidth, hops, wireless transfer speed and signal strength. However, Cain discloses generating QoS metrics for each potential route selection. The QoS metrics may include at least one of available bandwidth, hop count (paragraph [0020]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Barany with the teaching of Cain for the benefit of providing efficient routing of data packets based on QoS requirement.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barany in view of Leung et al (US 20030063591), hereinafter referred to as Leung.

Re claim 5, Barany discloses all of the limitations of the base claim, but fails to disclose determining how many remote communications devices are located in a transmission range. However, Leung discloses building a multicast tree based on the transmission range information (paragraph [0083]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Barany with the teaching of Leung for the benefit of efficient utilization of network resources by multicasting data packets within a transmission range.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Phillips can be reached on 571-272-3940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hong Cho/

Primary Examiner, Art Unit 2467

Notice of References Cited	Application/Control No. 13/531,294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,307,839 B1	10-2001	Gerszberg et al.	370/235
*	B	US-2003/0063591 A1	04-2003	Leung et al.	370/338
*	C	US-2003/0202468 A1	10-2003	Cain et al.	370/229
*	D	US-2006/0079274 A1	04-2006	Gallagher et al.	455/552.1
*	E	US-7,068,623 B1	06-2006	Barany et al.	370/329
*	F	US-7,257,106 B2	08-2007	Chen et al.	370/338
*	G	US-7,308,279 B1	12-2007	Zweig, Jonathan M.	455/522
*	H	US-7,385,924 B1	06-2008	Riddle, Guy	370/235
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



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BIB DATA SHEET

CONFIRMATION NO. 9530

SERIAL NUMBER 13/531,294	FILING or 371(c) DATE 06/22/2012 RULE	CLASS 370	GROUP ART UNIT 2467	ATTORNEY DOCKET NO. ED 1040		
APPLICANTS Eric M. Delangis, Huntsville, AL; ** CONTINUING DATA ***** This application is a CON of 12/581,852 10/19/2009 PAT 8,228,801 which is a CON of 10/686,375 10/14/2003 PAT 7,606,156 * which claims benefit of 60/418,521 10/15/2002 (*)Data provided by applicant is not consistent with PTO records. ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 07/03/2012						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /HONG SOL CHO/ Acknowledged Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY AL	SHEETS DRAWINGS 9	TOTAL CLAIMS 8	INDEPENDENT CLAIMS 3
ADDRESS Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856 UNITED STATES						
TITLE BROADBAND COMMUNICATIONS DEVICE						
FILING FEE RECEIVED 530	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

Search Notes 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

SEARCHED			
Class	Subclass	Date	Examiner
370	230-235,278,282,328,338,468,477	11/26/2012	hc

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search	11/26/2012	hc

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant										☐ CPA										☐ T.D.										☐ R.1.47									
CLAIM			DATE																																				
Final	Original	11/26/2012																																					
	1	✓																																					
	2	✓																																					
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EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S29	3	"12581852"	US-PGPUB; USPAT	OR	OFF	2012/11/26 09:38
S30	5	10/686375	US-PGPUB; USPAT	OR	OFF	2012/11/26 09:39
S31	9	((ERIC) near2 (DELANGIS)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2012/11/26 09:41
S32	37466	370/230-235,278,282,328,338,468,477.ccls.	US-PGPUB; USPAT	OR	OFF	2012/11/26 10:25
S37	1	"13531294"	US-PGPUB; USPAT	OR	OFF	2012/11/26 10:30
S48	809	(aggregat\$3 or combin\$3 or add\$3) near (data or message or inforamtion) with (wireless or mobile) adj (devices or station\$1)	US-PGPUB; USPAT	OR	OFF	2012/11/26 10:50
S50	544	(aggregat\$3 or combin\$3) near (data or message or inforamtion) with (wireless or mobile) adj (devices or station\$1)	US-PGPUB; USPAT	OR	OFF	2012/11/26 10:51
S51	67	S50 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2012/11/26 10:52
S53	195	S32 and (multiplex\$3 or aggregat\$3 or combin\$3) near (traffic or data or message\$1 or inforamtion or packet\$1 or frame\$1) with (wireless or mobile) adj (devices or station\$1)	US-PGPUB; USPAT	OR	OFF	2012/11/26 11:13
S54	26	S53 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2012/11/26 11:14
L5	25	(select\$3 or determin\$3 or choos\$3) with rout\$3 near path with qos same hop	US-PGPUB; USPAT	OR	OFF	2012/11/26 13:20
L11	41	(bs or ap)with (select\$3 or determin\$3 or choos\$3) with rout\$3 with hop	US-PGPUB; USPAT	OR	OFF	2012/11/26 13:28
L15	30	(select\$3 or determin\$3 or choos\$3) with rout\$3 with qos same hop same bandwidth	US-PGPUB; USPAT	OR	OFF	2012/11/26 13:30
L18	37	multicast\$3 with range near transmission	US-PGPUB; USPAT	OR	OFF	2012/11/26 13:48
L20	7	multicast\$3 with range near transmission same tree	US-PGPUB;	OR	OFF	2012/11/26 13:58

C:\Users\hcho\Documents\EAST\Workspaces\13531294.wsp

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.: **13/531,294** EXAMINER: Hong CHO
INVENTOR: Eric M. Delangis GROUP ART UNIT: 2467
FILED: JUNE 22, 2012 CONFIRMATION No.: 9530
TITLE: A BROADBAND COMMUNICATIONS DEVICE
ATTORNEY NO: ED 1040

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the Office Action issued on November 29, 2012 ("Office Action"), please reconsider the above-identified application in light of the following amendments to the specification, claims and accompanying remarks. The shortened period for response was to expire on February 29, 2013 (which does not exist). A petition for extension of time is requested for two months, thus extending the period for response to April 29, 2013. This Amendment is being filed on April 29, 2013.

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: April 29, 2013

By: Clay McGurk
Clay McGurk

IN THE SPECIFICATION

Please replace paragraph 1 of the specification with the following:

[0001] This application is a continuation of U.S. Patent Application Serial No. 12/581,852 filed October 19, 2009, now U.S. Patent 8,228,801, which is a continuation of U.S. Patent Application Serial No. 10/686,375 filed October 14, ~~2005~~ 2003, now U.S. Patent 7,606,156, which claims priority to U.S. Provisional Application Serial No. 60/418,521, filed October 15, 2002, all which are incorporated by reference herein.

THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1. (Currently Amended) A communications device that is capable of providing broadband communications services, comprising:

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

a processor that requests the at least two remote communications devices to assist in ~~transferring~~ downloading portions of data, receives the portions of the data from the at least two remote communication devices and aggregates the portions of the data downloaded from the at least two remote communications devices to create a data stream for the communication device.

2. (Currently Amended) The communications device of claim 1, wherein the processor allocates the at least two remote communications device into a multilink ~~group transfer~~ communication.

3. (Original) The communications device of claim 1, wherein the processor creates and updates routing tables with the at least two remote communications devices.

4. (Original) The communications device of claim 3, wherein the processor uses the routing tables to determine routing efficiencies based on at least one of quality of service, total connection speed of the at least two remote communication devices, a number of data hops, available unused bandwidth of the at least two remote communication devices, wireless transfer speeds and signal strength between the at least two remote communication devices.

5. (Currently Amended) The communications device of claim 1, wherein the processor determines ~~how many~~ a number of remote communications devices that are located in a transmission range with the communications device.

6. (Currently Amended) The communications device of claim 1, wherein the processor sends a request to each of the at least two remote communications devices for requesting use of a portion of unused bandwidth of the at least two remote communications devices, receives a response from each of the at least two remote communications devices, the response containing information about availability of the portion of unused bandwidth, sends control information to the at least two remote communications device so that the at least two remote communication devices receive a set of packets participating in a multilink connection, and receiving the set of packets from the at least two remote communications devices.

7. (Currently Amended) A communications device that is capable of providing broadband communications services, comprising:

at least one connection for connecting to a network;

a ~~at least one~~ wireless interface for connecting wirelessly to one or more remote communications devices; and

a processor that requests one or more of the remote communications devices to download transfer portions of data, receives the portions of data downloaded by the remote communication 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 transfer speed bandwidth for the communications device.

8. (Currently Amended) A communications device that is capable of providing broadband communications services, comprising:

a wireless interface for connecting wirelessly to ~~at least two wireless devices~~ a first wireless device and a network; and

a processor that requests the ~~at least two wireless devices~~ first wireless device to download a first portion of assist in transferring data, receives a second portion of data from the network, receives the first portion of data from the first wireless device and aggregates the first portion of data and the second portion of data to create a data stream from the at least two wireless devices that is downloaded to the communication device.

9. (New) The communication device of claim 7, where the network is a telephone network, the Internet, or a telecommunication system.

10. (New) The communication device of claim 8, where the network is a telephone network, the Internet, or a telecommunication system.

11. (New) The communication device of claim 8, wherein the wireless interface connects to a second wireless device, and

wherein the processor requests the second wireless device to download a third portion of data and aggregates the first portion of data, the second portion of data and the third portion of data to create the data stream that is downloaded to the communication device.

12. (New) The communication device of claim 8, wherein the wireless interface connects to a third wireless device, and

wherein the processor requests the third wireless device to download a fourth portion of data and aggregates the first portion of data, the second portion of data, the third portion of data and the fourth portion of data to create the data stream that is downloaded to the communication device.

13. (New) The communication device of claim 8, wherein the communication device is a cell phone or a mobile computer.

14. (New) The communication device of claim 8, wherein the first wireless device is a cell phone or a mobile computer.

15. (New) The communication device of claim 8, wherein the first wireless device is a wireless router.

16. (New) The communication device of claim 8, wherein the first wireless device connects to a wireless router.

REMARKS

Status of the Claims

Claims 1-8 were pending in this application before this Amendment. Claims 1-2 and 5-8 have been amended herein. Claims 9-16 are new claims and added herein. No new matter has been added. Thus, claims 1-16 are pending in this application pursuant to this Amendment.

Objection to the Specification

On page 2, paragraph 1 of the Office Action, the specification was objected to for not listing the current status of the prior pending applications. An amendment to the specification is requested herein. It is respectfully requested that the objection to the Specification be reconsidered and withdrawn.

Rejection of claims based on 35 U.S.C. §112

On pages 2-3 of the Office Action, claim 2 was rejected under 35 U.S.C. §112, first and second paragraphs. Although the specification describes multilink group transfer using different words, appropriate corrections to the claim has been made in this Amendment. It is respectfully requested that the rejections of claim 2 based on 35 U.S.C. §112 (first and second paragraphs) be reconsidered and withdrawn.

Double Patenting

On pages 3-5 of the Office Action, claims 1, 2 and 5-7 are rejected on the grounds of nonstatutory obviousness-type double patenting. Once the pending claims of the present application are indicated as being allowable over any cited prior art, a terminal disclaimer will most likely be filed to overcome any nonstatutory obviousness-type double patenting rejection that may exist at that time. It is respectfully requested that these rejections be postponed until the claims are indicated as being allowable except for any nonstatutory obviousness-type double patenting rejection or rejections.

35 U.S.C. §102 Rejections

On pages 5-6 of the Office Action, claims 1, 2 and 6-8 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 7,068,623 to Barany *et al.* ("Barany"). "A claim is

anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (other citations omitted); *see also* M.P.E.P. §2131.

Barany does not describe or suggest a processor that requests at least two remote communication devices to assist in downloading portions of data, receives the portions of data and aggregates (claims 1 and 8), combines and sequences (claim 7) the portions of data as in claims 1, 7 and 8. In contrast to claims 1, 7 and 8, Barany describes a RAN (radio access network) 11 that multiplexes data from two mobile stations 100 and 102 on the same channel. (See Figs 1 and 2; 5:1-29; 6:8-15). Barany does not describe or suggest that the RAN 11 requests that the two mobile stations 100 and 102 download data for RAN 11. RAN 11 of Barany is the network responsible for providing voice and data channel communication to/from each of the mobile stations 100 and 102. In other words, Barany is trying to solve a different problem than what is being claimed in the present application.

For these reasons, Barany fails to describe claims 1, 7 and 8. Thus, claims 1, 7 and 8 are not anticipated by Barany and should be allowed over Barany. All the other claims depend on claims 1, 7 and 8 and should be similarly allowed due to their dependence on those allowable independent claims. Therefore, it is respectfully requested that claims 1-16 be allowed over Barany, and that the rejection under 35 U.S.C. §102 of claims 1, 2 and 6-8 as being anticipated by Barany be reconsidered and withdrawn.

35 U.S.C. §103 Rejections

On pages 6-7 of the Office Action, claims 3 and 4 were rejected under 35 U.S.C. §103(a) as being unpatentable over Barany in view of U.S. Publ. Appl. 2003-0202468 to Cain *et al.* ("Cain"). Claims 3 and 4 depend on claim 1, and claim 1 was shown to be allowable for the reasons discussed above. Thus, claims 3 and 4 are similarly allowable over Barany in view of Cain due to their dependence on an allowable independent claim. It is respectfully requested that the rejection of claims 3 and 4 under 35 U.S.C. §103 based on Barany in view of Cain be reconsidered and withdrawn.

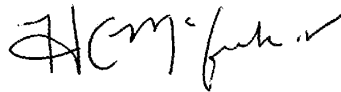
On page 7 of the Office Action, claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Barany in view of U.S. Publ. Appl. 2003-0063591 to Leung *et al.* ("Leung").

Claim 5 depends on claim 1, and claim 1 was shown to be allowable for the reasons discussed above. Thus, claim 5 is similarly allowable over Barany in view of Leung due to its dependence on an allowable independent claim. It is respectfully requested that the rejection of claim 5 under 35 U.S.C. §103 based on Barany in view of Leung be reconsidered and withdrawn.

Conclusion

All rejections in the Office Action have been properly traversed. It is respectfully requested that all outstanding rejections be reconsidered and withdrawn. It is believed that a full and complete reply has been made in response to the Office Action, and, that as such, the present patent application is in a condition for allowance. The Examiner is always welcome to telephone the attorney of record at the telephone number provided below if such telephone discussion would help expedite the prosecution of the patent application. Prompt and favorable consideration of this Amendment is respectfully requested.

Best Regards,



Date: April 29, 2013

H C McGurk IV, Reg. No. 34,964
Attorney for Applicant

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PO Box 1488
Orange, CA 92706
Phone: **949.395.3942**
Email: claymcgurk@cox.net

Electronic Patent Application Fee Transmittal				
Application Number:		13531294		
Filing Date:		22-Jun-2012		
Title of Invention:		BROADBAND COMMUNICATIONS DEVICE		
First Named Inventor/Applicant Name:		Eric M. Delangis		
Filer:		Harold C. McGurk		
Attorney Docket Number:		ED 1040		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 2 months with \$0 paid	2252	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				300

Electronic Acknowledgement Receipt	
EFS ID:	15638361
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	29-APR-2013
Filing Date:	22-JUN-2012
Time Stamp:	15:41:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$ 300
RAM confirmation Number	2495
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Amendment/Req. Reconsideration-After Non-Final Reject	13531294_Amendment.pdf	104572 b0f6e07376ef1565bfc5d8c3dbf8acaa798f053b	no	8
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30201 5cbc806ede8db99e6c6e77559f3d9ea8b69b81a6	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			134773		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/531,294		Filing Date 06/22/2012		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (j), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	04/29/2013	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 16	Minus	** 20	= 0	X \$40 =		0	
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828 7590 05/29/2013 Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			EXAMINER CHO, HONG SOL	
			ART UNIT	PAPER NUMBER
			2467	
			NOTIFICATION DATE	DELIVERY MODE
			05/29/2013	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CLAYMCGURK@COX.NET

Office Action Summary	Application No. 13/531,294	Applicant(s) DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 29 April 2013.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) 1-16 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 1-16 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some * c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Interim copies:

a) ☐ All b) ☐ Some c) ☐ None of the: Interim copies of the priority documents have been received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

4) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 04/29/13. Claims 1-16 are pending in the instant application.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 1, 2 and 6-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 6941151, "Takahashi") in view of Barany.

Re claims 1, 7 and 8, Takahashi discloses a communication device with a wireless interface for connecting to wireless devices (figure 1) and requesting the remote communications devices to download portions of data (column 9, lines 55-67), but fails to disclose combining and sequencing the portions of the data from the remote communications devices to create data stream for the communication device. However, Barany discloses multiplexing portions of the data from the remote communications

devices to create data stream for the communication device (figure 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Takahashi with the teaching of Barany for the benefit of providing efficient utilization of network resources by multiplexing data on a given channel.

Re claim 2, Takahashi discloses two remote communication devices in multilink communication with Internet or a telecommunication system (figure 1).

Re claim 6, Barany discloses requesting use of a portion of unused bandwidth of the at least two remote communications devices, receiving a response containing information about the portion of unused bandwidth (column 5, lines 1-12; lines 19-26), sending control information to the at least two remote communications device and receiving packets from the at least two remote communications devices (figure 3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Takahashi with the teaching of Barany for the benefit of providing efficient utilization of network resources by using unused bandwidth for other communication session.

Re claims 9, 10, 13 and 14, Takahashi discloses a mobile station in communication over the Internet or a telecommunication system (figure 1).

Re claims 11 and 12, Takahashi discloses requesting the remote communications devices to download portions of data (column 9, lines 55-67), Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Takahashi so that a mobile station could request a particular

wireless device to download a certain part of data for the benefit of providing network service by considering a given network condition.

Re claims 15 and 16, Takahashi discloses all of the limitations of the base claim, but fails to disclose a first device being a router or connected to a wireless router. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Takahashi so that a first device is a router or connected to a wireless router for the benefit of supporting larger scale network environment.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Barany and Cain et al (US 20030202468), hereinafter referred to as Cain.

Re claims 3 and 4, Takahashi discloses all of the limitations of the base claim, but fails to disclose using routing tables to determine routing efficiencies based on one of QoS, connection speed, unused bandwidth, hops, wireless transfer speed and signal strength. However, Cain discloses generating QoS metrics for each potential route selection. The QoS metrics may include at least one of available bandwidth, hop count (paragraph [0020]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Takahashi with the teaching of Cain for the benefit of providing efficient routing of data packets based on QoS requirement.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Barany and Leung et al (US 20030063591), hereinafter referred to as Leung.

Re claim 5, Takahashi discloses all of the limitations of the base claim, but fails to disclose determining how many remote communications devices are located in a transmission range. However, Leung discloses building a multicast tree based on the transmission range information (paragraph [0083]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Takahashi with the teaching of Leung for the benefit of efficient utilization of network resources by multicasting data packets within a transmission range.

Response to Arguments

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Phillips can be reached on 571-272-3940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hong Cho/

Primary Examiner, Art Unit 2467

Application/Control Number: 13/531,294
Art Unit: 2467

Page 7

Notice of References Cited	Application/Control No. 13/531,294		Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.	
	Examiner HONG CHO		Art Unit 2467	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,941,151	09-2005	Takahashi et al.	455/502
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	230-235,278,282,328,338,468,477	11/26/2012	hc

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search	11/26/2012	hc
updated search	5/21/2013	hc

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L6	1	"13531294"	US-PGPUB; USPAT	OR	OFF	2013/05/21 11:43
L12	1	(aggregat\$3 or combin\$3) with downloaded near(data or message or inforamtion) with (wireless or mobile) adj (devices or station\$1)	US-PGPUB; USPAT	OR	OFF	2013/05/21 11:56
L13	194	request\$3 with download\$3 near(data or message or inforamtion or file) with (wireless or mobile) adj (device\$1 or station\$1)	US-PGPUB; USPAT	OR	OFF	2013/05/21 11:58
L14	19	l13 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/05/21 11:59
L15	4	"6941151"	US-PGPUB; USPAT	OR	OFF	2013/05/21 12:06
L18	80	(aggregat\$3 or combin\$3 or multiplex\$3) near received near (packet or frame or cell or data or message or inforamtion) with sequenc\$3	US-PGPUB; USPAT	OR	OFF	2013/05/21 12:40
L19	10	l18 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/05/21 12:41

5/ 21/ 2013 1:26:13 PM**C:\Users\hcho\Documents\EAST\Workspaces\13531294.wsp**

<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant				☐ CPA				☐ T.D.				☐ R.1.47			
CLAIM		DATE													
Final	Original	11/26/2012	05/21/2013												
	1	✓	✓												
	2	✓	✓												
	3	✓	✓												
	4	✓	✓												
	5	✓	✓												
	6	✓	✓												
	7	✓	✓												
	8	✓	✓												
	9		✓												
	10		✓												
	11		✓												
	12		✓												
	13		✓												
	14		✓												
	15		✓												
	16		✓												

REPLY UNDER 37 C.F.R. §1.116
EXPEDITED PROCEDURE
TECHNOLOGY CENTER 2400

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.: **13/531,294** EXAMINER: Hong CHO
INVENTOR: Eric M. Delangis GROUP ART UNIT: 2467
FILED: JUNE 22, 2012 CONFIRMATION No.: 9530
TITLE: A BROADBAND COMMUNICATIONS DEVICE
ATTORNEY NO: ED 1040

Mail Stop **AF**
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

AMENDMENT AFTER FINAL

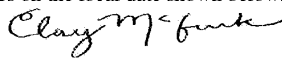
In response to the final Office Action issued on May 29, 2012 ("Office Action"), please reconsider the above-identified application in light of the following amendments to the claims and accompanying remarks.

MAIL STOP AF

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: July 25, 2013

By: 
Clay McGurk

THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1-16. (Canceled).

17. (New) A method for increasing bandwidth and data throughput comprising the steps of:

establishing a wireless connection between a first device and a second device, the first device being connected at a first location to a network, the second device being connected at a second location to the network, the second location being geographically separate from the first location, the first device and the second device being configured for accessing the network; and

routing data across the wireless connection thereby increasing bandwidth and data throughput at the first device than is achievable over the connection between the first device and the network.

18. (New) The method of claim 17, wherein the first location and the second location are physically isolated from each other.

19. (New) The method of claim 17, further comprising the step of aggregating the data received over the wireless connection and the data received over the connection at the first location.

20. (New) The method of claim 19, further comprising the step of creating a data stream from the data aggregated from the wireless connection and the connection at the first location.

21. (New) The method of claim 19, further comprising the step of creating a data file from the data aggregated from the wireless connection and the connection at the first location.

22. (New) The method of claim 17, further comprising the step of combining and sequencing the data received over the wireless connection and the data received over the connection at the first location.

23. (New) The method of claim 22, further comprising the step of creating a data stream from the data combined and sequenced from the wireless connection and the connection at the first location.

24. (New) The method of claim 22, further comprising the step of creating a data file from the data combined and sequenced from the wireless connection and the connection at the first location.

25. (New) The method of claim 17, further comprising the step of creating a first data stream from the data received over the wireless connection and a second data stream from the data received over the connection at the first location.

26. (New) The method of claim 17, further comprising the step of creating a first data file from the data received over the wireless connection and a second data file from the data received over the connection at the first location.

27. (New) The method of claim 17, wherein the wireless connection is established between a first wireless router at the first device and a second wireless router at the second device.

28. (New) The method of claim 17, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network.

29. (New) The method of claim 17, wherein the wireless connection is a cellular, satellite, Wi-Fi, WiMax or Bluetooth connection.

30. (New) A method for increasing bandwidth and data throughput comprising the steps of:

establishing a wireless connection between a first device and a second device, the first device being connected at a first location to a first network, the second device being connected at a second location to a second network, the second location being geographically separate from the first location, the first device being configured for accessing the first network, the second device being configured for accessing the second network; and

routing data across the wireless connection thereby increasing bandwidth and data throughput at the first device than is achievable over the connection between the first device and the first network.

31. (New) The method of claim 30, further comprising the step of aggregating the data received from the first network and the second network.

32. (New) The method of claim 31, further comprising the step of creating a data stream from the data aggregated from the first network and the second network.

33. (New) The method of claim 31, further comprising the step of creating a data file from the data aggregated from the first network and the second network.

34. (New) The method of claim 30, further comprising the step of creating a first data file from the data received from the first network and a second data file from the data received from the second network.

35. (New) A device comprising:
an interface for establishing a network connection at a first location to a network;
a wireless interface for establishing a wireless connection to a remote communications device, the remote communications device being connected at a second location to the network, the second location being geographically separate from the first location; and
a processor that requests the remote communications device to assist in routing data over the wireless connection, receives the data over the wireless connection thereby increasing communications bandwidth and data throughput than is achievable over the network connection.
36. (New) The device of claim 35, wherein the device is one of a modem, cellular phone, a router, a computer, hotspot device and a tablet.
37. (New) The device of claim 35, wherein the network connection is a wireless connection.

REMARKS

Status of the Claims

Claims 1-16 were pending in this application before this Amendment and are now canceled without prejudice or disclaimer. Claims 17-37 are new claims and are added in this Amendment. No new matter has been added. Thus, claims 17-37 are pending in this application pursuant to this Amendment.

35 U.S.C. §§ 102, 103 Rejections

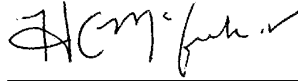
On pages 2-4 of the Office Action, claims 1, 2 and 6-16 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,941,151 to Takahashi *et al.* in view of U.S. Patent 7,068,623 to Barany *et al.* ("Barany"). On page 4 of the Office Action, claims 3 and 4 were rejected under 35 U.S.C. §103(a) as being unpatentable over Takahashi in view of Barany in view of U.S. Publ. Appl. 2003-0202468 to Cain *et al.* ("Cain"). On page 5 of the Office Action, claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Takahashi in view of Barany in view of U.S. Publ. Appl. 2003-0063591 to Leung *et al.* ("Leung"). These rejections are now moot because the rejections were based on claims that have been canceled without prejudice or disclaimer.

Conclusion

All rejections in the Office Action have been properly traversed. It is respectfully requested that all outstanding rejections be reconsidered and withdrawn. It is believed that a full and complete reply has been made in response to the Office Action, and, that as such, the present patent application is in a condition for allowance. The Examiner is always welcome to telephone the attorney of record at the telephone number provided below if such telephone discussion would help expedite the prosecution of the patent application.

Prompt and favorable consideration of this Amendment is respectfully requested.

Best Regards,



Date: July 25, 2013

H C McGurk IV, Reg. No. 34,964
Attorney for Applicant

The Law Office of Clay McGurk
PO Box 1488
Orange, CA 92706
Phone: **949.395.3942**
Email: claymcgurk@cox.net

Electronic Acknowledgement Receipt	
EFS ID:	16419875
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	25-JUL-2013
Filing Date:	22-JUN-2012
Time Stamp:	17:20:52
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response After Final Action	13531294_AAF_7-25-13.pdf	99446 3c95521b0ff09364ed004ae1337c7808d0c9001f	no	7

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/531,294		Filing Date 06/22/2012		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (j), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	07/25/2013	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 21	Minus	** 20	= 1	X \$40 =		40	
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		40	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828	7590	08/06/2013		
Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			EXAMINER CHO, HONG SOL	
			ART UNIT	PAPER NUMBER
			2467	
			NOTIFICATION DATE	DELIVERY MODE
			08/06/2013	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CLAYMCGURK@COX.NET

Advisory Action Before the Filing of an Appeal Brief	Application No. 13/531,294	Applicant(s) DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 25 July 2013 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.

b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because:

a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);

b) ☐ They raise the issue of new matter (see NOTE below);

c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: New claims changed the scope of the invention. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☐ For purposes of appeal, the proposed amendment(s): (a) ☐ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.

12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____

13. ☐ Other: _____.

STATUS OF CLAIMS

14. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: _____

Claim(s) withdrawn from consideration: _____

	/HONG CHO/ Primary Examiner, Art Unit 2467
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REPLY UNDER 37 C.F.R. §1.116
EXPEDITED PROCEDURE
TECHNOLOGY CENTER 2400

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.: **13/531,294** EXAMINER: Hong CHO
INVENTOR: Eric M. Delangis GROUP ART UNIT: 2467
FILED: JUNE 22, 2012 CONFIRMATION No.: 9530
TITLE: A BROADBAND COMMUNICATIONS DEVICE
ATTORNEY NO: ED 1040

Mail Stop **AF**
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

DO NOT ENTER: /H.C./

AMENDMENT AFTER FINAL

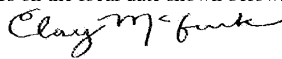
In response to the final Office Action issued on May 29, 2012 ("Office Action"), please reconsider the above-identified application in light of the following amendments to the claims and accompanying remarks.

MAIL STOP AF

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: July 25, 2013

By: 
Clay McGurk

Doc code: RCEX

PTO/SB/30EFS (07-09)

Doc description: Request for Continued Examination (RCE)

Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)							
Application Number	13531294	Filing Date	2012-06-22	Docket Number (if applicable)	ED 1040	Art Unit	2467
First Named Inventor	ERIC DELANGIS			Examiner Name	HONG CHO		
This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application. Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV							
SUBMISSION REQUIRED UNDER 37 CFR 1.114							
Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).							
☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.							
☒ Consider the arguments in the Appeal Brief or Reply Brief previously filed on <u>2013-07-25</u>							
☐ Other _____							
☐ Enclosed							
☐ Amendment/Reply							
☐ Information Disclosure Statement (IDS)							
☐ Affidavit(s)/ Declaration(s)							
☐ Other _____							
MISCELLANEOUS							
☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)							
☐ Other _____							
FEES							
The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.							
☐ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No _____							
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED							
☒ Patent Practitioner Signature							
☐ Applicant Signature							

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/H C McGurk IV, Reg No 34964/	Date (YYYY-MM-DD)	2013-08-27
Name	Harold McGurk	Registration Number	34964

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		13531294		
Filing Date:		22-Jun-2012		
Title of Invention:		BROADBAND COMMUNICATIONS DEVICE		
First Named Inventor/Applicant Name:		Eric M. Delangis		
Filer:		Harold C. McGurk		
Attorney Docket Number:		ED 1040		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for Continued Examination	2801	1	600	600
Total in USD (\$)				600

Electronic Acknowledgement Receipt	
EFS ID:	16695749
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	27-AUG-2013
Filing Date:	22-JUN-2012
Time Stamp:	13:22:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$600
RAM confirmation Number	14206
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Request for Continued Examination (RCE)	13531294_RCE_30e_fill.pdf	697835 8f15d781304b4e2a6230cbdaa005a49af7a b3e1d	no	3
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30357 0259de7a7d4799e7f6e2b39dc9a705134b deeab	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			728192		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/531,294		Filing Date 06/22/2012		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	08/27/2013	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 16	Minus	** 20	= 0	X \$40 =		0	
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828 7590 09/13/2013 Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			EXAMINER CHO, HONG SOL	
			ART UNIT 2467	PAPER NUMBER
			NOTIFICATION DATE 09/13/2013	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CLAYMCGURK@COX.NET

Office Action Summary	Application No. 13/531,294	Applicant(s) DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 08/27/2013.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) 17-37 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 17-37 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some * c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

4) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the RCE filed on 08/27/13. Claims 1-16 were cancelled. Claims 17-37 are pending in the instant application.

Claim Rejections - 35 USC § 112, First paragraph

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 17-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Re claims 17, 30 and 35, the original specification fails to explain how routing data across the wireless connection increases bandwidth and data throughput at the first device than is achievable over the connection between the first device and the network.

Claims 18-29, 31-34, 36 and 37 depend on claims 17, 30 and 35 are therefore similarly rejected.

4. Claims 20-26 and 32-34 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re claim 20, the original specification fails to explain how to create a data stream from the data aggregated from the wireless connection and the connection at the first location.

Re claim 21, the original specification fails to explain how to create a data file from the data aggregated from the wireless connection and the connection at the first location.

Re claim 22, the original specification fails to explain how to combine and sequence the data received over the wireless connection and the data received over the connection at the first location.

Re claim 23, the original specification fails to explain how to create a data stream from the data combined and sequenced from the wireless connection and the connection at the first location.

Re claim 24, the original specification fails to explain how to create a data file from the data combined and sequenced from the wireless connection and the connection at the first location.

Re claim 25, the original specification fails to explain how to create first data stream from the data received over the wireless connection and a second data stream from the data received over the connection at the first location.

Re claim 26, the original specification fails to explain how to create a first data file from the data received over the wireless connection and a second data file from the data received over the connection at the first location.

Re claim 32, the original specification fails to explain how to create a data stream from the data aggregated from the first network and the second network.

Re claim 33, the original specification fails to explain how to create a data file from the data aggregated from the first network and the second network.

Re claim 34, the original specification fails to explain how to create a first data file from the data received from the first network and a second data file from the data received from the second network.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 17-20, 22, 23, 25, 27-32 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vehvilainen (US 7426316) in view of Souisse et al (US 20020102987, “Souisse”).

Re claims 17, 30 and 35-37, Vehvilainen discloses establishing a wireless connection between a first device and a second device, the first device being connected at a first location to a network, the second device being connected at a second location to the network (figure 1; column 5, lines 11-16), the second location being geographically separate from the first location, the first device and the second device being configured for accessing the network (column 4, lines 29-33), but fails to disclose routing data across the wireless connection thereby increasing bandwidth and data throughput at the first device than is achievable over the connection between the first device and the network. However, Souisse discloses increasing utilization of the wireless communications to provide more bandwidth and throughput (paragraph [0012]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vehvilainen with the teaching of Souisse for the benefit of providing efficient utilization of network resources.

Re claim 18, Vehvilainen discloses the first location and the second location are physically isolated from each other (figure 1).

Re claims 19, 20, 22, 23, 25, 31 and 32, Vehvilainen discloses all of the limitations of the base claim, but fails to disclose aggregating the data received over the wireless connection and the data received over the connection at the first location.

Souisse discloses combining fragmented messages into an original message (paragraph [0038]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vehvilainen with the teaching of Souisse for the benefit of providing efficient network communication by combining data streams in sequence.

Re claims 27-29, Vehvilainen discloses the wireless connection is established between a first wireless router at the first device and a second wireless router at the second device, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network and the wireless connection is a cellular, satellite, Wi-Fi, WiMax or Bluetooth connection (column 5, lines 11-16).

Claims 21, 24, 26, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vehvilainen in view of Souisse and Miloushev et al (US 7562110, "Miloushev").

Re claims 21, 24, 26, 33 and 34, Vehvilainen discloses all of the limitations of the base claim, but fails to disclose creating a data file from the data combined and sequenced from the wireless connection and the connection at the first location. However, Miloushev discloses creating a data file from the data combined and sequenced from the wireless connection and the connection at the first location (column 21, lines 55-60). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vehvilainen with the teaching of

Miloushev for the benefit of providing efficient management of combined files by referring to a single file data.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087.

The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Phillips can be reached on 571-272-3940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hong Cho/

Primary Examiner, Art Unit 2467

Notice of References Cited	Application/Control No. 13/531,294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,426,316	09-2008	Vehvilainen, Markku	382/275
*	B	US-7,562,110	07-2009	Miloushev et al.	709/201
*	C	US-2002/0102987	08-2002	Souisse et al.	455/454
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	11/26/2012	05/21/2013	09/05/2013					
	1	✓	✓	-					
	2	✓	✓	-					
	3	✓	✓	-					
	4	✓	✓	-					
	5	✓	✓	-					
	6	✓	✓	-					
	7	✓	✓	-					
	8	✓	✓	-					
	9		✓	-					
	10		✓	-					
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	29			✓					
	30			✓					
	31			✓					
	32			✓					
	33			✓					
	34			✓					
	35			✓					
	36			✓					

<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47									
CLAIM		DATE							
Final	Original	11/26/2012	05/21/2013	09/05/2013					
	37			✓					

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	9	((ERIC) near2 (DELANGIS)).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/09/05 09:49
L17	10	L16 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 10:33
L16	83	(aggregat\$3 or combin\$3 or multiplex\$3) near received near (packet or frame or cell or data or message or inforamtion) with sequenc\$3	US-PGPUB; USPAT	OR	OFF	2013/09/05 10:33
L20	30	(combin\$5 or aggregat\$3 or multiplex\$3) with (receiv\$3 or transmit\$4) with wireless near connection with internet	US-PGPUB; USPAT	OR	OFF	2013/09/05 10:48
L21	1	"7426316".pn.	US-PGPUB; USPAT	OR	OFF	2013/09/05 10:50
L28	13	L26 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 10:58
L26	160	(combin\$5 or aggregat\$3 or multiplex\$3) with received with (data or flow\$1 or stream\$1)with wireless with internet	US-PGPUB; USPAT	OR	OFF	2013/09/05 10:58
L31	237	(combin\$5 or aggregat\$3 or multiplex\$3) with (receiv\$3 or transmit\$4) near (packet\$1 or frame\$1 or cell\$1 or data or message or inforamtion) with wireless with internet	US-PGPUB; USPAT	OR	OFF	2013/09/05 11:15
L32	25	L31 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 11:16
L40	144	(router or gateway) with (multiplex\$3 or combin\$5 or aggregat\$3) with (packet\$1 or frame\$1 or cell\$1 or data or message or information) near (transmitted or received) with wireless\$2	US-PGPUB; USPAT	OR	OFF	2013/09/05 11:31
L43	224	L42 and (multiplex\$3 or aggregat\$3 or combin\$3) near (traffic or data or message\$1 or inforamtion or packet\$1 or frame\$1) with (wireless or mobile) adj (devices or station\$1)	US-PGPUB; USPAT	OR	OFF	2013/09/05 11:35
L42	42135	370/230-235,278,282,328,338,468,477.ccls.	US-PGPUB; USPAT	OR	OFF	2013/09/05 11:35
L51	15	L50 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 11:52
L50	135	(multiplex\$3 or aggregat\$3 or combin\$3) with wireless\$2 near received near (stream\$1 or flow\$1 or traffic or data or message\$1 or inforamtion or packet\$1 or frame\$1)	US-PGPUB; USPAT	OR	OFF	2013/09/05 11:52

L52	1	13/531294	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/09/05 11:55
L55	5	L53 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 11:59
L53	78	(ms or mobile adj (station\$1 or device\$1)) with wireless\$3 with establish\$4 near connection with (ap or internet or ip)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/09/05 11:59
L57	166	L56 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 12:00
L56	1515	wireless\$3 with establish\$4 near connection with (ap or internet or ip)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/09/05 12:00
L60	41	L59 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 12:48
L59	55	increas\$3 near (bandwidth or throughput) with wireless near connection	US-PGPUB; USPAT	OR	OFF	2013/09/05 12:48
L64	29	L63 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 12:51
L63	252	increas\$3 with (bandwidth with throughput) with wireless	US-PGPUB; USPAT	OR	OFF	2013/09/05 12:51
L70	51	L69 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/09/05 13:25
L69	267	creat\$3 near file with data near (flow\$1 or stream\$1)	US-PGPUB; USPAT	OR	OFF	2013/09/05 13:25
L71	1	"7562110".pn.	US-PGPUB; USPAT	OR	OFF	2013/09/05 13:28
L72	1	13/531294	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/09/05 14:06

9/ 5/ 2013 2:44:34 PM

C:\Users\hcho\Documents\EAST Workspaces\13531294.wsp

Search Notes 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	230-235,278,282,328,338,468,477	11/26/2012	hc

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search	11/26/2012	hc
updated search	5/21/2013	hc
updated search	9/5/2013	hc

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.: **13/531,294**

EXAMINER: Hong CHO

INVENTOR: Eric M. Delangis

GROUP ART UNIT: 2467

FILED: JUNE 22, 2012

CONFIRMATION No.: 9530

TITLE: A BROADBAND COMMUNICATIONS DEVICE

ATTORNEY NO: ED 1040

Mail Stop **Amendment**
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

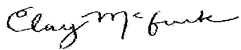
AMENDMENT

In response to the Office Action issued on September 13, 2013 ("Office Action"), please reconsider the above-identified application in light of the following amendments to the claims and accompanying remarks.

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: December 12, 2013

By: 
Clay McGurk

THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1-16. (Canceled).

17. (Currently Amended) A method for increasing bandwidth and data throughput comprising the steps of:

establishing a wireless connection between a first device and a second device, the first device being connected at a first location to a network via a landline, the second device being connected at a second location to the network, the second location being geographically separate from the first location, the first device and the second device being configured for accessing the network; and

~~routing data across the wireless connection thereby increasing bandwidth and data throughput at the first device than is achievable over the connection between the first device and the network~~ concurrently receiving at the first location first data from the network and second data over the wireless connection, the second data being received at the second location from the network.

18. (Previously Presented) The method of claim 17, wherein the first location and the second location are physically isolated from each other.

19. (Currently Amended) The method of claim 17, further comprising the step of aggregating the second data received over the wireless connection and the first data received over the connection at the first location.

20. (Currently Amended) The method of claim ~~19~~ 17, ~~further comprising the step of creating a data stream from the data aggregated from the wireless connection and the connection at the first location~~ wherein a connection at the first location and a connection at the second location are network connection points.

21. (Currently Amended) The method of claim 17, ~~further comprising the step of~~ creating a data file from the data aggregated from the wireless connection and the connection at the first location wherein the first device and the second device are consumer networking devices.

22. (Currently Amended) The method of claim 17, further comprising the ~~step~~ steps of; ~~combining and sequencing the data received over the wireless connection and the data received over the connection at the first location~~

establishing a second wireless connection between the first device and a third device, the third device being connected at a third location to the network, the third location being geographically different than the first location and the second location; and

concurrently receiving third data over the second wireless connection with the receipt of the first data at the first location and the second data over the wireless connection.

23. (Currently Amended) The method of claim 22, further comprising the step of ~~creating a data stream from the data combined and sequenced from the wireless connection and the connection at the first location~~ aggregating the first data, the second data and the third data.

24. (Canceled).

25. (Currently Amended) The method of claim 17, ~~further comprising the step of~~ creating a first data stream from the data received over the wireless connection and a second data stream from the data received over the connection at the first location wherein the first data and the second data are received as data packets.

26. (Currently Amended) The method of claim 17, ~~further comprising the step of~~ creating a first data file from the data received over the wireless connection and a second data file from the data received over the connection at the first location wherein the network is the Internet.

27. (Previously Presented) The method of claim 17, wherein the wireless connection is established between a first wireless router at the first device and a second wireless router at the second device.

28. (Previously Presented) The method of claim 17, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network.

29. (Currently Amended) The method of claim 17, wherein the wireless connection is a cellular connection, a satellite connection, a Wi-Fi connection, a WiMax connection or a Bluetooth connection.

30-34. (Canceled).

35. (Currently Amended) A device comprising:
an interface ~~for establishing that establishes~~ a landline network connection at a first location to a first network and receives first data packets over the network connection;
a wireless interface ~~for establishing that establishes~~ a wireless connection to a remote communications device, the remote communications device being connected at a second location to ~~the~~ a second network, the second location being geographically separate from the first location; and
a processor that receives from the interface first data packets from the first network and concurrently receives over the wireless interface second data packets from the second network, the second data packets being received at the second location from the second network ~~requests the remote communications device to assist in routing data over the wireless connection, receives the data over the wireless connection thereby increasing communications bandwidth and data throughput than is achievable over the network connection.~~

36. (Previously Presented) The device of claim 35, wherein the device is one of a modem, cellular phone, a router, a computer, hotspot device and a tablet.

37. (Currently Amended). The device of claim 35, wherein the ~~network connection is a wireless connection~~ the device is part of a home-based network system.

38. (New) The device of claim 35, wherein the first network and the second network are the same network.

39. (New) A method for providing broadband communications services, comprising:
receiving first data packets over a landline connection;
receiving second data packets over a wireless connection, the first data packets being concurrently received with the second data packets; and
aggregating the first data packets with the second data packets.

40. (New) The method of claim 39, wherein the first data packets are received at a home-based network system, and wherein the second packets are received over the wireless connection at the home-based network system.

41. (New) The method of claim 39, wherein the first data packets are received by a consumer-based network system, and wherein the second packets are received over the wireless connection at the consumer-based network system.

42. (New) The method of claim 39, further comprising:
receiving data packets over a plurality of wireless connections, the data packets being concurrently received with the first data packets; and
aggregating the first data packets with the data packets.

REMARKS

Status of the Claims

Claims 17-37 were pending in this application before this Amendment. In this Amendment, claims 24 and 30-34 are canceled without prejudice or disclaimer. Claims 17, 19-23, 25-26, 29, 35 and 37 are amended herein. Claims 39-42 are new claims and are added in this Amendment. No new matter has been added. Thus, claims 17-23, 25-29, 35-42 are currently pending in this application pursuant to this Amendment.

35 U.S.C. § 112 Rejections

On pages 2-4 of the Office Action, claims 17-37 were rejected under 35 U.S.C. §112, first paragraph. All the claims which were rejected have been either amended or canceled. The claims have been amended to advance prosecution without addressing the alleged merits of the §112 rejection. The applicant believes there is ample support in the specification for what was previously claimed and specifically reserves the right to use such deleted language in the future. It is respectfully requested that the rejection of claims 17-37 be reconsidered and withdrawn.

35 U.S.C. § 103 Rejections

On pages 5-6 of the Office Action, claims 17-20, 22-23, 25, 27-32 and 35-37 were rejected under 35 U.S.C. §103(a) as being unpatentable over Vehvilainen (U.S. Patent 7,426,316) (“Vehvilainen”) and Souisse *et al.* (U.S. Application Publication 2002-0102987) (“Souisse”).

Vehvilainen is poor prior art because this reference describes a method and apparatus for improving image quality, which has nothing to do with the claimed invention. Vehvilainen does not describe or suggest concurrently receiving data as required in amended claims 17 and 35, or aggregating data as in new claim 39. Though image phone 102 and personal computer 104 may be connected to a network 103 or each other, Vehvilainen fails to describe or suggest concurrently receiving data. (Vehvilainen, Fig. 1; 4:29-33). Vehvilainen is a point-to-point connection between the phone 102 and computer 104, either via communication network 103 or via a Bluetooth connection. (Vehvilainen, 5:11-16). Data is sent between the phone 102 and computer 104 over one of the connection, but not both concurrently.

Souisse does not cure the deficiency of Vehvilainen because it is concerned with fragmenting a single message and the sending the message fragments over multiple independent networks to a single receiving unit. (Souisse, Abstract; Figs. 5, 6). Souisse was used for rejecting the prior claim language of claims 17, 30 and 35, rather than the amended language currently used in these claims which requires a landline connection, something missing in Souisse. Therefore a combination a Souisse and Vehvilainen does not result in the claimed invention because both fail to describe or suggest, either individually or in combination, each and all the elements required in claims 17 and 35. It is respectfully requested that the rejection of claims 17-20, 22-23, 25, 27-32 and 35-37 under 35 U.S.C. §103(a) based on Vehvilainen and Souisse be reconsidered and withdrawn.

On page 6-7 of the Office Action, claims 21, 24, 26, 33 and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Vehvilainen in view of Souisse and Miloushev *et al.* (U.S. Patent 7,562,110). This rejection was based on claim language that was deleted and replaced with different claim language having different subject matter. It is therefore respectfully requested that the rejection of claims 21, 24, 26, 33 and 34 be reconsidered and withdrawn.

Conclusion

All rejections in the Office Action have been properly traversed. It is respectfully requested that all outstanding rejections be reconsidered and withdrawn. It is believed that a full and complete reply has been made in response to the Office Action, and, that as such, the present patent application is in a condition for allowance. The Examiner is always welcome to telephone the attorney of record at the telephone number provided below if such telephone discussion would help expedite the prosecution of the patent application.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully Submitted,



Date: December 12, 2013

H C McGurk IV, Reg. No. 34,964
Attorney for Applicant

The Law Office of Clay McGurk
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Orange, CA 92706
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Electronic Acknowledgement Receipt	
EFS ID:	17648282
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	12-DEC-2013
Filing Date:	22-JUN-2012
Time Stamp:	19:17:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	13531294_Amendment_12-12-13.pdf	97937 34a13fe792b64432709609eb0da7a12f455b79f5	no	8

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/531,294		Filing Date 06/22/2012		☐ To be Mailed					
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO													
APPLICATION AS FILED – PART I													
(Column 1)		(Column 2)											
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)					
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A							
☐ SEARCH FEE (37 CFR 1.16(k), (j), or (m))		N/A		N/A		N/A							
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A							
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =							
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =							
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).											
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))													
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL							
APPLICATION AS AMENDED – PART II													
(Column 1)		(Column 2)		(Column 3)									
AMENDMENT	12/12/2013	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)			
	Total (37 CFR 1.16(i))	* 20	Minus	** 21	= 0		X \$40 =		0				
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0		X \$210 =		0				
	☐ Application Size Fee (37 CFR 1.16(s))												
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))												
						TOTAL ADD'L FEE		0					
(Column 1)		(Column 2)		(Column 3)									
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE (\$)		ADDITIONAL FEE (\$)			
	Total (37 CFR 1.16(i))	*	Minus	**	=		X \$ =						
	Independent (37 CFR 1.16(h))	*	Minus	***	=		X \$ =						
	☐ Application Size Fee (37 CFR 1.16(s))												
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))												
						TOTAL ADD'L FEE							
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										LIE /ROSALIND BALL/			

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828 7590 12/30/2013 Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			EXAMINER CHO, HONG SOL	
			ART UNIT 2467	PAPER NUMBER
			NOTIFICATION DATE 12/30/2013	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CLAYMCGURK@GMAIL.COM

Office Action Summary	Application No. 13/531,294	Applicant(s) DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 12/12/13.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5) ☒ Claim(s) 17-23, 25-29 and 35-42 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 17-23, 25-29 and 35-42 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some * c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

4) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 12/12/13. Claims 17-23, 25-29 and 35-42 are pending in the instant application.

Claim Rejections - 35 USC § 112, First paragraph

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 17-23, 25-29 and 35-42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Re claim 17, the original specification fails to disclose concurrently receiving at the first location first data from the network and second data over the wireless connection, the second data being received at the second location from the network.

Re claim 22, the original specification fails to disclose establishing a second wireless connection between the first device and a third device, the third device being

connected at a third location to the network, the third location being geographically different than the first location and the second location; and concurrently receiving third data over the second wireless connection with the receipt of the first data at the first location and the second data over the wireless connection.

Re claim 35, the original specification fails to disclose a processor that receives from the interface first data packets from the first network and concurrently receives over the wireless interface second data packets from the second network, the second data packets being received at the second location from the second network.

Re claim 39, the original specification fails to disclose receiving second data packets over a wireless connection, the first data packets being concurrently received with the second data packets

Re claim 42, the original specification fails to disclose receiving data packets over a plurality of wireless connections, the data packets being concurrently received with the first data packets; and aggregating the first data packets with the data packets.

Claims 18-23, 25-29, 36-38 and 40-42 depend on claims 17, 35 and 39 are therefore similarly rejected.

Claim Rejections - 35 USC § 112 Second Paragraph

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 40 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claims 40 and 41, it is not clear what home-based/consumer-based network system is.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 17-23, 25-29 and 35-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vehvilainen (US 7426316) in view of Bi (US 7113173).

Re claims 17-21, 25, 26, 35-40 and 42, Vehvilainen discloses establishing a wireless connection between a first device and a second device, being a consumer device, the first device being connected at a first location to a network, the second device being connected at a second location to the network (figure 1; column 5, lines 11-16), the second location being geographically separate from the first location, the first device and the second device being configured for accessing the network (column 4, lines 29-33),

but fails to disclose concurrently receiving data from networks by landline and wireless connection. However, Bi discloses multiplexing received packets from wired and wireless connections (figures 44 and 46, column 47, lines 23-35). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vehvilainen with the teaching of Bi for the benefit of providing efficient utilization of network resources by multiplexing data packets.

Re claim 18, Vehvilainen discloses the first location and the second location are physically isolated from each other (figure 1).

Re claims 22 and 23, Vehvilainen discloses establishing a second wireless connection between the first device and a third device and concurrently receiving third data over the second wireless connection with the receipt of the first data at the first location and the second data over the wireless connection (column 4, lines 29-33). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vehvilainen with the teaching of Bi for the benefit of providing efficient utilization of network resources by multiplexing data packets.

Re claims 27-29, Vehvilainen discloses the wireless connection is established between a first wireless router at the first device and a second wireless router at the second device, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network and the wireless connection is a cellular, satellite, Wi-Fi, WiMax or Bluetooth connection (column 5, lines 11-16).

Response to Arguments

8. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Phillips can be reached on 571-272-3940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hong Cho/

Primary Examiner, Art Unit 2467

Notice of References Cited	Application/Control No. 13/531,294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-7,113,173	09-2006	Bi et al.	345/169
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	230-235,278,282,328,338,468,477	11/26/2012	hc

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search	11/26/2012	hc
updated search	5/21/2013	hc
updated search	9/5/2013	hc
updated search	12/23/2013	hc

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	16	L1 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/12/23 11:59
L1	141	(multiplex\$3 or aggregat\$3 or combin\$3) with wireless\$2 near received near (stream\$1 or flow\$1 or traffic or data or message\$1 or information or packet\$1 or frame\$1)	US-PGPUB; USPAT	OR	OFF	2013/12/23 11:59
L14	568	concurrently near receiv\$3 near (data or packet\$1 or frame\$1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2013/12/23 12:43
L15	111	L14 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/12/23 12:45
L17	75	L14 and @rlad<"20021015" and wireless	US-PGPUB; USPAT	OR	OFF	2013/12/23 12:46
L28	29531	(multiplex\$3 or aggregat\$3 or combin\$3) with received near (data or message\$1 or packet\$1 or frame\$1)	US-PGPUB; USPAT	OR	OFF	2013/12/23 13:12
L29	5211	L28 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/12/23 13:13
L40	26	L39 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2013/12/23 13:21
L39	93	(multiplex\$3 or aggregat\$3 or combin\$3) with (data or packet\$1 or frame\$1) near wired with wireless\$2	US-PGPUB; USPAT	OR	OFF	2013/12/23 13:21

12/23/2013 2:42:33 PM**C:\Users\hcho\Documents\EAST\Workspaces\13531294.wsp**

<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant
 ☐ CPA
 ☐ T.D.
 ☐ R.1.47

CLAIM		DATE									
Final	Original	11/26/2012	05/21/2013	09/05/2013	12/23/2013						
	1	✓	✓	-	-						
	2	✓	✓	-	-						
	3	✓	✓	-	-						
	4	✓	✓	-	-						
	5	✓	✓	-	-						
	6	✓	✓	-	-						
	7	✓	✓	-	-						
	8	✓	✓	-	-						
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	16		✓	-	-						
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	30			✓	-						
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	32			✓	-						
	33			✓	-						
	34			✓	-						
	35			✓	✓						
	36			✓	✓						

<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant						☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE									
Final	Original	11/26/2012	05/21/2013	09/05/2013	12/23/2013						
	37			✓	✓						
	38				✓						
	39				✓						
	40				✓						
	41				✓						
	42				✓						

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Harold McGurk
The Law Office of Clay McGurk
P.O. BOX 1488
Orange, CA 92856



**Courtesy Reminder for
Application Serial No: 13/531,294**

Attorney Docket No: ED 1040

Customer Number: 64828

Date of Electronic Notification: 12/30/2013

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

An email notification regarding the correspondence was sent to the following email address(es) associated with your customer number:

CLAYMCGURK@GMAIL.COM

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>. If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov or call 1-866-217-9197.

**AMENDMENT UNDER 37 C.F.R. §1.116
EXPEDITED PROCEDURE
Technology Center 2400**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.:	<u>13/531,294</u>	EXAMINER:	Hong CHO
INVENTOR:	Eric M. Delangis	GROUP ART UNIT:	2467
FILED:	JUNE 22, 2012	CONFIRMATION No.:	9530
TITLE:	A BROADBAND COMMUNICATIONS DEVICE		
ATTORNEY No:	ED 1040		

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Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

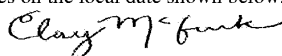
AMENDMENT UNDER 37 C.F.R. §1.116

In response to the final Office Action issued on December 30, 2013 ("Office Action"), please reconsider the above-identified application in light of the following amendments to the claims and the accompanying remarks.

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: March 11, 2014

By: 
Clay McGurk

THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1-16. (Canceled).

17. (Currently Amended) A method for increasing bandwidth and data throughput comprising the steps of:

establishing a wireless connection between a first device and a second device, the first device being connected at a first location to a network via a landline, the second device being connected at a second location to the network, the second location being geographically separate from the first location, the first device and the second device being configured for accessing the network; and

concurrently receiving at the first ~~location~~ device first data from the network at the first location and second data over the wireless connection from the second device, the second data being received at the second location from the network.

18. (Previously Presented) The method of claim 17, wherein the first location and the second location are physically isolated from each other.

19. (Previously Presented) The method of claim 17, further comprising the step of aggregating the second data received over the wireless connection and the first data received over the connection at the first location.

20. (Previously Presented) The method of claim 17, wherein a connection at the first location and a connection at the second location are network connection points.

21. (Previously Presented) The method of claim 17, wherein the first device and the second device are consumer networking devices.

22. (Previously Presented) The method of claim 17, further comprising the steps of; establishing a second wireless connection between the first device and a third device, the third device being connected at a third location to the network, the third location being geographically different than the first location and the second location; and

concurrently receiving third data over the second wireless connection with the receipt of the first data at the first location and the second data over the wireless connection.

23. (Previously Presented) The method of claim 22, further comprising the step of aggregating the first data, the second data and the third data.

24. (Canceled).

25. (Previously Presented) The method of claim 17, wherein the first data and the second data are received as data packets.

26. (Previously Presented) The method of claim 17, wherein the network is the Internet.

27. (Previously Presented) The method of claim 17, wherein the wireless connection is established between a first wireless router at the first device and a second wireless router at the second device.

28. (Previously Presented) The method of claim 17, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network.

29. (Previously Presented) The method of claim 17, wherein the wireless connection is a cellular connection, a satellite connection, a Wi-Fi connection, a WiMax connection or a Bluetooth connection.

30-34. (Canceled).

35. (Previously Presented) A device comprising:

an interface that establishes a landline network connection at a first location to a first network and receives first data packets over the network connection;

a wireless interface that establishes a wireless connection to a remote communications device, the remote communications device being connected at a second location to a second network, the second location being geographically separate from the first location; and

a processor that receives from the interface first data packets from the first network and concurrently receives over the wireless interface second data packets from the second network, the second data packets being received at the second location from the second network.

36. (Previously Presented) The device of claim 35, wherein the device is one of a modem, cellular phone, a router, a computer, hotspot device and a tablet.

37. (Currently Amended) The device of claim 35, wherein the ~~the~~ device is part of a home-based network system.

38. (Previously Presented) The device of claim 35, wherein the first network and the second network are the same network.

39. (Previously Presented) A method for providing broadband communications services, comprising:

receiving first data packets over a landline connection;

receiving second data packets over a wireless connection, the first data packets being concurrently received with the second data packets; and

aggregating the first data packets with the second data packets.

40. (Previously Presented) The method of claim 39, wherein the first data packets are received at a home-based network system, and wherein the second packets are received over the wireless connection at the home-based network system.

41. (Previously Presented) The method of claim 39, wherein the first data packets are received by a consumer-based network system, and wherein the second packets are received over the wireless connection at the consumer-based network system.

42. (Previously Presented) The method of claim 39, further comprising:
receiving data packets over a plurality of wireless connections, the data packets being concurrently received with the first data packets; and
aggregating the first data packets with the data packets.

REMARKS

Status of the Claims

Claims 17-37 were pending in this application before this Amendment.

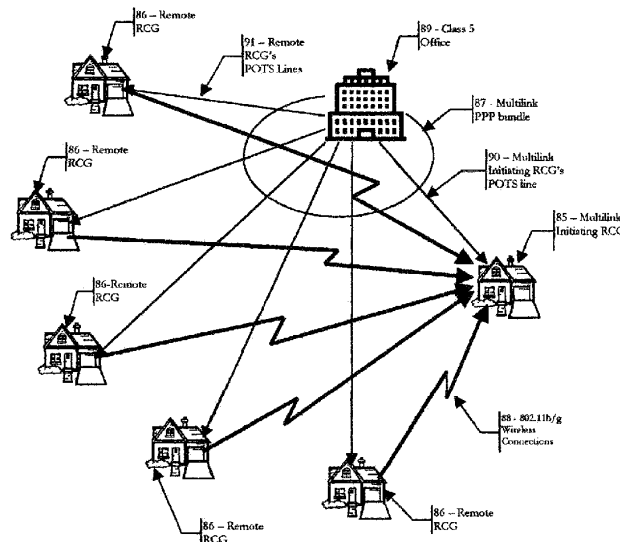
Claims 17 and 37 are amended according to 37 C.F.R. §1.116. Claim 17 is being amended to further clarify that the first device is receiving the first data and the second data. The changes to claim 17 were made to make this method claim more similar to what is being claimed in device claim 35. Claim 37 is being amended to delete a second occurrence of “the”. No new matter has been added.

Thus, claims 17-23, 25-29, 35-42 are currently pending in this application pursuant to this Amendment.

35 U.S.C. § 112 (first paragraph) Rejection

On pages 2-3 of the Office Action, claims 17-23, 25-29 and 35-42 were rejected under 35 U.S.C. §112, first paragraph. Issues of “concurrently receiving” are being raised in regards to claims 17, 22, 35, 39 and 42. “Concurrently receiving” is one the central purposes of all embodiments of the present invention - which is to receive data over many different links at the same time. This is clearly shown in Figure 7 of the present application, reproduced below:

FIG.7



The multilink initiating RCG 85 is receiving first data over POTS line 90. The five RCG's shown in Fig. 7 are each receiving their data from the network via each of their own POTS line 91. Multilink initiating RCG 85 receives first data over POTS line 90 and concurrently receives data from remote RCGs 86 via wireless connections 88. In one embodiment of the present invention, this is referred to as a "Multilink PPP Connection" which is explained in detail in paragraphs 72-80, among other places. It is inherent in a "multilink PPP connection" that the multilink initiating RCG 85 receives data concurrently thereby fulfilling one of the main purposes of the invention which is to increase bandwidth for a particular location. Otherwise, if data is not being concurrently received, there is no increase in bandwidth and defeats one of the primary purposes of the present invention.

The present application incorporated by reference both the parent and grand-parent applications. The grand-parent application, serial no. 10/686,375, was published in U.S. Published Application 2005-0078690. In that original filing of the grand-parent patent application, there existed claim 3 that related to concurrent reception of data. Claim 3 of the original grand-parent application is reproduced below:

3. An RCG of claims 1 and 2 that dynamically allocates separate and physically diverse POTS lines or wireless connections into a multilink group capable of aggregating the combined bandwidth of a plurality of said separate physically diverse POTS lines or wireless connections and providing said aggregate bandwidth to the benefit of a single, or a plurality of RCG device for the concurrent and high speed transmission of large or multiple files; and that can utilize one or more of the separate and physically diverse POTS lines or wireless connections that are physically connected to other remote RCG devices as stand alone connections that are not grouped in a multilink configuration to the benefit of a single or a plurality of RCG devices for the concurrent high speed transmission of large or multiple files.

Fig. 7 undoubtedly shows a device that is able to connect to multiple remote devices and can concurrently receive data from each of the remote devices. Therefore, the specification clearly supports what is being claimed in claims 17, 22, 35, 39 and 42. It is respectfully requested that the rejection of claims 17-23, 25-29 and 35-42 under 35 U.S.C. §112, first paragraph, be reconsidered and withdrawn.

35 U.S.C. § 112 (second paragraph) Rejections

On pages 4-5 of the Office Action, claims 40 and 41 were rejected under 35 U.S.C. §112, second paragraph as being indefinite due to issues about what is meant by a home-based network or a consumer-based network. In paragraphs 9-10 and 12 of the present application (among others), it describes in one embodiment how the device (e.g., RCG) is simply plugged into the existing telephone line at a residence or small business. The phrases “home-based network” and “consumer-based network” should be interpreted using a plain or ordinary meaning to those of ordinary skill in the art in light of what is described in the specification. Therefore, it is respectfully requested that the rejection of claims 40 and 41 under 35 U.S.C. §112, second paragraph, be reconsidered and withdrawn.

35 U.S.C. § 103 Rejections

On pages 5-6 of the Office Action, claims 17-23, 25-29 and 35-42 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 7,426,316 to Vehvilainen (“Vehvilainen”) in view of U.S. Patent 7,113,173 to Bi *et al.* (“Bi”). Basically, Vehvilainen was relied for teaching the first paragraph of claim 17 by citing Fig. 1, col. 5, lines 11-16 and col. 4, lines 29-33. Bi was relied for teaching the second paragraph of claim 17 by citing Figs. 44 and 46, and col. 47, lines 23-35. It will be shown that the Vehvilainen and Bi in combination do not teach all the limitations of claim 17, 35 and 39.

Vehvilainen teaches four ways to transfer images or photographs which are taken on a phone 102 to a computer 104. (Vehvilainen, 5:11-16; 4:29-33). Vehvilainen describes four ways that images are transferred from the phone 102 to the computer 104: (1) through a communication network 103 (e.g., the Internet); or (2) a Bluetooth connection; or (3) a similar wireless connection; or (4) a cable connecting the devices. *Id.* Notably, the citations in Vehvilainen use the word “or” and never the word “and” when describing the different ways of transferring the images. By using the word “or”, Vehvilainen only describes that images are transferred only over one of these four ways from the phone 102 to the computer 104, or from another phone to the phone 102. Vehvilainen never describes or suggests using two or more of these transfer methods concurrently to transfer images from the phone 102 to the computer 104. Data is sent between the phone 102 and the computer 104 over one of the connections, but not both concurrently.

Vehvilainen is using what is known to those of ordinary skill in the art as a point-to-point connection. A point-to-point connection described in Vehvilainen is the one of the problems that the present application was trying to solve. The present invention provides advantages of transferring large amounts of information or multiple files over multiple lines at the same time.

There is no description or suggestion that the phone 102 or the computer 104 of Vehvilainen is able to support sending images concurrently over different connections. However, even if Vehvilainen did suggest such, it would still fall short of what is recited in claims 17, 35 and 39. These claims require that first data is being received from the network at the first device (e.g., computer 104), **but also** that second data is being received by a second device (e.g., phone 102) from the network and is also transmitted wirelessly to the first device (computer 104) concurrently with the receipt of the first data. In Vehvilainen, image data **originates** at the phone 102, **not** from the network 103 as required in the claims. Images in Vehvilainen are transferred from the phone 102 across the network 103 to the computer 104, rather than data being transferred from the network 103 to the phone 102 then to the computer 104. Therefore Vehvilainen is missing a limitation of the claim 17 in that the phone 102 would be receiving data **from** the network and then transferring that data to computer 104.

Vehvilainen is poor prior art because this reference describes a method and apparatus for **improving image quality**, which has nothing to do with the claimed invention. The methods described in Vehvilainen produce image correcting information to decrease errors in the image produced by a camera module. (Vehvilainen, Abstract). The embodiments of the claimed invention concern ways of transferring data across multiple connections at the same time, rather than ways for improving image quality such as described in Vehvilainen. Therefore, Vehvilainen is a poor reference, unrelated to what is being solved in the present application, and basically is from a different field that is non-analogous art.

Bi does not cure the deficiency of Vehvilainen because Bi is nothing more than describing a router in the portions cited in the Office Action. (Bi, 47:23-35). In Bi, Fig. 46 merely illustrates a software structure of a network system that enables a wireless device to interface with a wired LAN system such as shown in Fig. 44. That is all that Fig. 44 shows – a wireless device 101 being able to connect to a host computer system. In other words, Bi shows in Figs. 44 and 46 a way for a router to communicate with a LAN and a wireless device. The multiplexing of data from the wired LAN card 1352 and the wireless LAN card 1360 is for

transmitting combined data to a network such as the Internet. *Id.* Bi simply allows a wireless device 101 to communicate with the Internet or a LAN system. Bi never describes or suggests a way for the wireless device 101 to transmit data it receives from the network to another device as required in claims 17, 35 and 39.

A combination of Vehvilainen and Bi only results in a system where it makes possible for the phone 102 and the computer 104 to communicate with the network 103. Bi simply is describing a way that is not described in Vehvilainen for *how* the phone 102 connects to the network 103, or the computer 104 connects to the network 103. Therefore a combination Vehvilainen and Bi does not result in the claimed invention because both fail to describe or suggest, either individually or in combination, each and all the elements required in claims 17, 35 and 39. It is respectfully requested that the rejection of claims 17-23, 25-29 and 35-42 under 35 U.S.C. §103(a) based on Vehvilainen and Bi be reconsidered and withdrawn.

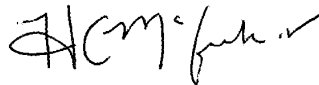
Conclusion

All rejections in the Office Action have been properly traversed. It is respectfully requested that all outstanding rejections be reconsidered and withdrawn. It is believed that a full and complete reply has been made in response to the Office Action, and, that as such, the present patent application is in a condition for allowance.

The Examiner is always welcome to telephone the attorney of record at the telephone number provided below if such telephone discussion would help expedite the prosecution of the patent application.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully Submitted,



Date: March 11, 2014

H C McGurk IV, Reg. No. 34,964
Attorney for Applicant

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Orange, CA 92706
Phone: **949.395.3942**
Email: claymcgurk@gmail.com

Electronic Acknowledgement Receipt	
EFS ID:	18434646
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	11-MAR-2014
Filing Date:	22-JUN-2012
Time Stamp:	15:41:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response After Final Action	13531294_AAF_3-11-14.pdf	447733 5591e07fca239dd0ff8ccfeb2dd6fb24debd133e	no	10

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/531,294		Filing Date 06/22/2012		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	03/11/2014	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 20	Minus	** 21	= 0	X \$40 =		0	
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X \$210 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/531,294		Filing Date 06/22/2012		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (j), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	03/11/2014		CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))		* 20	Minus	** 21	= 0	X \$40 =	0	
	Independent (37 CFR 1.16(h))		* 3	Minus	***3	= 0	X \$210 =	0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))		*	Minus	**	=	X \$ =		
	Independent (37 CFR 1.16(h))		*	Minus	***	=	X \$ =		
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828 7590 03/20/2014 Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			EXAMINER CHO, HONG SOL	
			ART UNIT 2467	PAPER NUMBER
			NOTIFICATION DATE 03/20/2014	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CLAYMCGURK@GMAIL.COM

Advisory Action Before the Filing of an Appeal Brief	Application No. 13/531,294	Applicant(s) DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	AIA (First Inventor to File) Status No

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 11 March 2014 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.
NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior Advisory Action or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.

Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because:

a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);

b) ☐ They raise the issue of new matter (see NOTE below);

c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. ☐ Applicant's reply has overcome the following rejection(s): _____.

6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. ☐ For purposes of appeal, the proposed amendment(s): (a) ☐ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
Claim 17 is amended so that would require further consideration and search. It should be noted that claim 17 is not similar to claim 35. In claim 17, the first device receives the first data and the second data form one common network while in claim 35, the first device receives the first data from the first network and the second data from the second network.

13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____

14. ☐ Other: _____.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

/HONG CHO/
 Primary Examiner, Art Unit 2467

Continuation of 3. NOTE: Amended claim 17 changes the scope of the invention.

**AMENDMENT UNDER 37 C.F.R. §1.116
EXPEDITED PROCEDURE
Technology Center 2400**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.:	<u>13/531,294</u>	EXAMINER:	Hong CHO
INVENTOR:	Eric M. Delangis	GROUP ART UNIT:	2467
FILED:	JUNE 22, 2012	CONFIRMATION No.:	9530
TITLE:	A BROADBAND COMMUNICATIONS DEVICE		
ATTORNEY No:	ED 1040		

Mail Stop **AF**
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

DO NOT ENTER: /H.C./

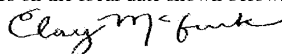
AMENDMENT UNDER 37 C.F.R. §1.116

In response to the final Office Action issued on December 30, 2013 ("Office Action"), please reconsider the above-identified application in light of the following amendments to the claims and the accompanying remarks.

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: March 11, 2014

By: 
Clay McGurk

Doc code: RCEX

PTO/SB/30EFS (07-09)

Doc description: Request for Continued Examination (RCE)

Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL **(Submitted Only via EFS-Web)**

Application Number	13531294	Filing Date	2012-06-22	Docket Number (if applicable)	ED 1040	Art Unit	2467
First Named Inventor	ERIC DELANGIS			Examiner Name	HONG CHO		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☒ Amendment/Reply

☐ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☐ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No _____

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/H C McGurk IV, Reg No 34964/	Date (YYYY-MM-DD)	2014-03-31
Name	Harold McGurk	Registration Number	34964

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.: **13/531,294** EXAMINER: Hong CHO
INVENTOR: Eric M. Delangis GROUP ART UNIT: 2467
FILED: JUNE 22, 2012 CONFIRMATION No.: 9530
TITLE: A BROADBAND COMMUNICATIONS DEVICE
ATTORNEY NO: ED 1040

Mail Stop **Amendment**
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

AMENDMENT

In response to the final Office Action issued on December 30, 2013 ("Office Action"), please reconsider the above-identified application in light of the following amendments to the claims and the accompanying remarks. A request for continued examination (RCE) is being filed concurrently with this Amendment. March 30, 2014 falls on a Sunday. Therefore the Amendment, the RCE and requisite fees are being submitted on the next business day via EFS-Web.

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: March 31, 2014

By: Clay McGurk
Clay McGurk

THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1-16. (Canceled).

17. (Currently Amended) A method for increasing bandwidth and data throughput comprising the steps of:

establishing a wireless connection between a first device and a second device, the first device being connected at a first location to a network via a landline, the second device being connected at a second location to the network, the second location being geographically separate from the first location, the first device and the second device being configured for accessing the network; and

concurrently receiving at the first ~~location~~ device first data from the network at the first location and second data over the wireless connection from the second device, the second data being received at the second location from the network.

18. (Previously Presented) The method of claim 17, wherein the first location and the second location are physically isolated from each other.

19. (Previously Presented) The method of claim 17, further comprising the step of aggregating the second data received over the wireless connection and the first data received over the connection at the first location.

20. (Previously Presented) The method of claim 17, wherein a connection at the first location and a connection at the second location are network connection points.

21. (Previously Presented) The method of claim 17, wherein the first device and the second device are consumer networking devices.

22. (Previously Presented) The method of claim 17, further comprising the steps of; establishing a second wireless connection between the first device and a third device, the third device being connected at a third location to the network, the third location being geographically different than the first location and the second location; and

concurrently receiving third data over the second wireless connection with the receipt of the first data at the first location and the second data over the wireless connection.

23. (Previously Presented) The method of claim 22, further comprising the step of aggregating the first data, the second data and the third data.

24. (Canceled).

25. (Previously Presented) The method of claim 17, wherein the first data and the second data are received as data packets.

26. (Previously Presented) The method of claim 17, wherein the network is the Internet.

27. (Currently Amended) The method of claim 17, wherein ~~the wireless connection is established between a first wireless router at the first device and a second wireless router at the second device~~ is a wireless device.

28. (Previously Presented) The method of claim 17, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network.

29. (Previously Presented) The method of claim 17, wherein the wireless connection is a cellular connection, a satellite connection, a Wi-Fi connection, a WiMax connection or a Bluetooth connection.

30-34. (Canceled).

35. (Currently Amended) A device comprising:

an interface that establishes a landline network connection at a first location to a first network and receives first data packets over the network connection;

a wireless interface that establishes a wireless connection to a remote communications device, the remote communications device being connected at a second location to a second network, the second location being geographically separate from the first location; and

a processor that receives from the interface the first data packets from the first network and concurrently receives over the wireless interface second data packets from the second network, the second data packets being received at the second location from the second network.

36. (Previously Presented) The device of claim 35, wherein the device is one of a modem, cellular phone, a router, a computer, hotspot device and a tablet.

37. (Currently Amended) The device of claim 35, wherein the ~~the~~ device is part of a home-based network system.

38. (Canceled).

39. (Currently Amended) A method for providing broadband communications services, comprising:

receiving first data packets over a landline connection;

receiving second data packets over a wireless connection, the first data packets being concurrently received with the second data packets; and

wherein aggregating the first data packets create a first data stream and with the second data packets create a second data stream.

40. (Previously Presented) The method of claim 39, wherein the first data packets are received at a home-based network system, and wherein the second packets are received over the wireless connection at the home-based network system.

41. (Previously Presented) The method of claim 39, wherein the first data packets are received by a consumer-based network system, and wherein the second packets are received over the wireless connection at the consumer-based network system.

42. (Previously Presented) The method of claim 39, further comprising:
receiving data packets over a plurality of wireless connections, the data packets being concurrently received with the first data packets; and
aggregating the first data packets with the data packets.

43. (New) A method for increasing bandwidth and data throughput comprising the steps of:

establishing a wireless connection between a first device and a wireless device, the first device being connected at a first location to a first network, the wireless device being connected at a second location to the first network or a second network, the second location being geographically separate from the first location; and

concurrently receiving at the first device first data from the first network at the first location and second data over the wireless connection from the wireless device, the second data being received at the second location from the first network or the second network.

REMARKS

Status of the Claims

Claims 17-23, 25-29, 35-42 were pending in this application before this Amendment.

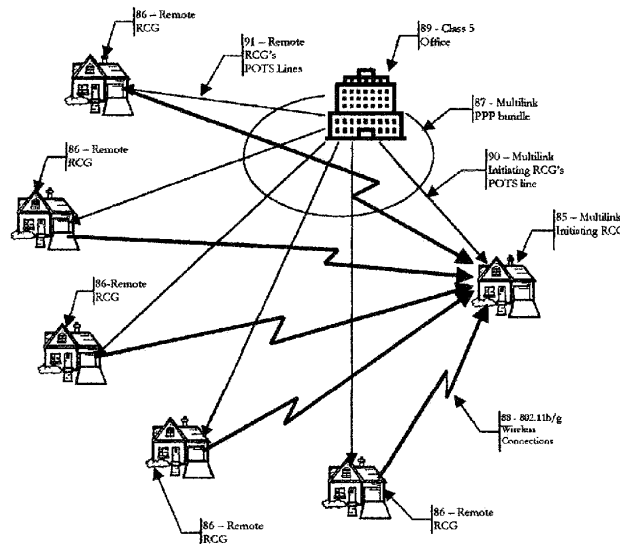
In this Amendment, claims 17, 27, 35 and 39 were amended, claim 38 was canceled and claim 43 is new.

Thus, claims 17-23, 25-29, 35-37 and 39-42 are currently pending in this application pursuant to this Amendment.

35 U.S.C. § 112 (first paragraph) Rejection

On pages 2-3 of the Office Action, claims 17-23, 25-29 and 35-42 were rejected under 35 U.S.C. §112, first paragraph. Issues of “concurrently receiving” are being raised in regards to claims 17, 22, 35, 39 and 42. “Concurrently receiving” is one the central purposes of all embodiments of the present invention - which is to receive data over many different links at the same time. This is clearly shown in Figure 7 of the present application, reproduced below:

FIG.7



The multilink initiating RCG 85 is receiving first data over POTS line 90. The five RCG's shown in Fig. 7 are each receiving their data from the network via each of their own POTS line 91. Multilink initiating RCG 85 receives first data over POTS line 90 and

concurrently receives data from remote RCGs 86 via wireless connections 88. In one embodiment of the present invention, this is referred to as a “Multilink PPP Connection” which is explained in detail in paragraphs 72-80 of the specification of the pending application, among other places. It is inherent in a “multilink PPP connection” that the multilink initiating RCG 85 receives data concurrently thereby fulfilling one of the main purposes of the invention which is to increase bandwidth for a particular location. Otherwise, if data is not being concurrently received, there is no increase in bandwidth and defeats one of the primary purposes of the present invention.

The present application incorporated by reference both the parent and grand-parent applications. The grand-parent application, serial no. 10/686,375, was published in U.S. Published Application 2005-0078690. In that original filing of the grand-parent patent application, there existed claim 3 that related to concurrent reception of data. Claim 3 of the original grand-parent application is reproduced below:

3. An RCG of claims 1 and 2 that dynamically allocates separate and physically diverse POTS lines or wireless connections into a multilink group capable of aggregating the combined bandwidth of a plurality of said separate physically diverse POTS lines or wireless connections and providing said aggregate bandwidth to the benefit of a single, or a plurality of RCG device for the concurrent and high speed transmission of large or multiple files; and that can utilize one or more of the separate and physically diverse POTS lines or wireless connections that are physically connected to other remote RCG devices as stand alone connections that are not grouped in a multilink configuration to the benefit of a single or a plurality of RCG devices for the concurrent high speed transmission of large or multiple files.

Fig. 7 undoubtedly shows a device that is able to connect to multiple remote devices and can concurrently receive data from each of the remote devices. Claim 3 of the original patent application confirms the “concurrent high transmission of large or multiple files.” Therefore, there is clear support for what is being claimed in claims 17, 22, 35, 39 and 42. It is respectfully requested that the rejection of claims 17-23, 25-29 and 35-42 under 35 U.S.C. §112, first paragraph, be reconsidered and withdrawn.

35 U.S.C. § 112 (second paragraph) Rejections

On pages 4-5 of the Office Action, claims 40 and 41 were rejected under 35 U.S.C. §112, second paragraph as being indefinite due to issues about what is meant by a home-based network

or a consumer-based network. In paragraphs 9-10 and 12 of the present application (among others), it describes in one embodiment how the device (e.g., RCG) is simply plugged into the existing telephone line at a residence or small business. The phrases “home-based network” and “consumer-based network” should be interpreted using a plain or ordinary meaning to those of ordinary skill in the art in light of what is described in the specification. Therefore, it is respectfully requested that the rejection of claims 40 and 41 under 35 U.S.C. §112, second paragraph, be reconsidered and withdrawn.

35 U.S.C. § 103 Rejections

On pages 5-6 of the Office Action, claims 17-23, 25-29 and 35-42 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 7,426,316 to Vehvilainen (“Vehvilainen”) in view of U.S. Patent 7,113,173 to Bi *et al.* (“Bi”). Basically, Vehvilainen was relied for teaching the first paragraph of claim 17 by citing Fig. 1, col. 5, lines 11-16 and col. 4, lines 29-33. Bi was relied for teaching the second paragraph of claim 17 by citing Figs. 44 and 46, and col. 47, lines 23-35. It will be shown that the Vehvilainen and Bi in combination do not teach all the limitations of claim 17, 35 and 39.

Vehvilainen teaches four ways to transfer images or photographs which are taken on a phone 102 to a computer 104. (Vehvilainen, 5:11-16; 4:29-33). These four ways are: (1) through a communication network 103 (e.g., the Internet); or (2) a Bluetooth connection; or (3) a similar wireless connection; or (4) a cable connecting the devices. *Id.* Notably, the citations in Vehvilainen use the word “or” and never the word “and” when describing the different ways of transferring the images. By using the word “or”, Vehvilainen only describes that images are transferred only over one of these four ways from the phone 102 to the computer 104, or from another phone to the phone 102. Vehvilainen never describes or suggests using two or more of these transfer methods concurrently to transfer images from the phone 102 to the computer 104. Data is sent between the phone 102 and the computer 104 over one of the connections, but not both concurrently.

Vehvilainen is using what is known to those of ordinary skill in the art as a point-to-point connection. A point-to-point connection described in Vehvilainen is the one of the problems that the present application was trying to solve. The present invention provides advantages of transferring large amounts of information or multiple files over multiple lines at the same time.

There is no description or suggestion that the phone 102 or the computer 104 of Vehvilainen is able to support concurrently sending images over different connections. However, even if Vehvilainen did suggest such, it would still fall short of what is recited in claims 17, 35 and 39. These claims require that first data is being received from the network at the first device (e.g., computer 104), **but also** that second data is being received by a second device (e.g., phone 102) from the network and is also transmitted wirelessly to the first device (computer 104) concurrently with the receipt of the first data. In Vehvilainen, image data *originates* at the phone 102, **not** from the network 103 as required in the claims. Claim 17 requires that data is received from the network 103 by the phone 102 and the computer 104. Images in Vehvilainen are transferred from the phone 102 across the network 103 to the computer 104, rather than data being transferred from the network 103 to the phone 102 then to the computer 104. Therefore Vehvilainen is missing a limitation of the claim 17 in that the phone 102 would be receiving data **from** the network and then transferring that data to computer 104.

Vehvilainen is poor prior art because this reference describes a method and apparatus for *improving image quality*, which is non-analogous art. The methods described in Vehvilainen produce image correcting information to decrease errors in the image produced by a camera module. (Vehvilainen, Abstract). The embodiments of the claimed invention concern ways of transferring data across multiple connections at the same time, rather than ways for improving image quality such as described in Vehvilainen. Therefore, Vehvilainen is a poor reference, unrelated to what is being solved in the present application, and basically is from a different field that is non-analogous art.

Bi does not cure the deficiency of Vehvilainen because Bi is nothing more than describing a router in the portions cited in the Office Action. (Bi, 47:23-35). In Bi, Fig. 46 merely illustrates a software structure of a network system that enables a wireless device to interface with a wired LAN system such as shown in Fig. 44. That is all that Fig. 44 shows – a wireless device 101 being able to connect to a host computer system. In other words, Bi shows in Figs. 44 and 46 a way for a router to communicate with a LAN and a wireless device. The multiplexing of data from the wired LAN card 1352 and the wireless LAN card 1360 is for transmitting combined data to a network such as the Internet. *Id.* Bi simply allows a wireless device 101 to communicate with the Internet or a LAN system. Bi never describes or suggests a

way for the wireless device 101 to transmit data it receives from the network to another device as required in claims 17, 35 and 39.

A combination of Vehvilainen and Bi only results in a system where it makes possible for the phone 102 and the computer 104 to communicate with the network 103. Bi simply is describing a way that is not described in Vehvilainen for *how* the phone 102 connects to the network 103, or the computer 104 connects to the network 103. Therefore a combination Vehvilainen and Bi does not result in the claimed invention because both fail to describe or suggest, either individually or in combination, each and all the elements required in claims 17, 35 and 39. It is respectfully requested that the rejection of claims 17-23, 25-29 and 35-42 under 35 U.S.C. §103(a) based on Vehvilainen and Bi be reconsidered and withdrawn.

Conclusion

All rejections in the Office Action have been properly traversed. It is respectfully requested that all outstanding rejections be reconsidered and withdrawn. It is believed that a full and complete reply has been made in response to the Office Action, and, that as such, the present patent application is in a condition for allowance.

The Examiner is always welcome to telephone the attorney of record at the telephone number provided below if such telephone discussion would help expedite the prosecution of the patent application.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully Submitted,



Date: March 31, 2014

H C McGurk IV, Reg. No. 34,964
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Electronic Patent Application Fee Transmittal				
Application Number:		13531294		
Filing Date:		22-Jun-2012		
Title of Invention:		BROADBAND COMMUNICATIONS DEVICE		
First Named Inventor/Applicant Name:		Eric M. Delangis		
Filer:		Harold C. McGurk		
Attorney Docket Number:		ED 1040		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Independent Claims in Excess of 3	2201	1	210	210
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
RCE - 2nd and Subsequent Request	2820	1	850	850
Total in USD (\$)				1060

Electronic Acknowledgement Receipt	
EFS ID:	18633603
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	31-MAR-2014
Filing Date:	22-JUN-2012
Time Stamp:	18:47:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1060
RAM confirmation Number	6065
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Request for Continued Examination (RCE)	13531294_RCE_30e_fill.pdf	697841 991d93af6cb41ea5380c88efec8ccfd81e07f886	no	3
Warnings:					
Information:					
2	Amendment Submitted/Entered with Filing of CPA/RCE	13531294_RCEAmendment_3-31-2014.pdf	446930 4418fe84e8c5fda90e337896ef603e885d320a6	no	10
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32045 c913bfc0f982fa6d334348503df2bb93ef753e32	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			1176816		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/531,294		Filing Date 06/22/2012		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (j), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	03/31/2014		CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		
	Total (37 CFR 1.16(i))		* 20		Minus	** 21	= 0		
	Independent (37 CFR 1.16(h))		* 4		Minus	***3	= 1		
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						RATE (\$)		ADDITIONAL FEE (\$)	
						X \$40 =		0	
						X \$210 =		210	
TOTAL ADD'L FEE								210	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT			HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		
	Total (37 CFR 1.16(i))		*		Minus	**	=		
	Independent (37 CFR 1.16(h))		*		Minus	***	=		
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						RATE (\$)		ADDITIONAL FEE (\$)	
						X \$ =			
						X \$ =			
TOTAL ADD'L FEE									
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828	7590	04/21/2014		
Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			EXAMINER CHO, HONG SOL	
			ART UNIT	PAPER NUMBER
			2467	
			NOTIFICATION DATE	DELIVERY MODE
			04/21/2014	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CLAYMCGURK@GMAIL.COM

Office Action Summary	Application No. 13/531,294	Applicant(s) DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 03/31/2014.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 17-23, 25-29, 35-37 and 39-43 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 17-23, 25-29, 35-37 and 39-43 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the RCE filed on 03/31/2014. Claims 17-23, 25-29, 35-37 and 39-43 are pending in the instant application.

Claim Rejections - 35 USC § 103

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

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claims 17, 18, 20-22, 25-29, 35-37, 39-41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vehvilainen (US 7426316) in view of Xu (US 20090150924).

Re claims 17, 18, 20, 21, 25, 26, 35-37, 39-41 and 43, Vehvilainen discloses establishing a wireless connection between a first device (figure 1, element 104) and a second device, being a consumer device (figure 1, element 106), the first device being connected at a first location to a network (figure 1, element 103), the second device being connected at a second location to the network (figure 1; column 5, lines 11-16), the

second location being geographically separate from the first location, the first device and the second device being configured for accessing the network (column 4, lines 29-33). Vehvilainen discloses the second device can receive images produced by the camera module over the Internet (column 4, lines 29-33), but fails to disclose concurrently receiving data from the Internet and the wireless connection. However, Xu discloses simultaneously receiving packets from different transmission medium (paragraph [0023]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vehvilainen with the teaching of Xu so that the first device receives first data from the Internet and second data from the second device, where the second device receives data produced by the camera module over the Internet.

Re claim 18, Vehvilainen discloses the first location and the second location are physically isolated from each other (figure 1).

Re claim 22, Vehvilainen discloses establishing a second wireless connection between the first device and a third device (column 4, lines 29-33), but fails to disclose concurrently receiving third data over the second wireless connection with the receipt of the first data at the first location and the second data over the wireless connection. However, Xu discloses simultaneously receiving packets from different transmission media (paragraph [0023]). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vehvilainen with the teaching of Xu for the benefit of efficient utilization of network resources by multiplexing data received from different transmission media.

Re claims 27-29, Vehvilainen discloses the wireless connection is established between a first wireless router at the first device and a second wireless router at the second device, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network and the wireless connection is a cellular, satellite, Wi-Fi, WiMax or Bluetooth connection (column 5, lines 11-16).

4. Claims 19, 23 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vehvilainen in view of Xu and Jost et al (US 7653089, "Jost").

Re claims 19, 23 and 42, Vehvilainen discloses all of the limitations of the base claim, but fails to disclose aggregating the first data, the second data and the third data.

However, it is well known in the art that traffic flows received from a plurality of senders are multiplexed. Jost discloses multiplexing data streams from various service providers (figure 7). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Vehvilainen with the teaching of Jost for the benefit of providing efficient utilization of network resources.

Response to Arguments

5. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Phillips can be reached on 571-272-3940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Hong Cho/

Primary Examiner, Art Unit 2467

Notice of References Cited	Application/Control No. 13/531,294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2009/0150924	06-2009	Xu, Yue Heng	725/31
*	B	US-7,653,089	01-2010	Jost et al.	370/485
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
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FOREIGN PATENT DOCUMENTS

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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant		☐ CPA		☐ T.D.		☐ R.1.47			
CLAIM		DATE							
Final	Original	11/26/2012	05/21/2013	09/05/2013	12/23/2013	04/16/2014			
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	25			✓	✓	✓			
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	33			✓	-	-			
	34			✓	-	-			
	35			✓	✓	✓			
	36			✓	✓	✓			

<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant										☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE													
Final	Original	11/26/2012	05/21/2013	09/05/2013	12/23/2013	04/16/2014									
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	38				✓	-									
	39				✓	✓									
	40				✓	✓									
	41				✓	✓									
	42				✓	✓									
	43					✓									

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S174	26	S173 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2014/04/16 07:56
S173	96	(multiplex\$3 or aggregat\$3 or combin\$3) with (data or packet\$1 or frame\$1) near wired with wireless\$2	US-PGPUB; USPAT	OR	OFF	2014/04/16 07:56
S176	10	(eric near delangis).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/04/16 08:17
S175	69696	(370/235,230,233,363,371,374,381,433,465-468,470-474,483-486,493-495,352,395,252).ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/04/16 08:17
S177	3	concurrently near receiv\$3 near (data or packet\$1 or frame\$1) same ((wired or landline) with wireless)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/04/16 08:19
S178	36	(multiplex\$3 or aggregat\$3 or combin\$3) with received near (data or packet\$1 or frame\$1) with wired with wireless\$2	US-PGPUB; USPAT	OR	OFF	2014/04/16 08:21
L6	499	receiv\$3 near data with wirelessly with server	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/04/16 09:53
L7	46	l6 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2014/04/16 09:54
L22	3	multi near link with concurrent\$2 with (receiv\$3 or send\$3 or transmit\$4)	US-PGPUB; USPAT	OR	OFF	2014/04/16 10:36
L45	58	l44 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2014/04/16 11:25
L44	309	(concurrent\$2 or simultaneous\$2) with receiv\$3 with transmission near (media or medium)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/04/16 11:25

EAST Search History

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L47	15	l46 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2014/04/16: 12:19
L54	4	09/953980	US-PGPUB; USPAT	OR	OFF	2014/04/16: 13:17
L63	492	(multiplex\$3 or aggregat\$3 or combin\$3) with received near (traffic or data or packet\$1 or frame\$1) near (stream or flow)	US-PGPUB; USPAT	OR	OFF	2014/04/16: 14:06

4/ 16/ 2014 2:22:06 PM**C:\ Users\ hcho\ Documents\ EAST\ Workspaces\ 13531294.wsp**

Search Notes 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	230-235,278,282,328,338,468,477	11/26/2012	hc

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search	11/26/2012	hc
updated search	5/21/2013	hc
updated search	9/5/2013	hc
updated search	12/23/2013	hc
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**Courtesy Reminder for
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Attorney Docket No: ED 1040

Customer Number: 64828

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13531294	
	Filing Date		2012-06-22	
	First Named Inventor	Eric Delangis		
	Art Unit	2467		
	Examiner Name	Hong Cho		
	Attorney Docket Number	ED 1040		

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	Filing Date	2012-06-22
	First Named Inventor	Eric Delangis
	Art Unit	2467
	Examiner Name	Hong Cho
	Attorney Docket Number	ED 1040

1	H. Balakrishnan et al., "A Comparison of Mechanisms for Improving TCP Performance over Wireless Links", IEEE/ACM Transactions on Networking, 17 pages; 1997.	☐
2	J. Chen et al., "An Efficient Multipath Forwarding Method", Proceedings of IEEE Infocom '98; 9 pages; 1998.	☐
3	J. Chen, "New Approaches to Routing for Large-Scale Data Networks", Thesis for Doctor of Philosophy, Rice University; 259 pages; 1999.	☐
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6	E. Kohler et al., "The Click Modular Router", Proc. of the 17th Symposium on Operating Systems Principles; 34 pages; 1999.	☐
7	S. Lee et al., "Split Multipath Routing with Maximally Disjoint Paths in Ad hoc Networks", Infocom 98 - Proceedings, IEEE (Volume 3); 5 pages; 1998.	☐
8	Y. Lee et al., "Improving TCP Performance in Multipath Packet Forwarding Networks", Journal of Communications and Networks, Vol. 4, No. 2; 10 pages; June 2002.	☐
9	L. Magalhaes et al., "Transport Level Mechanisms for Bandwidth Aggregation on Mobile Hosts", IEEE-ICNP; 7 pages; 2001.	☐
10	S. Mascolo et al., "TCP Westwood: Bandwidth Estimation for Enhanced Transport over Wireless Links", Proc. of the ACM Mobicom; 11 pages; 2001.	☐
11	J. Mo et al., "Analysis and Comparison of TCP Reno and Vegas", University of California at Berkeley; 19 pages; 1998.	☐

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13531294
	Filing Date		2012-06-22
	First Named Inventor	Eric Delangis	
	Art Unit	2467	
	Examiner Name	Hong Cho	
Attorney Docket Number		ED 1040	

12	J. Mo et al., "Analysis and Comparison of TCP Reno and Vegas", IEEE; 8 pages; 1999.	☐
13	P. Rodriguez et al., "Dynamic Parallel Access to Replicated Content in the Internet", IEEE/ACM Transactions on Networking; 11 pages; 2000.	☐
14	P. Srisuresh et al., "Request for Comments: 2663 - IP Network Address Translator (NAT) Terminology and Considerations"; The Internet Society; 30 pages; 1999.	☐
15	E. Steinbach et al., "A Simulation Study of Packet Path Diversity for TCP File Transfer and Media Transport on the Internet", Stanford University; 8 pages; August 2002.	☐

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	Filing Date	2012-06-22
	First Named Inventor	Eric Delangis
	Art Unit	2467
	Examiner Name	Hong Cho
	Attorney Docket Number	ED 1040

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Signature	/H C McGurk IV/	Date (YYYY-MM-DD)	2014-06-03
Name/Print	H C McGurk	Registration Number	34964

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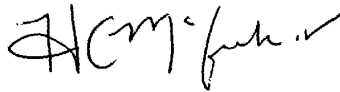
APPLICATION NO.: **13/531,294** EXAMINER: Hong CHO
INVENTOR: Eric M. Delangis GROUP ART UNIT: 2467
FILED: JUNE 22, 2012 CONFIRMATION No.: 9530
TITLE: A BROADBAND COMMUNICATIONS DEVICE
ATTORNEY No: ED 1040

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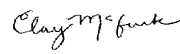
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EFS ID:	19203299
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
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16	Non Patent Literature	Mascolo_ACMMobicom_2001_fonts.pdf	296126 3572fdc36f517dce01859938fef11dd983cf37c6	no	11
Warnings:					
Information:					
Total Files Size (in bytes):			17024467		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.: **13/531,294**

EXAMINER: Hong CHO

INVENTOR: Eric M. Delangis

GROUP ART UNIT: 2467

FILED: JUNE 22, 2012

CONFIRMATION No.: 9530

TITLE: A BROADBAND COMMUNICATIONS DEVICE

ATTORNEY No: ED 1040

Mail Stop **Amendment**
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

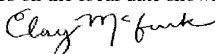
AMENDMENT

In response to the Office Action issued on April 21, 2014 ("Office Action"), please reconsider the above-identified application in light of the following amendments to the claims and the accompanying remarks. This Amendment is being submitted on or before July 21, 2014 via EFS-Web.

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: July 21, 2014

By: 
Clay McGurk

THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1-16. (Canceled).

17. (Currently Amended) A method for increasing bandwidth and data throughput comprising the steps of:

sending a multilink request from a first device to a second device to join a multilink connection ~~establishing a wireless connection between a first device and a second device~~, the first device being connected at a first location to a network ~~via a landline~~, the second device being connected at a second location to the network, the second location being geographically separate from the first location, the first device and the second device being configured for accessing the network; and

when the multilink request is accepted by the second device, concurrently ~~receiving~~ at the first device first data from the network at the first location and during the multilink connection, concurrently receiving second data over ~~the~~ a wireless connection from the second device, the second data being received at the second location from the network.

18. (Previously Presented) The method of claim 17, wherein the first location and the second location are physically isolated from each other.

19. (Previously Presented) The method of claim 17, further comprising the step of aggregating the second data received over the wireless connection and the first data received over the connection at the first location.

20. (Previously Presented) The method of claim 17, wherein a connection at the first location and a connection at the second location are network connection points.

21. (Previously Presented) The method of claim 17, wherein the first device and the second device are consumer networking devices.

22. (Currently Amended) The method of claim 17, further comprising the steps of[;]; ~~sending another multilink request from the first device to a third device, establishing a second wireless connection between the first device and a third device,~~ the third device being connected at a third location to the network, the third location being geographically different than the first location and the second location; and

when the another multilink request is accepted by the third device, concurrently receiving third data during the multilink connection over the a second wireless connection between the first device and the third device ~~with the receipt of the first data at the first location and the second data over the wireless connection.~~

23. (Previously Presented) The method of claim 22, further comprising the step of aggregating the first data, the second data and the third data.

24. (Canceled).

25. (Previously Presented) The method of claim 17, wherein the first data and the second data are received as data packets.

26. (Previously Presented) The method of claim 17, wherein the network is the Internet.

27. (Previously Presented) The method of claim 17, wherein the second device is a wireless device.

28. (Previously Presented) The method of claim 17, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network.

29. (Previously Presented) The method of claim 17, wherein the wireless connection is a cellular connection, a satellite connection, a Wi-Fi connection, a WiMax connection or a Bluetooth connection.

30-34. (Canceled).

35. (Currently Amended) A device comprising:

an interface that establishes a ~~landline~~ network connection at a first location to a first network and receives first data packets over the network connection;

a wireless interface that is configured to establish ~~establishes~~ a wireless connection to a remote communications device, the remote communications device being connected at a second location to a second network, ~~the second location being geographically separate from the first location~~; and

a processor that sends a multilink request over the wireless interface to the remote communications device to join the multilink connection, receives from the interface the first data packets from the first network and when the multilink request is accepted by the remote communications device, concurrently receives ~~over~~ from the wireless interface second data packets from the second network, the second data packets being received at the second location from the second network.

36. (Previously Presented) The device of claim 35, wherein the device is one of a modem, cellular phone, a router, a computer, hotspot device and a tablet.

37. (Previously Presented) The device of claim 35, wherein the device is part of a home-based network system.

38. (Canceled).

39. (Currently Amended) A method for providing broadband communications services, comprising:

sending to a remote host an inquiry in whether the remote host is able to support a multilink connection;

receiving first data packets over a ~~landline~~ first connection to the Internet;

when the remote host indicates that the multilink connection is supported, receiving second data packets over a ~~wireless~~ a second connection, the first data packets being concurrently received with the second data packets during the multilink connection; and

wherein the first data packets create a first data stream and the second data packets create a second data stream.

40. (Currently Amended) The method of claim 39, wherein the first data packets are received at a home-based network system, and wherein the second packets are received over the ~~wireless~~ second connection at the home-based network system.

41. (Currently Amended) The method of claim 39, wherein the first data packets are received by a consumer-based network system, and wherein the second packets are received over the ~~wireless~~ second connection at the consumer-based network system.

42. (Currently Amended) The method of claim 39, further comprising:
during the multilink connection, receiving data packets over a plurality of wireless connections, the data packets being concurrently received with the first data packets; and
aggregating the first data packets with the data packets.

43. (Currently Amended) A method for increasing bandwidth and data throughput comprising the steps of:

sending a multilink request from a first device to a second device to join a multilink connection ~~establishing a wireless connection between a first device and a wireless device~~, the first device being connected at a first location to a first network, the wireless device being connected at a second location to the first network or a second network, the second location being geographically separate from the first location; and

when the multilink request is accepted by the second device, concurrently ~~receiving~~ at the first device first data from the first network at the first location and during the multilink connection, concurrently receiving second data over ~~the~~ a wireless connection from the wireless device, the second data being received at the second location from the first network or the second network.

REMARKS

Status of the Claims

Claims 17-23, 25-29, 35-37 and 39-43 were pending in this application before this Amendment.

In this Amendment, claims 17, 22, 35 and 39-43 have been amended.

Thus, claims 17-23, 25-29, 35-37 and 39-43 are currently pending in this application pursuant to this Amendment.

35 U.S.C. § 103 Rejections

On pages 2-4 of the Office Action, claims 17-18, 20-22, 25-29, 35-37, 39-41 and 43 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 7,426,316 to Vehvilainen (“Vehvilainen”) in view of U.S. Application Publication 2009/0150924 to Xu (“Xu”). Vehvilainen and Xu, in combination or individually, do not teach all the limitations of claims 17, 35, 39 and 43, and each reference is non-analogous art.

Claim limitations are not described or suggested in Vehvilainen or Xu

In the Office Action, the “first device” was equated to computer 104 of Vehvilainen, and the “second device” was equated to image server 106. (Office Action, last five lines on p. 2). Vehvilainen shows in Fig. 1 that computer 104 and image server 106 are connected to network 103. Xu was used to illustrate in Fig. 1 that receiver 14 can receive electronic programming guides (“EPG”) from both content provider 12 and network 18. (Xu, ¶ 23; Office Action, p. 3, lines 5-7). However, both Vehvilainen and Xu are deficient in neither teaches as required in amended claims 17, 35, 39 and 43 anything about a (1) “multilink request” that is sent by a first device to a second device; or (2) the required “wireless connection” between two devices, where (3) the two devices are connected to and concurrently receiving data from the network, and where (4) one device is transferring its data received from the network to the other device during a multilink connection.

Vehvilainen and Xu fail to describe anything about a “multilink request” that is sent by a first device to a second device as required by claims 17, 35, 39 and 43. “Multilink requests” and “multilink connections” are absent from any of the teachings of Vehvilainen and Xu. Although

the receiver 14 in Xu may receive data from network 18 and content provider 12 at the same time, this is not a “multilink connection” for the reasons discussed below

Vehvilainen fails to describe or suggest the required wireless connection between two devices, where the two devices are connected to and concurrently receiving data from the network, and where one device is transferring its data received from the network to the other device during a multilink connection, as required in claims 17, 35 and 43. Vehvilainen does not describe a “wireless connection” between image server 106 and computer 104. The Office Action does not state with particularity where Vehvilainen describes this feature between the image server 106 and computer 104. Vehvilainen only shows that computer 104 and image server 106 are each connected to network 103, but Fig. 1 does not show any “wireless connection” required by the claims from computer 104 to image server 106.

In Vehvilainen, data is transferred in one direction between image server 106 and computer 104, and visa versa. Vehvilainen only shows the transfer of data between networked devices, nothing more. Vehvilainen is significantly missing any description of both image server 106 and computer 104 concurrently receiving data from network 103, and where data received at computer 104 or image server 106 is also being transferred to the other device over a wireless connection during a multilink connection.

Even if phone 102 in Vehvilainen was substituted for image server 106 (as was done in the previous office action), phone 102 and computer 104 are only communicating in a point-to-point connection over the network 103 or via a Bluetooth wireless connection. Vehvilainen would still fall short because it does not describe phone 102 and computer 104 both concurrently receiving data from network 103, and where data received at phone 102 or computer 104 is also transferred to the other device during a multilink connection. Vehvilainen only shows data going one way, from phone 102 to computer 104, or visa versa, over a single connection. What would be required by claims 17, 35 and 43 is that image server 106 communicates data concurrently to phone 102 and computer 104, and while this data is being received at phone 102, phone 102 also would be sending data to computer 104. This is clearly not shown or described in Vehvilainen in any manner.

Xu fails to cure the deficiencies of Vehvilainen. Xu shows in Fig. 1 a single connection between receiver 14 and the network 18. Xu is missing a description or figure that shows two receivers 14, where the two receivers 14 are connected to network 18 and to each other via a

wireless connection. This is essential and required by claims 17, 35 and 43. Xu would need to show data being sent by EPG server 20 to network 18, where two receivers 14 are concurrently receiving data from network 18, but where one receiver 14 is also sending its data to the other receiver 14 over a wireless connection during a multilink connection. In other words, a second receiver 14 is missing from Xu that is required by the claims. Xu therefore fails to show the required devices, the required connections to the network, and the required wireless connection between devices as required in claims 17, 35, 39 and 43. Xu is not able to cure the deficiencies of Vehvilainen.

In summary, the combination of Vehvilainen and Xu falls short because both references do not show, describe, mention or suggest as required in amended claims 17, 35, 39 and 43 anything about a (1) “multilink request” that is sent by a first device to a second device; or (2) the required “wireless connection” between two devices, where (3) the two devices are connected to and concurrently receiving data from the network, and where (4) one device is transferring its data received from the network to the other device during a multilink connection.

Vehvilainen and Xu are each Non-analogous Art

“In order for a reference to be proper for use in an obviousness rejection under 35 U.S.C. §103, the reference must be analogous art to the claimed invention. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *see also*, MPEP 2141.01(a). A reference is analogous art to the claimed invention if: (1) the reference is from the same field of endeavor as the claimed invention (even if it addresses a different problem); or (2) the reference is reasonably pertinent to the problem faced by the inventor (even if it is not in the same field of endeavor as the claimed invention). *See Bigio*, 381 F.3d at 1325. Vehvilainen and Xu are each non-analogous art according to this two prong test.

Under the first prong of the test, Vehvilainen and Xu have to be from the same field or endeavor as the claimed invention. Neither reference is from the same field or endeavor as the claimed invention. The core teachings of Vehvilainen are methods for enhancing image quality by means of store image distortion information in an image server 106 that is then used to correct images taken from a specific imaging devices 102. (*See*, Vehvilainen, Abstract). This field or endeavor as described in Vehvilainen has nothing to do with the multilink connection of the claimed invention.

Xu describes that its invention relates to the use of electronic programming guides to make selections for video viewing. (Xu, ¶2 and Abstract). Xu teaches how to use separate file indexes accessed through two separate media connections to access desired content. (Xu, ¶ 22). The desired content (e.g., video) is only transmitted over the primary transmission medium (i.e., “A” in Fig. 1), not both transmission media. (Xu, ¶ 24). When content is being provided to receiver via route “A”, receiver 14 may access more programming guide information via route “B”. (Xu, ¶24). Providing programming guide information via two separate routes to a single receiver is not related to the same field or endeavor as the claimed invention. Neither Vehvilainen nor Xu are therefore from the same field or endeavor as the claimed invention, e.g., how to create a multilink connection, and thus fail the first prong of the test for analogous art.

Under the second prong of the test, Vehvilainen and Xu each has to be reasonably pertinent to the problem faced by the inventor of the present application. Again, the problems faced in Vehvilainen and Xu are not reasonably pertinent to the problem faced by the inventor of the present application. Vehvilainen is not trying to solve anything related to a multilink connection, but rather is using image correcting information to decrease errors in an image that is produced by a camera module. (Vehvilainen, Abstract). Similarly, Xu is trying to solve the problem related to downloading, accessing and using programming guides. (Xu, ¶¶ 2-5, 22, 24). Therefore, Vehvilainen and Xu fail the second prong of the test for analogous art.

In summary, Vehvilainen and Xu fail both prongs of the test for analogous art. Therefore, Vehvilainen and Xu are each non-analogous art and should not be used in an obviousness rejection for the claimed invention.

Summary

A combination of Vehvilainen and Xu does not result in the claimed invention because both fail to describe or suggest, either individually or in combination, each and all the elements required in claims 17, 35, 39 and 43. Vehvilainen and Xu are also non-analogous art and can not be used in an obviousness-type rejection. For these reasons, Vehvilainen in view of Xu lack the requirements for making a *prima facie* case of obviousness. Thus claims 17, 35, 39, and 43 are allowable over Vehvilainen in view of Xu. All the other claims that depend on these claims should be similarly allowed due to their dependence on those allowable independent claims. Therefore, it is respectfully requested that the rejection of claims 17-18, 20-22, 25-29, 35-37, 39-

41 and 43 under 35 U.S.C. §103(a) based on Vehvilainen and Xu be reconsidered and withdrawn.

Rejection of claims 19, 23 and 42

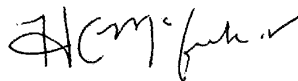
On page 4 of the Office Action, claims 19, 23 and 42 were rejected under 35 U.S.C. §103(a) as being unpatentable over Vehvilainen in view of Xu and U.S. Patent 7,653,089 to Jost *et al.* ("Jost"). The Office Action stated that Jost "discloses multiplexing data streams from various service providers (figure 7)". (Office Action, p. 4, § 4). This is being used against the "aggregating" limitation in claims 19, 23 and 42. Jost is not cited or relied upon for making up for the deficiencies of Vehvilainen and Xu as discussed above. Claims 19 and 23 are allowable due to their dependence on allowable independent claim 17. Claim 42 is similarly allowable due to its dependence on allowable independent claim 39. It is respectfully requested that the rejection under 35 U.S.C. §103 of claims 19, 23 and 42 as being unpatentable over Vehvilainen in view of Xu and Jost be reconsidered and withdrawn.

Conclusion

All rejections in the Office Action have been properly traversed. It is respectfully requested that all outstanding rejections be reconsidered and withdrawn. It is believed that a full and complete reply has been made in response to the Office Action, and, that as such, the present patent application is in a condition for allowance.

The Examiner is always welcome to telephone the attorney of record at the telephone number provided below if such telephone discussion would help expedite the prosecution of the patent application. Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully Submitted,



Date: July 21, 2014

H C McGurk IV, Reg. No. 34,964
Attorney for Applicant
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PO Box 1488
Orange, CA 92706
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Electronic Acknowledgement Receipt	
EFS ID:	19632352
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	21-JUL-2014
Filing Date:	22-JUN-2012
Time Stamp:	14:19:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	13531294_Amendment_7-21-2014.pdf	116417 2e87284a0ecc2befeec1862958f9b8a4d9d6f4879	no	11

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New Applications Under 35 U.S.C. 111

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New International Application Filed with the USPTO as a Receiving Office

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828 7590 08/21/2014 Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			EXAMINER CHO, HONG SOL	
			ART UNIT 2467	PAPER NUMBER
			NOTIFICATION DATE 08/21/2014	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

CLAYMCGURK@GMAIL.COM

Office Action Summary	Application No. 13/531,294	Applicant(s) DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on 07/21/14.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 17-23,25-29,35-37 and 39-43 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 17-23, 25-29, 35-37 and 39-43 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some** c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

4) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to the amendment filed on 07/21/14. Claims 17-23, 25-29, 35-37 and 39-43 are pending in the instant application.

Claim Rejections - 35 USC § 112, First paragraph

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
3. Claims 17-23, 25-29, 35-37 and 39-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re claims 17, 35 and 43, it recites “sending a multilink request from a first device to a second device to join a multilink connection”. The original specification fails to describe the above claim limitation. Thus, Examiner concludes that the claimed feature indicated above is a new matter.

Re claim 39, it recites “sending to a remote host an inquiry in whether the remote host is able to support a multilink connection”. The original specification fails to describe the above claim limitation. Thus, Examiner concludes that the claimed feature indicated above is a new matter.

Claims 18-23, 25-29, 36, 37 and 40-42 depend on claims 17, 35 and 39 are therefore similarly rejected.

Response to Arguments

4. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hong Cho whose telephone number is 571-272-3087. The examiner can normally be reached on Mon-Fri during 7 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Phillips can be reached on 571-272-3940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Hong Cho/

Primary Examiner, Art Unit 2467

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

13531294 - GAI: 2467

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13531294	
	Filing Date		2012-06-22	
	First Named Inventor	Eric Delangis		
	Art Unit	2467		
	Examiner Name	Hong Cho		
	Attorney Docket Number	ED 1040		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		13531294	13531294 - GAU: 2467
	Filing Date		2012-06-22	
	First Named Inventor	Eric Delangis		
	Art Unit	2467		
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1	H. Balakrishnan et al., "A Comparison of Mechanisms for Improving TCP Performance over Wireless Links", IEEE/ACM Transactions on Networking, 17 pages; 1997.	☐
2	J. Chen et al., "An Efficient Multipath Forwarding Method", Proceedings of IEEE Infocom '98; 9 pages; 1998.	☐
3	J. Chen, "New Approaches to Routing for Large-Scale Data Networks", Thesis for Doctor of Philosophy, Rice University; 259 pages; 1999.	☐
4	M. Handley et al., "Network Intrusion Detection: Evasion, Traffic Normalization, and End-to-End Protocol Semantics", Proceedings of the 10th USENIX Security Symposium; 18 pages; 2001.	☐
5	H. Hsieh et al., "A Transport Layer Approach for Achieving Aggregate Bandwidths on Multi-homed Mobile Hosts", Proc. of MobiCom; 12 pages; August 2002.	☐
6	E. Kohler et al., "The Click Modular Router", Proc. of the 17th Symposium on Operating Systems Principles; 34 pages; 1999.	☐
7	S. Lee et al., "Split Multipath Routing with Maximally Disjoint Paths in Ad hoc Networks", Infocom 98 - Proceedings, IEEE (Volume 3); 5 pages; 1998.	☐
8	Y. Lee et al., "Improving TCP Performance in Multipath Packet Forwarding Networks", Journal of Communications and Networks, Vol. 4, No. 2; 10 pages; June 2002.	☐
9	L. Magalhaes et al., "Transport Level Mechanisms for Bandwidth Aggregation on Mobile Hosts", IEEE-ICNP; 7 pages; 2001.	☐
10	S. Mascolo et al., "TCP Westwood: Bandwidth Estimation for Enhanced Transport over Wireless Links", Proc. of the ACM Mobicom; 11 pages; 2001.	☐
11	J. Mo et al., "Analysis and Comparison of TCP Reno and Vegas", University of California at Berkeley; 19 pages; 1998.	☐

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	Attorney Docket Number	ED 1040		

12	J. Mo et al., "Analysis and Comparison of TCP Reno and Vegas", IEEE; 8 pages; 1999.	☐
13	P. Rodriguez et al., "Dynamic Parallel Access to Replicated Content in the Internet", IEEE/ACM Transactions on Networking; 11 pages; 2000.	☐
14	P. Srisuresh et al., "Request for Comments: 2663 - IP Network Address Translator (NAT) Terminology and Considerations"; The Internet Society; 30 pages; 1999.	☐
15	E. Steinbach et al., "A Simulation Study of Packet Path Diversity for TCP File Transfer and Media Transport on the Internet", Stanford University; 8 pages; August 2002.	☐

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EXAMINER SIGNATURE

Examiner Signature	/Hong Cho/	Date Considered	07/23/2014
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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	Art Unit	2467
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	Attorney Docket Number	ED 1040

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

- ☐ See attached certification statement.
- ☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- ☐ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/H C McGurk IV/	Date (YYYY-MM-DD)	2014-06-03
Name/Print	H C McGurk	Registration Number	34964

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /H.C./

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	32	multi near link with ppp same request\$3	US-PGPUB; USPAT	OR	OFF	2014/08/18: 10:50
L7	41	(request\$3 or join\$3 or establish\$3) with multi near link with connection	US-PGPUB; USPAT	OR	OFF	2014/08/18: 11:55
L8	10	(eric near delangis).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/08/18: 12:38
L9	156	(multiplex\$3 or aggregat\$3 or combin\$3) with wireless\$2 near received near (stream\$1 or flow\$1 or traffic or data or message\$1 or inforamtion or packet\$1 or frame\$1)	US-PGPUB; USPAT	OR	OFF	2014/08/18: 12:39
L10	16	L9 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2014/08/18: 12:39
L12	59094	(370/235,230,233,363,371,374,381,433,465- 468,470-474,483-486,493- 495,352,395,252).ccls.	US-PGPUB; USPAT	OR	OFF	2014/08/18: 12:41
L16	58	L12 and multi near link with ppp	US-PGPUB; USPAT	OR	OFF	2014/08/18: 12:58
L17	10	L16 and @rlad<"20021015"	US-PGPUB; USPAT	OR	OFF	2014/08/18: 12:58
L18	7	(join\$3 or request\$3 or support\$3) with multi near link near connection	US-PGPUB; USPAT	OR	OFF	2014/08/18: 13:04

8/18/2014 1:05:17 PM**C:\Users\hcho\Documents\EAST\Workspaces\13531294.wsp**

Search Notes 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	230-235,278,282,328,338,468,477	11/26/2012	hc

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search	11/26/2012	hc
updated search	5/21/2013	hc
updated search	9/5/2013	hc
updated search	12/23/2013	hc
updated search	4/16/2014	hc
updated search	8/18/2014	hc

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant										☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE													
Final	Original	11/26/2012	05/21/2013	09/05/2013	12/23/2013	04/16/2014	08/18/2014								
	1	✓	✓	-	-	-	-								
	2	✓	✓	-	-	-	-								
	3	✓	✓	-	-	-	-								
	4	✓	✓	-	-	-	-								
	5	✓	✓	-	-	-	-								
	6	✓	✓	-	-	-	-								
	7	✓	✓	-	-	-	-								
	8	✓	✓	-	-	-	-								
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	35			✓	✓	✓	✓								
	36			✓	✓	✓	✓								

<i>Index of Claims</i> 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant										☐ CPA		☐ T.D.		☐ R.1.47	
CLAIM		DATE													
Final	Original	11/26/2012	05/21/2013	09/05/2013	12/23/2013	04/16/2014	08/18/2014								
	37			✓	✓	✓	✓								
	38				✓	-	-								
	39				✓	✓	✓								
	40				✓	✓	✓								
	41				✓	✓	✓								
	42				✓	✓	✓								
	43					✓	✓								

REPLY UNDER 37 C.F.R. §1.116
EXPEDITED PROCEDURE
Technology Center 2400

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.: **13/531,294** EXAMINER: Hong CHO
INVENTOR: Eric M. Delangis GROUP ART UNIT: 2467
FILED: JUNE 22, 2012 CONFIRMATION NO.: 9530
TITLE: A BROADBAND COMMUNICATIONS DEVICE
ATTORNEY NO: ED 1040

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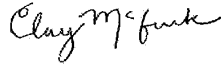
REPLY UNDER 37 C.F.R. §1.116

In response to the Office Action issued on August 21, 2014 ("Office Action"), please reconsider the above-identified application in light of the following remarks. This Reply is being submitted before November 21, 2014 via EFS-Web.

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: August 25, 2014

By: 

Clay McGurk

MAILSTOP AF

THE CLAIMS

This listing of claims will replace all prior versions and listings of the claims in the application:

1-16. (Canceled).

17. (Previously Presented) A method for increasing bandwidth and data throughput comprising the steps of:

sending a multilink request from a first device to a second device to join a multilink connection, the first device being connected at a first location to a network, the second device being connected at a second location to the network, the second location being geographically separate from the first location, the first device and the second device being configured for accessing the network; and

when the multilink request is accepted by the second device, receiving at the first device first data from the network at the first location and during the multilink connection, concurrently receiving second data over a wireless connection from the second device, the second data being received at the second location from the network.

18. (Previously Presented) The method of claim 17, wherein the first location and the second location are physically isolated from each other.

19. (Previously Presented) The method of claim 17, further comprising the step of aggregating the second data received over the wireless connection and the first data received over the connection at the first location.

20. (Previously Presented) The method of claim 17, wherein a connection at the first location and a connection at the second location are network connection points.

21. (Previously Presented) The method of claim 17, wherein the first device and the second device are consumer networking devices.

22. (Previously Presented) The method of claim 17, further comprising the steps of: sending another multilink request from the first device to a third device, the third device being connected at a third location to the network, the third location being geographically different than the first location and the second location; and

when the another multilink request is accepted by the third device, concurrently receiving third data during the multilink connection over a second wireless connection between the first device and the third device.

23. (Previously Presented) The method of claim 22, further comprising the step of aggregating the first data, the second data and the third data.

24. (Canceled).

25. (Previously Presented) The method of claim 17, wherein the first data and the second data are received as data packets.

26. (Previously Presented) The method of claim 17, wherein the network is the Internet.

27. (Previously Presented) The method of claim 17, wherein the second device is a wireless device.

28. (Previously Presented) The method of claim 17, wherein the network is one or a combination of a cable network, a telecommunication network, an optical network and a communications network.

29. (Previously Presented) The method of claim 17, wherein the wireless connection is a cellular connection, a satellite connection, a Wi-Fi connection, a WiMax connection or a Bluetooth connection.

30-34. (Canceled).

35. (Previously Presented) A device comprising:

an interface that establishes a network connection at a first location to a first network and receives first data packets over the network connection;

a wireless interface that is configured to establish a wireless connection to a remote communications device, the remote communications device being connected at a second location to a second network; and

a processor that sends a multilink request over the wireless interface to the remote communications device to join the multilink connection, receives from the interface the first data packets from the first network and when the multilink request is accepted by the remote communications device, concurrently receives from the wireless interface second data packets from the second network, the second data packets being received at the second location from the second network.

36. (Previously Presented) The device of claim 35, wherein the device is one of a modem, cellular phone, a router, a computer, hotspot device and a tablet.

37. (Previously Presented) The device of claim 35, wherein the device is part of a home-based network system.

38. (Canceled).

39. (Previously Presented) A method for providing broadband communications services, comprising:

sending to a remote host an inquiry in whether the remote host is able to support a multilink connection;

receiving first data packets over a first connection to the Internet;

when the remote host indicates that the multilink connection is supported, receiving second data packets over a second connection, the first data packets being concurrently received with the second data packets during the multilink connection; and

wherein the first data packets create a first data stream and the second data packets create a second data stream.

40. (Previously Presented) The method of claim 39, wherein the first data packets are received at a home-based network system, and wherein the second packets are received over the second connection at the home-based network system.

41. (Previously Presented) The method of claim 39, wherein the first data packets are received by a consumer-based network system, and wherein the second packets are received over the second connection at the consumer-based network system.

42. (Previously Presented) The method of claim 39, further comprising:
during the multilink connection, receiving data packets over a plurality of wireless connections, the data packets being concurrently received with the first data packets; and
aggregating the first data packets with the data packets.

43. (Previously Presented) A method for increasing bandwidth and data throughput comprising the steps of:

sending a multilink request from a first device to a second device to join a multilink connection the first device being connected at a first location to a first network, the wireless device being connected at a second location to the first network or a second network, the second location being geographically separate from the first location; and

when the multilink request is accepted by the second device, receiving at the first device first data from the first network at the first location and during the multilink connection, concurrently receiving second data over a wireless connection from the wireless device, the second data being received at the second location from the first network or the second network.

REMARKS

Status of the Claims

Claims 17-23, 25-29, 35-37 and 39-43 are currently pending in this application. No amendments are being presented herein.

35 U.S.C. §112 Rejection

On pages 2-3 of the Office Action, claims 17-23, 25-29, 35-37 and 39-43 were rejected under 35 U.S.C. §112, first paragraph, as allegedly containing new matter for (1) “sending a multilink request from a first device to a second device to join a multilink connection” as used in claims 17, 35 and 43; and (2) “sending to a remote host an inquiry in whether the remote host is able to support a multilink connection” as used in claim 39. Both of these claim limitations are supported by the specification as detailed below.

In general, multilink connections are described over sixty times throughout the specification of the present application. Multilink connections are explained in great detail starting with paragraph 74 under the heading “Multilink PPP Connections” and continuing through paragraphs 79 of the specification of the present application. Fig. 7 of the present application illustrates multilink connections.

Support for “sending a multilink request from a first device to a second device to join a multilink connection” as used in claims 17, 35 and 43 can be found in paragraph 77 of the present application where it states (emphasis added):

... 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...

Further support is found in paragraph 78 of the present application where it states (emphasis added):

... Once a remote RCG--86 has been removed from participating in a multilink bundle--87, the initiating RCG--85 will then look up another remote RCG in its router tables that can be used to participate in the multilink PPP bundle--87, and request that the new remote RCG--86 *to join* the existing multilink bundle--87...

Therefore, there is clear support in the specification of the present application for “sending a multilink request from a first device to a second device to join a multilink connection” as used in claims 17, 35 and 43.

Support for “sending a remote host an inquiry in whether the remote host is able to support a multilink connection” as used in claim 39 can be found at the beginning of paragraph 77 of the present application where it 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. 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. ...

Link Control Protocol (LCP) as referenced in paragraph 77 of the specification of the present application is an important protocol. To those of ordinary skill in the art, it is well known that Link Control Protocol has three primary functions: (1) link configuration; (2) link maintenance; and (3) link termination. The primary concern is with link configuration, where LCP link configuration is the process of setting up and negotiating the parameters of a link. In the link establishment phase of LCP link configuration, two devices exchange information about the conditions under which the link will operate. LCP link configuration is described in more detail in Appendix A, attached hereto, from “The TCP/IP Guide” (available on the Internet). This article describes LCP link configuration as known by those of ordinary skill in the art, and provides a flowchart illustrating the different steps of this process. This flowchart includes the steps of determining whether a multilink connection can be supported. If a multilink connection is possible, “Responding Device Sends Configure-Ack Message”; otherwise, “Responder Sends Configure-Reject Message”. Therefore, there is clear support for the step of “sending a remote host an inquiry in whether the remote host is able to support a multilink connection” as in claim 39 from the specification of the present application itself, and additionally from the functionality of LCP as understood by those of ordinary skill in the art.

For these reasons, it is respectfully submitted that there is clear support in the specification of the present application for the steps founds in claims 17, 35, 39 and 43. It is therefore respectfully requested that the rejections of claims 17-23, 25-29, 35-37 and 39-43

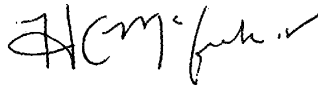
under 35 U.S.C. §112, first paragraph be reconsidered and withdrawn, and this application be forthrightly allowed.

Conclusion

All rejections in the Office Action have been properly traversed. It is respectfully requested that all outstanding rejections be reconsidered and withdrawn. It is believed that a full and complete reply has been made in response to the Office Action, and, that as such, the present patent application is in a condition for allowance.

The Examiner is always welcome to telephone the attorney of record at the telephone number provided below if such telephone discussion would help expedite the prosecution of the patent application. Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully Submitted,



Date: August 25, 2014

H C McGurk IV, Reg. No. 34,964
Attorney for Applicant

The Law Office of Clay McGurk
PO Box 1488
Orange, CA 92706

Phone: **949.395.3942**
Email: claymcgurk@gmail.com

APPENDIX A

The TCP/IP Guide

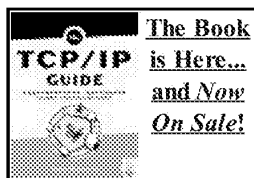
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9 TCP/IP Lower-Layer (Interface, Internet and Transport) Protocols (OSI Layers 2, 3 and 4)

9 TCP/IP Network Interface Layer (OSI Data Link Layer) Protocols

9 TCP/IP Serial Line Internet Protocol (SLIP) and Point-to-Point Protocol (PPP)

9 Point-to-Point Protocol (PPP)

9 PPP Core Protocols: Link Control, Network Control and Authentication

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PPP Core Protocols: Link
Control, Network Control and
Authentication



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PPP Network Control Protocols
(IPCP, IPXCP, NBFCP and
others)



Search

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► PPP

► TCP/IP Protocol

► Protocol

PPP Link Control Protocol (LCP)

(Page 2 of 3)

LCP Link Configuration

Link configuration is arguably the most important job that LCP does in PPP. During the *Link Establishment* phase, LCP frames are exchanged that enable the two physically-connected devices to negotiate the conditions under which the link will operate. Figure 27 shows the entire procedure, which we will now examine in detail.

The process starts with the initiating device (let's call it device A, yeah, isn't that original) creating a *Configure-Request* frame that contains a variable number of configuration options that it wants to see set up on the link. This is basically device A's "wish list" for how it wants the link created.

I want
to build
a digital
gorilla
gram that
I can send
to my
friends.

Launch on
IBM Bluemix

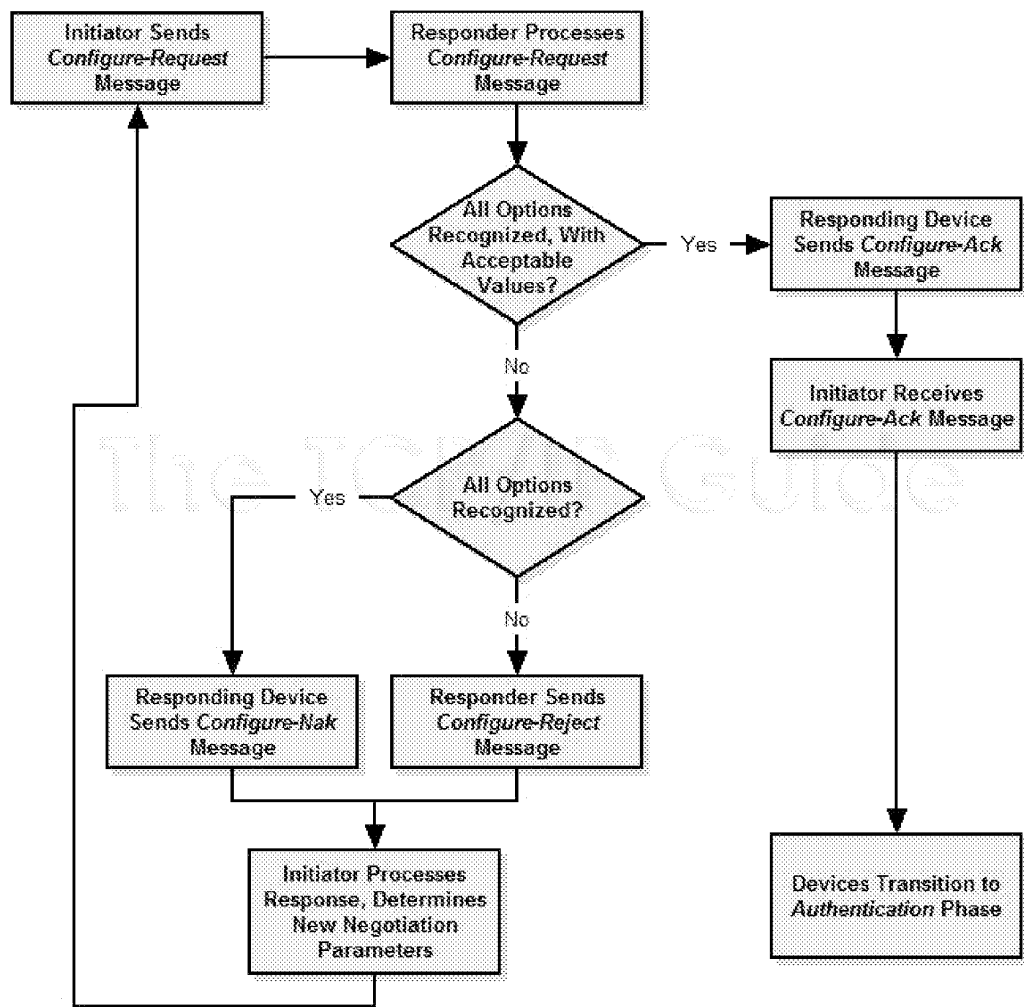
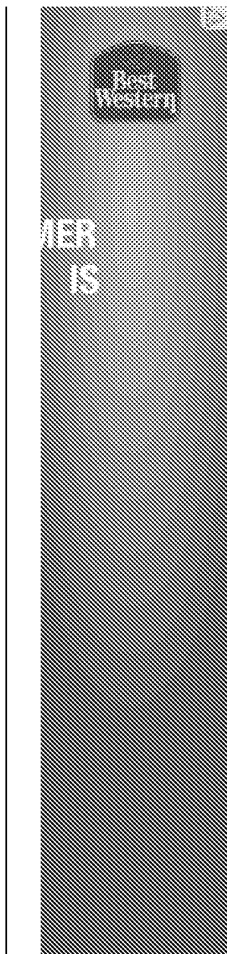


Figure 27: PPP LCP Link Configuration Process

This flowchart shows in more detail the negotiation process undertaken to configure the link by LCP. This process begins when the PPP link enters the *Link Establishment* phase. After successful configuration, the connection transitions to the Authentication phase.

The main PPP document (RFC 1661) defines a number of different configuration options that the initiator can specify in this request. Any one of these can be included and if so, filled in with the value corresponding to what device A wants for that option. If absent, this means device A is neither requesting nor specifying that option. The six options are:

- **Maximum-Receive-Unit (MRU):** Lets device A specify the maximum size datagram it wants the link to be able to carry.
- **Authentication-Protocol:** Device A can indicate the type of authentication protocol it wishes to use (if any).
- **Quality-Protocol:** If device A wants to enable quality monitoring on the link, what protocol to use (though there is only one currently defined: LQR).
- **Magic-Number:** Used to detect looped back links or other anomalies in the connection.



- **Protocol-Field-Compression:** Allows device *A* to specify that it wants to use "compressed" (8 bit) *Protocol* fields in PPP *data* frames instead of the normal 16 bit *Protocol* field. This provides a small but free savings (one byte) on each PPP frame. Note that this has nothing to do with the compression feature offered by CCP. See the PPP general frame format topic for more on this feature.
- **Address-and-Control-Field-Compression (ACFC):** The same as the option just above but used to compress the *Address* and *Control* fields, again for small bandwidth savings. Again, see the PPP general frame format topic for more.

Other options may also be added to this list by optional feature protocols. For example, [Multilink PPP](#) adds several options that must be negotiated during link setup.

The other device (let's call it say... device *B* ☺) receives the *Configure-Request* and processes it. It then has three choices of how to respond:

1. If every option in it is acceptable in every way, device *B* sends back a *Configure-Ack* ("acknowledge"). The negotiation is complete.
2. If all the options that device *A* sent are valid ones that device *B* recognizes and is capable of negotiating, but it doesn't accept the values device *A* sent, then device *B* returns a *Configure-Nak* ("negative acknowledge") frame. This [message](#) includes a copy of each configuration option that *B* found unacceptable.
3. If any of the options that *A* sent were either unrecognized by *B*, or represent ways of using the link that *B* considers not only unacceptable but not even subject to negotiation, it returns a *Configure-Reject* containing each of the objectionable options.

The difference between a *Configure-Nak* and a *Configure-Reject* is that the former is like device *B* saying "I don't accept your terms, but I'm willing to haggle", while the latter is device *B* basically saying "No way Jose". For example, if device *A* tries to request PAP as the authentication protocol but device *B* wants to use CHAP, it will send a *Configure-Nak*. If device *B* doesn't support authentication at all, it will send a *Configure-Reject*.



Note: Even after receiving a reject, device *A* can retry the negotiation with a new *Configure-Request*.



PPP Core Protocols: [Link Control](#), [Network Control](#) and [Authentication](#)



Pages

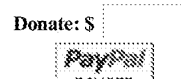
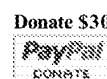
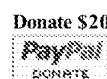
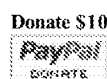
1 2 3



PPP Network Control Protocols
([IPCP](#), [IPXCP](#), [NBFCP](#) and
[others](#))



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Electronic Acknowledgement Receipt	
EFS ID:	19960863
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	25-AUG-2014
Filing Date:	22-JUN-2012
Time Stamp:	19:45:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response After Final Action	13531294_Reply_8-25-2014.pdf	2838458 d2d5cb11d3a85ff0291386a75d8b2b6f4bc e80b1	no	14

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 13/531,294		Filing Date 06/22/2012		☐ To be Mailed	
ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO									
APPLICATION AS FILED – PART I									
(Column 1)		(Column 2)							
FOR		NUMBER FILED		NUMBER EXTRA		RATE (\$)		FEE (\$)	
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A		N/A		N/A			
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A		N/A		N/A			
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A		N/A		N/A			
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =		*		X \$ =			
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =		*		X \$ =			
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))									
* If the difference in column 1 is less than zero, enter "0" in column 2.						TOTAL			
APPLICATION AS AMENDED – PART II									
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT	08/25/2014	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 20	Minus	** 21	= 0	X \$40 =		0	
	Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X \$210 =		0	
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE		0	
(Column 1)		(Column 2)		(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =			
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =			
	☐ Application Size Fee (37 CFR 1.16(s))								
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))								
						TOTAL ADD'L FEE			
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.									

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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NOTICE OF ALLOWANCE AND FEE(S) DUE

64828 7590 09/08/2014
Harold McGurk
The Law Office of Clay McGurk
P.O. BOX 1488
Orange, CA 92856

EXAMINER

CHO, HONG SOL

ART UNIT

PAPER NUMBER

2467

DATE MAILED: 09/08/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530

TITLE OF INVENTION: BROADBAND COMMUNICATIONS DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	12/08/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
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or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

64828 7590 09/08/2014
Harold McGurk
The Law Office of Clay McGurk
P.O. BOX 1488
Orange, CA 92856

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530

TITLE OF INVENTION: BROADBAND COMMUNICATIONS DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	12/08/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHO, HONG SOL	2467	370-235000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
☐ Applicant asserting small entity status. See 37 CFR 1.27
☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530
64828	7590	09/08/2014	EXAMINER	
Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856			CHO, HONG SOL	
			ART UNIT	PAPER NUMBER
			2467	
DATE MAILED: 09/08/2014				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 13/531,294	Applicant(s) DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/25/14.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 17-23,25-29,35-37,39-43. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☐ All b) ☐ Some *c) ☐ None of the:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____	6. ☐ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material	7. ☐ Other _____
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____	

/HONG CHO/ Primary Examiner, Art Unit 2467	
---	--

Issue Classification 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.	
	Examiner HONG CHO	Art Unit 2467	

CPC					
Symbol				Type	Version
H04W	88	/	16	F	2013-01-01
H04L	12	/	5692	I	2013-01-01
H04W	8	/	26	A	2013-01-01
H04W	28	/	06	A	2013-01-01
H04W	40	/	02	A	2013-01-01
H04W	72	/	04	A	2013-01-01
H04W	80	/	00	A	2013-01-01
H04W	84	/	12	A	2013-01-01
H04W	84	/	18	A	2013-01-01
		/			
		/			
		/			
		/			
		/			
		/			
		/			

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/HONG CHO/ Primary Examiner.Art Unit 2467	09/02/14	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	7

Issue Classification 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION										
CLASS			SUBCLASS			CLAIMED					NON-CLAIMED					
370			230			H	0	4	L	12 / 26 (2006.01.01)						
CROSS REFERENCE(S)						H	0	4	J	3 / 16 (2006.01.01)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)															
370	468															
							</									

NONE		Total Claims Allowed:	
		20	
(Assistant Examiner)	(Date)		
/HONG CHO/ Primary Examiner, Art Unit 2467	09/02/14	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	7

Issue Classification 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	17	17	40												
2	18	18	41												
3	19	19	42												
4	20	20	43												
5	21														
6	22														
7	23														
8	25														
9	26														
10	27														
11	28														
12	29														
13	35														
14	36														
15	37														
16	39														

NONE		Total Claims Allowed:	
		20	
(Assistant Examiner)	(Date)		
/HONG CHO/ Primary Examiner, Art Unit 2467	09/02/14	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	7

REPLY UNDER 37 C.F.R. §1.116
EXPEDITED PROCEDURE
Technology Center 2400

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.: **13/531,294** EXAMINER: Hong CHO
INVENTOR: Eric M. Delangis GROUP ART UNIT: 2467
FILED: JUNE 22, 2012 CONFIRMATION NO.: 9530
TITLE: A BROADBAND COMMUNICATIONS DEVICE
ATTORNEY NO: ED 1040

Mail Stop **AF**
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

OK TO ENTER: /H.C./

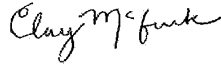
REPLY UNDER 37 C.F.R. §1.116

In response to the Office Action issued on August 21, 2014 ("Office Action"), please reconsider the above-identified application in light of the following remarks. This Reply is being submitted before November 21, 2014 via EFS-Web.

CERTIFICATE OF ELECTRONIC (EFS-WEB) TRANSMISSION

I hereby certify that this correspondence is being transmitted via the U.S. Patent Office's electronic filing system in accordance with 37 C.F.R. § 1.8(a)(1) from the **Pacific Time Zone** of the United States on the local date shown below.

Dated: August 25, 2014

By: 

Clay McGurk

MAILSTOP AF



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 9530

SERIAL NUMBER 13/531,294	FILING or 371(c) DATE 06/22/2012 RULE	CLASS 370	GROUP ART UNIT 2467	ATTORNEY DOCKET NO. ED 1040		
APPLICANTS INVENTORS Eric M. Delangis, Huntsville, AL; ** CONTINUING DATA ***** This application is a CON of 12/581,852 10/19/2009 PAT 8228801 which is a CON of 10/686,375 10/14/2003 PAT 7606156 * which claims benefit of 60/418,521 10/15/2002 (*)Data provided by applicant is not consistent with PTO records. ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 07/03/2012						
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /HONG SOL CHO/ Acknowledged Examiner's Signature		☒ Met after Allowance hc Initials	STATE OR COUNTRY AL	SHEETS DRAWINGS 9	TOTAL CLAIMS 8	INDEPENDENT CLAIMS 3
ADDRESS Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856 UNITED STATES						
TITLE BROADBAND COMMUNICATIONS DEVICE						
FILING FEE RECEIVED 740	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	59504	(370/235,230,233,363,371,374,381,433,465-468,470-474,483-486,493-495,352,395,252).cls.	US-PGPUB; USPAT	OR	OFF	2014/09/02 10:01
L2	58	L1 and multi near link with ppp	US-PGPUB; USPAT	OR	OFF	2014/09/02 10:01
L5	10	(eric near delangis).in.	US-PGPUB; USPAT	OR	OFF	2014/09/02 10:11
L6	9	((join\$3 or request\$3 or support\$3) with multi near link near connection	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/02 10:11
L7	11	((request\$3 or join\$3 or establish\$3) with multi near link with connection).clm.	US-PGPUB; USPAT	OR	OFF	2014/09/02 10:44
L8	20	((multiplex\$3 or aggregat\$3 or combin\$3) with wireless\$2 near received near (stream\$1 or flow\$1 or traffic or data or message\$1 or inforamtion or packet\$1 or frame\$1)).clm.	US-PGPUB; USPAT	OR	OFF	2014/09/02 11:09

9/ 2/ 2014 11:11:43 AM**C:\ Users\ hcho\ Documents\ EAST\ Workspaces\ 13531294.wsp**

Search Notes 	Application/Control No. 13531294	Applicant(s)/Patent Under Reexamination DELANGIS, ERIC M.
	Examiner HONG CHO	Art Unit 2467

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
370	230-235,278,282,328,338,468,477	11/26/2012	hc

SEARCH NOTES		
Search Notes	Date	Examiner
EAST text search	11/26/2012	hc
updated search	5/21/2013	hc
updated search	9/5/2013	hc
updated search	12/23/2013	hc
updated search	4/16/2014	hc
updated search	8/18/2014	hc
updated search	9/2/2014	hc

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
370	230, 468	9/2/2014	hc

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

64828 7590 09/08/2014
Harold McGurk
The Law Office of Clay McGurk
P.O. BOX 1488
Orange, CA 92856

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	06/22/2012	Eric M. Delangis	ED 1040	9530

TITLE OF INVENTION: BROADBAND COMMUNICATIONS DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	12/08/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHO, HONG SOL	2467	370-235000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

- 1 **CLAY MCGURK**
- 2 **The Law Office of Clay McGurk**
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

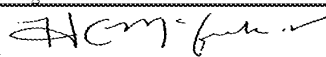
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature



Date **September 12, 2014**

Typed or printed name **H C McGurk IV**

Registration No. **34,964**

Electronic Patent Application Fee Transmittal				
Application Number:		13531294		
Filing Date:		22-Jun-2012		
Title of Invention:		BROADBAND COMMUNICATIONS DEVICE		
First Named Inventor/Applicant Name:		Eric M. Delangis		
Filer:		Harold C. McGurk		
Attorney Docket Number:		ED 1040		
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	2501	1	480	480
Publ. Fee- Early, Voluntary, or Normal	1504	1	0	0

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				480

Electronic Acknowledgement Receipt	
EFS ID:	20126175
Application Number:	13531294
International Application Number:	
Confirmation Number:	9530
Title of Invention:	BROADBAND COMMUNICATIONS DEVICE
First Named Inventor/Applicant Name:	Eric M. Delangis
Customer Number:	64828
Filer:	Harold C. McGurk
Filer Authorized By:	
Attorney Docket Number:	ED 1040
Receipt Date:	12-SEP-2014
Filing Date:	22-JUN-2012
Time Stamp:	15:39:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$480
RAM confirmation Number	1984
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Issue Fee Payment (PTO-85B)	13531294_PartB_9-12-2014.pdf	3103487 d1118db735568dbb2b27c2916a0451e77b eb0bd6	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31865 b0e2ae4c7ba81583e066277343ba0359493 156c5	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			3135352		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/531,294	10/14/2014	8861349	ED 1040	9530
64828	7590	09/24/2014		
Harold McGurk The Law Office of Clay McGurk P.O. BOX 1488 Orange, CA 92856				

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Eric M. Delangis, Huntsville, AL;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.