



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.
14/990,203	01/07/2016	Katelijjn Vleugels	0097725-001US6	3115
145584	7590	11/15/2019	EXAMINER	
Prince Lobel Tye LLP			VOLTAIRE, JEAN F	
One International Place			ART UNIT	PAPER NUMBER
Suite 3700			2466	
Boston, MA 02110			NOTIFICATION DATE	DELIVERY MODE
			11/15/2019	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):

docketing@princelobel.com

Notice of Abandonment	Application No.	Applicant(s)
	14/990,203	Vleugels et al.
	Examiner	Art Unit
	JEAN F VOLTAIRE	2466

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

This application is abandoned in view of:

1. ☐ Applicant's failure to timely file a proper reply to the Office letter mailed on _____.
 - (a) ☐ A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
 - (b) ☐ A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 to the final rejection. (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) if this is utility or plant application, a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. Note that RCEs are not permitted in design applications.)
 - (c) ☐ A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
 - (d) ☐ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
 - (a) ☐ The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
 - (b) ☐ The submitted fee of \$ _____ is insufficient. A balance of \$ _____ is due.
The issue fee required by 37CFR 1.18 is \$ _____. The publication fee, if required by 37 CFR 1.18(d), is \$ _____.
 - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
 - (a) ☐ Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
 - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record or other party authorized under 37 CFR 1.33 (b). See 37 CFR 1.138(b).
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☒ The reason(s) below:

Appellant hereby withdraws the above-referenced appeal prior to issuance of a written decision. Appellant requests immediately dismiss the appeal without any further action.

/JEAN F VOLTAIRE/ Examiner, Art Unit 2466	/FARUK HAMZA/ Supervisory Patent Examiner, Art Unit 2466
--	---

Petitions to revive under 37 CFR 1.137, or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.



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.
14/990,203	01/07/2016	Katelijjn Vleugels	0097725-001US6	3115
145584	7590	11/07/2019		
Prince Lobel Tye LLP One International Place Suite 3700 Boston, MA 02110			EXAMINER VOLTAIRE, JEAN F	
			ART UNIT 2466	PAPER NUMBER
			NOTIFICATION DATE 11/07/2019	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):

docketing@princelobel.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KATELIJN VLEUGELS et al.

Appeal 2018-004855
Application 14/990,203
Technology Center 2400

ORDER DISMISSING APPEAL

The Patent Trial and Appeal Board assumed jurisdiction of the above-identified proceeding on April 9, 2018. A document withdrawing the appeal in this proceeding was filed on November 1, 2019. See MPEP 1215.01.

Accordingly, the appeal in this application is dismissed. The application is being returned to the Examiner for further action as may be appropriate.

If there are any questions pertaining to this Order, please contact the Patent Trial and Appeal Board at 571-272-9797.

BAR/RMM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 14/990,203
Appeal No. : 2018-004855
First Named Inventor : Katelijn Vleugels
Filed : January 7, 2016
TC/A.U. : 2466
Examiner : Jean F. Voltaire

Docket No. : 0097725-001US6
Customer No. : 145584
Confirmation No. : 3115

NOTICE OF WITHDRAWAL OF APPEAL

Mail Stop
Patent Trial and Appeal Board
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Appellant hereby withdraws the above-referenced appeal prior to issuance of a written decision. Please immediately dismiss the appeal without any further action.

Appellant does not believe that any fees are due, however, the U.S. PTO is authorized to charge any required fees to Appellant's counsel's deposit account number 145584.

Respectfully submitted,

Date: November 1, 2019

By: /Brian A. Tollefson/
Brian A. Tollefson
Registration No. 46,338
Attorney for Applicant
Prince Lobel Tye LLP
One International Place
Suite 3700
Boston, MA 02110
T: (617) 456-8099
btollefson@princelobel.com

3324010-11/1/19

Electronic Acknowledgement Receipt	
EFS ID:	37632163
Application Number:	14990203
International Application Number:	
Confirmation Number:	3115
Title of Invention:	Apparatus and Method for Integrating Short-Range Wireless Personal Area Networks for a Wireless Local Area Network Infrastructure
First Named Inventor/Applicant Name:	Katelijjn Vleugels
Customer Number:	145584
Filer:	Brian A. Tollefson/Keisha Gayle-Luz
Filer Authorized By:	Brian A. Tollefson
Attorney Docket Number:	0097725-001US6
Receipt Date:	01-NOV-2019
Filing Date:	07-JAN-2016
Time Stamp:	13:41:00
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	Request to Withdraw Appeal by Appellant	14990203-Withdrawal.pdf	97198	no	1
			5d565d8d3ff91d2be96927944f7db36cdbc20d06		
Warnings:					

Information:	
Total Files Size (in bytes):	97198
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. <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.	

I hereby certify that this correspondence is being filed via
EFS-Web with the United States Patent and Trademark Office
on April 05, 2018.

Davis Wright Tremaine LLP

By: Cindy Taliva'a

PATENT
Attorney Docket No.: 0097725-001US6

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Katelijan Vleugels et al.

Application No.: 14/990,203

Filed: January 7, 2016

FOR: APPARATUS AND METHOD FOR
INTEGRATING SHORT-RANGE
WIRELESS PERSONAL AREA
NETWORKS FOR A WIRELESS LOCAL
AREA NETWORK INFRASTRUCTURE

Customer No.: 83664

Confirmation No.: 3115

Examiner: Jean F. Voltaire

Technology Center/Art Unit: 2466

APPELLANT'S REPLY BRIEF UNDER
37 C.F.R. § 41.41

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

In response to the Examiner's Answer (hereinafter the "*Answer*"), mailed February 8, 2018 and in accordance with 37 C.F.R. § 41.41, Appellant respectfully submits this Reply Brief and requests consideration of the remarks made herein.

Among other papers related to the above-cited application (hereinafter the "*Application*") that may be referenced in this Reply Brief, a Final Office Action was mailed on October 4, 2016 (hereinafter the "*Final Office Action*"), a Reply to the Final Office Action was submitted January 4, 2017 (hereinafter the "*Reply to Final Office Action*"; captioned "Amendment After Final"), an Advisory Action was mailed on January 27, 2017 (hereinafter the "*Advisory Action*"), and Appellant's Brief on Appeal was filed on October 3, 2017 (hereinafter the "*Appeal Brief*").

1. STATUS OF THE CLAIMS

Claims 1-7 are currently pending and are rejected pending this appeal. Claim 1 is the sole independent claim. A copy of Appellant's claims as currently rejected is located on pp. 11-12 of the *Appeal Brief*. A summary of the claimed subject matter is laid out in the *Appeal Brief*.

2. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claim 1 stands rejected under non-statutory type double patenting over claim 1 of U.S. Pat. No. 9,264,991. Appellant did not oppose the rejection, but will agree to filing a terminal disclaimer to overcome that rejection if the claim is otherwise allowed.

Claims 1-7 stand rejected under 35 U.S.C. § 103(a) with an assertion of unpatentability over U.S. Patent No. 6,771,933 to Eng ("*Eng*") in view of U.S. Patent Publication No. 2006/0015621 to Quinn ("*Quinn*"). Details of those rejections are laid out in the *Final Office Action* and the *Appeal Brief*.

3. ARGUMENTS IN RESPONSE TO THE ANSWER

Appellant respectfully maintains the arguments set forth in the *Appeal Brief*, which is hereby incorporated by reference in its entirety. Furthermore, Appellant respectfully submits the following arguments in response to the *Answer*.

Appellant's claim 1 is directed to a network-enabled hub wherein logic maintains at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol.

In prior arguments, Appellant has pointed out that it might not make sense, or be obvious to, combine the teachings of *Eng* and *Quinn* and the reasons therefore have been set out in prior filings. In this Reply Brief, in order to focus the arguments, Appellant will not address that point as it should be apparent that even if *Eng* and *Quinn* were somehow combined, that combination would still lack a teaching of each element of independent claim 1 and therefore the allowability of the pending claims does not turn on whether *Eng* and *Quinn* could be sensibly combined.

The parties appear to agree that *Eng* does not show the element of “...at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol” of claim 1. For example, note paragraph (2)(a)(i) of the *Answer* (“However, *Eng* appears to be silent as to the second network protocol is an overlay with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol.”).

Thus it appears that the main difference in the positions of the parties is as to whether *Quinn* discloses an overlay protocol, and more precisely, “a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol” as claimed in claim 1.

It would appear that the essence of the Examiner's argument in the *Answer* is that Quinn's use of both a wireless local area network module (WLAN) [in *Quinn*, that module is an 802.11 WLAN module] and a wireless personal area network interface (WPAN) [in *Quinn*, that module is a Bluetooth™ module]. Appellant has explained, at several points in the prosecution that neither the WLAN nor the WPAN constitute the claimed overlay network, as the recited elements of the claim are not met.

For example, Appellant has explained that the use by a device of the Bluetooth™ network protocol and the 802.11 WLAN protocol would not be a use of an overlay protocol at least because the Bluetooth™ network protocol is not an overlay protocol with respect to the WLAN network protocol nor is the WLAN network protocol an overlay protocol with respect to the Bluetooth™ network protocol. This is the case at least because neither is partially consistent with the other. This requirement is not a case of "limitations from the specification being read into the claims" as the claims have long since had the explicit recitation of "the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol."

It would appear that the Examiner's assertion is that the Bluetooth™ network protocol in *Quinn* is an overlay protocol with respect to the 801.11 WLAN protocol because *Quinn* uses a common antenna for the 801.11 WLAN communications and the WPAN protocol communications. See, *Answer*, paragraph (2)(b)(i)(2) ("...the WPAN protocol of Quinn's reference is an overlay protocol with respect to the WLAN protocol of Quinn's reference in that communications using the WPAN protocol are partially consistent with the WLAN protocol since they share a common antenna to communicate information in each respective network.")

Appellant agrees that *Quinn* shows that a WLAN module and a WPAN module can use the same antenna, such as FIG. 2 of *Quinn* showing antenna 28, WLAN module 30 and WPAN module 32 and paragraph [0018] of *Quinn* mentioning those elements. That says nothing about whether modules use protocols that are partially consistent. This point was explained in the *Reply to Final Office Action*. See, *Reply to Final Office Action*, p. 6 (“*Quinn* does not describe or suggest any particular need for making such protocols overlay protocols. It could be that *Quinn*’s multi-mode wireless switches (see item 26 in FIG. 2 of *Quinn*) internally coordinates to avoid interference, but *Quinn* does not even appear to address or comment on wireless interference. Thus, if the Examiner is to cite *Quinn* as teaching the claimed overlay protocol, the Examiner must at least point to something in *Quinn* where one network protocol is an overlay protocol with respect to another network protocol in that communications using the second network protocol are partially consistent with the first network protocol. *Quinn*’s ¶ [0020] merely shows that multiple wireless protocols could be used.”). The Examiner has now apparently taken a position that the use of a common antenna teaches the use of two protocols that are partially consistent and connections “that can be maintained, at times, simultaneously with each other” from merely the mention of a common antenna.

In prior arguments, Appellant explained the network protocols used in *Quinn* are not overlay networks in that is not a second network protocol that is partially consistent with the first network protocol. In response to the Examiner’s new argument that the use of a common antenna for two protocols makes them the claimed overlay protocols, Appellant respectfully disagrees and notes that nothing in *Quinn* indicates any particular partial consistency of protocols being used.

In view of the above, even if it were obvious to one with ordinary skill in the art at the time of invention to combine the teaching of *Quinn* with the teaching of *Eng*, there still would not be a teaching of all of the elements of the claims, because the combination of *Quinn* and *Eng* do not teach an overlay protocol, as recited in the claims. Thus, Appellant respectfully submits that the claims are allowable over *Eng* and *Quinn*.

4. CONCLUSION

For the reasons stated herein, it is respectfully submitted that the rejection under 35 U.S.C. § 103 should be reversed. If for any reason the Board finds the *Application* other than in condition for allowance, the Office is requested to call the undersigned attorney at the telephone number below to discuss the steps necessary for placing the *Application* in condition for allowance.

The Appeal Forwarding Fee required by 37 C.F.R. § 41.20(b)(4) of \$2,240 is submitted with this filing. Appellant is not requesting an oral hearing, so the 37 C.F.R. § 41.20(b)(3) fee is not required to be submitted. It is believed that no other fees are due at this time. If fees are due, the Commissioner is hereby authorized to charge such fees, or credit any overpayments to Deposit Account No. 040258.

Respectfully submitted,

Date: April 5, 2018

/Philip H. Albert/
Philip H. Albert
Reg. No. 35,819

DAVIS WRIGHT TREMAINE LLP
505 Montgomery Street, Eighth Floor
San Francisco, California 94111-6533
Tel: (415) 276-4890 Fax: (415) 276-6599
PHA/clt

Electronic Acknowledgement Receipt	
EFS ID:	32257925
Application Number:	14990203
International Application Number:	
Confirmation Number:	3115
Title of Invention:	Apparatus and Method for Integrating Short-Range Wireless Personal Area Networks for a Wireless Local Area Network Infrastructure
First Named Inventor/Applicant Name:	Katelijn Vleugels
Customer Number:	83664
Filer:	Philip H. Albert/Cindy Taliva'a
Filer Authorized By:	Philip H. Albert
Attorney Docket Number:	0097725-001US6
Receipt Date:	05-APR-2018
Filing Date:	07-JAN-2016
Time Stamp:	15:42:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$2240
RAM confirmation Number	040618INTEFSW00002072040258
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Reply Brief Filed	2018-04-05-Reply-Brief-0097725-001US6.pdf	114085	no	6
			020677ee7b8f530ff1cffb83746d4a2f837ae6a6		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31025	no	2
			43487885d474917118989525c01d9189cdf0de97		
Warnings:					
Information:					
Total Files Size (in bytes):			145110		
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.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/990,203	01/07/2016	Katelijn Vleugels	0097725-001US6	3115
83664 7590 02/08/2018 Davis Wright Tremaine LLP - SF IP Docketing Dept. Davis Wright Tremaine LLP 1201 Third Avenue, Suite 2200 Seattle, WA 98101			EXAMINER VOLTAIRE, JEAN F	
			ART UNIT 2466	PAPER NUMBER
			NOTIFICATION DATE 02/08/2018	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):

patentdocket@dwt.com



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Application Number: 14/990,203
Filing Date: January 07, 2016
Appellant(s): VLEUGELS ET AL.

Philip H. Albert
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 10/3/2017.

(1) Grounds of Rejection to be reviewed on Appeal

Every ground of rejection set forth in the Office action dated 10/04/2016 from which the appeal is taken is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(2) Response to Argument

Appellant asserts:

a. The § 103(a) rejection is deficient because each and every element of Appellant's claim 1 is not disclosed or suggested by Eng, by Quinn, or by a combination of Eng and Quinn.

i. The Examiner very kindly points out that a prima facie case of obviousness has well been established by the combination of Eng and Quinn. As stated in previous office action, the rejection of independent 1 is an obviousness rejection depending upon the combination of Eng's reference and Quinn's reference, rather than either reference taken alone. As depicted in figure 4, Eng discloses a first wireless network protocol (WLAN) and a second wireless network protocol (WPAN) such as a WLAN/M-BTAP radio that enables network connection with a Bluetooth device (enabling a second radio protocol) while supporting data flow using WLAN (first radio protocol). Moreover, figure 4 further shows how WLAN/M-BTAP maintains uplink and downlink connections between the first wireless network (WLAN) and the second wireless network (WPAN). Eng

further discloses data generated by application server 426 and Bluetooth devices is transmitted by WLAN radio as shown in figure 4. However, Eng appears to be silent as to the second network protocol is an overlay with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol. At this point, Quinn's reference, which is in similar filed of endeavor, is cited in the rejection to cure the above deficiency of Eng. As depicted in figure 2, Quinn discloses an information handling system to process information, including two wireless networking interfaces WLAN and WPAN. Peripherals interact with the handling system through wireless local area network and wireless personal area network. A multi-mode switch (26) with the wireless networking interfaces placed in a housing allocates communication between the handling system and peripherals through the wireless networks. In section (b)(i)(2) below, the Examiner will point out how the Quinn's reference cures the deficiency of Eng and why a prima facie case of obviousness has well been established by the combination of Eng and Quinn.

b. That neither reference, alone nor in combination, describes "... maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, **wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications**

using the second network protocol are partially consistent with the first network protocol” in accordance with Appellants’ claimed invention.

i. The Examiner very kindly points out that:

1) in section [(a)-i] above, the Examiner already described how WLAN/M-BTAP maintains uplink and downlink connections between the first wireless network (WLAN) and the second wireless network (WPAN).

2) that neither the claim itself nor the specification define “the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol” in a substantial matter. The specification, for example in paragraph 65, merely describes that “the use of a secondary network (WPAN) protocol that is an overlay protocol that is partially compatible with the WLAN protocol, **but not entirely, in terms of power, frame contents and sequences, timing, etc.**” i.e. not limited to only power, frame contents and sequences, timing. Therefore, as depicted in figure 2 and paragraph 18 of Quinn (secondary reference cited to cure the deficiency of Eng’s reference), a wireless local area network module 30 (WLAN) and wireless personal area network 32 (WPAN) interface share a common antenna 28 to communicate information in each respective network. In view of paragraph 65 of the instant application, the WPAN protocol of Quinn’s reference is an overlay protocol with respect to the WLAN protocol of Quinn’s reference in that

communications using the WPAN protocol are partially consistent with the WLAN protocol since they share a common antenna to communicate information in each respective network.

ii. In response to appellant's argument that "the use by a device of the Bluetooth protocol and the 802.11 WLAN protocol would not be a use of an overlay protocol because the Bluetooth network protocol is not an overlay protocol with respect to the WLAN network protocol nor is the WLAN network protocol an overlay protocol with respect to the Bluetooth network protocol. This is the case at least because neither is partially consistent with the other".

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. As stated above, the specification of the examining application describes (paragraph 65) how the WPAN protocol is an overlay protocol that is partially compatible with the WLAN protocol, but not entirely, in terms of power, frame contents and sequences, timing, etc. Since they share a common antenna to communicate information in each respective network, therefore they are partially consistent with the other as shown in figure 2 of Quinn's reference. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

c. That dependent claims 2-7 are allowable over the cited references at least due to their dependence on allowable claim 1.

i. The Examiner very kindly points out that because of the rejection for Claim 1 is met by the references cited above, the dependent Claims 2-7 are rejected for the reasons set forth above in the grounds of rejection.

DOUBLE PATENTING REJECTION

The following ground(s) of rejection is/are not presented for review on appeal because the Appellant did not oppose the rejection, but will agree to filing a Terminal Disclaimer (TD) to overcome the double patenting rejection of claim 1 if the claim is otherwise allowed.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/JEAN F VOLTAIRE/

Examiner, Art Unit 2466

Conferee:

/JAE Y LEE/

Primary Examiner, Art Unit 2466

/FARUK HAMZA/

Supervisory Patent Examiner, Art Unit 2466

Requirement to pay appeal forwarding fee. In order to avoid dismissal of the instant appeal in any application or ex parte reexamination proceeding, 37 CFR 41.45 requires payment of an appeal forwarding fee within the time permitted by 37 CFR 41.45(a), unless appellant had timely paid the fee for filing a brief required by 37 CFR 41.20(b) in effect on March 18, 2013.

/JEAN F VOLTAIRE/

Examiner, Art Unit 2466

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Katelijnn Vleugels et al.

Application No.: 14/990,203

Filed: January 7, 2016

FOR: APPARATUS AND METHOD FOR
INTEGRATING SHORT-RANGE
WIRELESS PERSONAL AREA
NETWORKS FOR A WIRELESS LOCAL
AREA NETWORK INFRASTRUCTURE

Customer No.: 83664

Confirmation No.: 3115

Examiner: Jean F. Voltaire

Technology Center/Art Unit: 2466

APPELLANT'S BRIEF UNDER
37 C.F.R. § 41.37

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

This Appeal Brief is submitted pursuant to the Notice of Appeal filed on March 3, 2017 and in support of an appeal from the final rejections set forth in a Final Office Action dated October 4, 2016 (the "Final Office Action") and Advisory Action dated January 27, 2017 (the "Advisory Action").

The remarks submitted herein pertain to the claims of record at the time of the Final Office Action. Claims 1–7 are pending in the Application, of which claim 1 is independent. Appellant submits this Brief on Appeal.

TABLE OF CONTENTS

1. REAL PARTY IN INTEREST	3
2. RELATED APPEALS AND INTERFERENCES.....	3
3. SUMMARY OF CLAIMED SUBJECT MATTER	3
4. ARGUMENTS.....	5
5. CONCLUSION.....	10
6. CLAIMS APPENDIX.....	11

(Not being needed, no Evidence Appendix or Related Proceedings Appendix was included.)

1. REAL PARTY IN INTEREST

The real party in interest is Omega Sub Holdings, Inc., 13452 E. Desert Trail, Scottsdale, Arizona 85259 (Appellant). Omega Sub Holdings, Inc. is the Assignee of the entire right, title, and interest in the subject Application (U.S. Patent Application No. 14/990,203), as indicated in an Assignment recorded on May 19, 2017 at Reel 042438, Frame 0342.

2. RELATED APPEALS AND INTERFERENCES

There are no other pending appeals by Appellant or interferences in which Appellant is involved, the outcome of which would directly affect, or have a bearing on, the decision by the Board of Patent Appeals and Interferences in this pending appeal.

3. SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's independent claim 1 is directed to a network-enabled hub. More specifically, embodiments relate to a network-enabled hub wherein logic maintains at least a first network connection using a first network protocol and a second network connection using a second network protocol.

Appellant's independent claim 1 is reproduced directly below, with parenthetical comments to indicate example portions of the specification as filed that support each claim element. The example portions are not intended to be exhaustive citations.

1. A network-enabled hub (¶¶ [0012], [0033]), usable for facilitating data communications between two or more wireless devices (¶ [0033], lines 16-19) that are configured to communicate indirectly with each other (¶¶ [0038]-[0039]), via the network-enabled hub, comprising:

an interface to a wireless radio circuit that can send and receive data wirelessly (§ [0067]),
providing the hub with bi-directional wireless data communication capability;
logic for processing data received via the wireless radio circuit (§§ [0037], [0041], [0073]);
logic for generating data to be transmitted by the wireless radio circuit (§§ [0045]-[0046],
[0081]);
logic for initiating and maintaining network connections with nodes of a wireless network
external to the network-enabled hub (§ [0067]), maintaining at least a first network
connection (§§ [0070], [0076]) using a first network protocol and a second network
connection using a second network protocol, that can be maintained, at times,
simultaneously with each other (§ [0065]), wherein the second network protocol is an
overlay protocol with respect to the first network protocol in that communications using
the second network protocol are partially consistent with the first network protocol (§
[0065], lines 18-21, 23-27); and
data forwarding logic, implemented in the network-enabled hub using hardware and/or
software, that forwards data between an originating node and a destination node,
wherein the originating node is a node in one of the first and second networks and the
destination node is a node in the other of the first and second networks (§ [0070], lines
6-10, § [0072], § [0059]).

An example of an embodiment is shown in Fig. 7 and described in §§ [0042]-[0045].
Other examples of use cases are described in §§ [0048]-[0062]. Figs. 8-9 and § [0076] illustrate
how a laptop 122 acts as a coordinator device (COORD, STA1) for communications between an
access point AP 110 using a primary wireless network (e.g., PWN 100) and a peripheral PER1

using a secondary wireless network (e.g., SWN 114). Coordination is achieved by the use of a secondary wireless network protocol that is an overlay protocol that is partially consistent with the primary wireless network protocol, but not entirely, in terms of power, frame contents and sequences, timing, etc. ¶ [0065], lines 23-26.

4. ARGUMENTS

A. Grouping of Claims

For purposes of this appeal, Appellant argues the patentability of independent claim 1 and dependent claims 2–7. No admissions are made by the groupings of claims, and Appellant reserves the right to pursue any claims that are not specifically argued in any subsequent prosecution of the present application, and in any continuation or divisional applications.

B. Rejections in Final Office Action

In the Final Office Action, the Examiner rejected claim 1 on the ground of non-statutory type double patenting rejection as being unpatentable over claim 1 of U.S. Pat. No. 9,264,991. Appellant did not oppose the rejection, but will agree to filing a Terminal Disclaimer to overcome the double patenting rejection of claim 1 if the claim is otherwise allowed.

In the Final Office Action, the Examiner rejected claims 1–7 under 35 U.S.C. § 103(a) asserting unpatentability over U.S. Patent No. 6,771,933 to Eng (“*Eng*”) in view of U.S. Patent Publication No. 2006/0015621 to Quinn (“*Quinn*”).

C. References

Eng: The Examiner cited to *Eng* as facilitating communication between a first network protocol and a second network protocol, citing to FIG. 4 of *Eng* that shows a first wireless network (WLAN) and a second wireless network (WPAN). FIG. 4 of *Eng* shows a label

“WLAN/M-BTAP” numbered 411, which are elsewhere (at column 1, lines 55-60) defined as a combination of a wireless LAN (WLAN) radio and a master Bluetooth access point radio with WLAN examples including IEEE 802.11b, IEEE 802.11a, HiperLAN, or HiperLAN2.

Eng, at column 7, lines 8-28, references FIG. 4 of *Eng* and describes how such a “WLAN/M-BTAP” might work. In their example, the master Bluetooth access point radio in WLAN/M-BTAP 411 (shown as a rectangular box) can communicate with slave Bluetooth devices 412, 413 (shown as cordless telephone handsets) using the Bluetooth network protocol, thereby forming a Bluetooth WPAN 410. WLAN/M-BTAP 411 further uses a WLAN radio to communicate with WLAN access points 423, 424 (via remote unit 104, various cabling, and other hardware not relevant here). Thus, *Eng* shows a device that communicates with Bluetooth slave devices using a Bluetooth network protocol and communicates with a LAN infrastructure using a WLAN protocol, such as an IEEE 802.11 protocol.

Quinn: The Examiner cited to *Quinn*, FIG. 3 and ¶ [0020] (Final Office Action, p. 10). *Quinn* describes a number of protocols such as the 802.11a standard operating at a frequency of 5 GHz, the 802.11b standard operating at 2.4 GHz with the Direct Sequence Spread Spectrum, the 802.11g standard (which *Quinn* incorrectly asserts is “known as Bluetooth operating at 2.4 GHz”), the Bluetooth protocol, and the Ultrawide Band standard (UWB) that uses the 3.1 to 10.6 GHz. *Quinn*’s ¶ [0020] shows that multiple wireless protocols could be used.

D. A prima facie case of obviousness has not been established because neither of the cited references disclose or suggest each element of claim 1

Appellant respectfully submits that the § 103(a) rejection is deficient because each and every element of Appellant’s claim 1 is not disclosed or suggested by *Eng*, by *Quinn*, or by a combination of *Eng* and *Quinn*.

In brief, claim 1 recites logic “...maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol” and the Examiner has failed to make a prima facie case that a combination of *Eng* and *Quinn*, even if the teachings of those references could sensibly be combined, include the claimed first network protocol and the claimed second network protocol, and discloses or suggests that they can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol. In prior arguments, Applicant has pointed out that the network protocols used in *Eng* and *Quinn* are not overlay networks in that is not a second network protocol that is partially consistent with the first network protocol.

In citing to *Eng* as facilitating communication between a first network protocol and a second network protocol, it appears that the Examiner is referring to a first wireless network (WLAN) and a second wireless network (WPAN) shown in FIG. 4 of *Eng*. As explained above, *Eng* is showing a device that operates both in a WLAN space and in a Bluetooth space.

Thus, *Eng* shows a device that communicates with Bluetooth slave devices using a Bluetooth network protocol and communicates with a LAN infrastructure using a WLAN protocol. There is a distinction between what is claimed and using a Bluetooth radio in the same space as a WLAN radio. The use by a device of the Bluetooth protocol and the 802.11 WLAN protocol would not be a use of an overlay protocol because the Bluetooth network protocol is not

an overlay protocol with respect to the WLAN network protocol nor is the WLAN network protocol an overlay protocol with respect to the Bluetooth network protocol. This is the case at least because neither is partially consistent with the other.

The Examiner had previously asserted that with respect to the specification of the instant application, and according to a broadest reasonable interpretation, the second network (WPAN) protocol, as disclosed in *Eng* and *Quinn*, is an overlay protocol that is partially consistent with the first network (WLAN) protocol but failed to present a prima facie case, or even an explanation, of how the Examiner could conclude that the Bluetooth network protocol and the WLAN network protocol are partially consistent.

Similarly, the Examiner appears to cite *Quinn*'s use of a WLAN protocol and the Bluetooth network protocol, but does not make a prima facie case that the Bluetooth network protocol and the WLAN network protocol are partially consistent, which would be required even under a broadest reasonable interpretation of claim 1.

The Examiner cites *Quinn*'s FIG. 3 and ¶ [0020], but whatever *Quinn* may show, it is not the claimed overlay protocol. *Quinn* describes a number of protocols, but *Quinn* does not describe or suggest any particular need for making such protocols overlay protocols. It could be that *Quinn*'s multi-mode wireless switches (see item 26 in FIG. 2 of *Quinn*) internally coordinate to avoid interference, but *Quinn* does not even appear to address or comment on wireless interference.

It appears that the Examiner has failed to even indicate something in *Quinn* where one network protocol is an overlay protocol with respect to another network protocol in that

communications using the second network protocol are partially consistent with the first network protocol. *Quinn*'s ¶ [0020] merely shows that multiple wireless protocols could be used.

For example, in the Final Office Action, at page 3, fifth line from the bottom, the Examiner stated that "With respect to the specification of the instant application, and according to BRI, the second network (WPAN) protocol, as disclosed in Eng and Quinn, is an overlay protocol that is partially compatible with the first network (WLAN) protocol" but does not explain how the Examiner could conclude that the Bluetooth network protocol and the WLAN network protocol are partially compatible.

The Examiner, at the end of page 3 and onto page 4 of the Final Office Action, asserted that "Quinn is also cited for showing that the WPAN protocol/second network protocol are overlay with the WLAN protocol/first network protocol in that communications using the WPAN/second network protocol are partially consistent with the WLAN/first network protocol" but again failed to note that the Bluetooth network protocol and the WLAN network protocol are in fact not at all compatible.

While this point was raised in the response to the Final Office Action, it was not addressed the Advisory Action. Appellant's position is that *Eng* does not show a first network protocol and a second network protocol that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol and *Quinn* does not make up for what *Eng* lacks.

In view of the above, even if it were obvious to one with ordinary skill in the art at the time of invention to combine the teaching of *Quinn* with the teaching of *Eng*, there still would

not be a teaching of all of the elements of the claims, because the combination of *Quinn* and *Eng* do not teach an overlay protocol, as described in the present application.

Thus, Appellant respectfully submits that the Examiner has failed to make a prima facie case for unallowability of claim 1 over *Eng* and *Quinn*. As such, Appellant respectfully requests reversal of the rejection.

E. Allowability of Claims 2-7 over the Cited References

Claims 2-7 are allowable over the cited references at least due to their dependence on allowable claim 1.

5. CONCLUSION

For the reasons stated herein, it is respectfully submitted that the rejection should be reversed. If for any reason the Board finds the Application other than in condition for allowance, the Office is requested to call the undersigned attorney at the San Francisco, California telephone number (415) 276-4890 to discuss the steps necessary for placing the Application in condition for allowance.

Respectfully submitted,

Date: October 3, 2017

/Philip H. Albert/
Philip H. Albert
Reg. No. 35,819

DAVIS WRIGHT TREMAINE LLP
505 Montgomery Street, Eighth Floor
San Francisco, California 94111-6533
Tel: (415) 276-4890 Fax: (415) 276-6599
PHA/clt

6. CLAIMS APPENDIX

1. (Rejected) A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub, comprising:

- an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability;
- logic for processing data received via the wireless radio circuit;
- logic for generating data to be transmitted by the wireless radio circuit;
- logic for initiating and maintaining network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol; and
- data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks.

2. (Rejected) The network-enabled hub of claim 1, further comprising a routing module for receiving a poll request that contains information required to unambiguously identify a station that is a node in the second network, wherein the routing module coordinates retrieval of information from the station.

3. (Rejected) The network-enabled hub of claim 1, wherein the first network connection provides a link via an access point of a wireless LAN and the second network connection provides a link to a personal area network ("PAN") serving PAN devices, such that network nodes that have access to the wireless LAN can address packets to PAN devices that are nodes on the PAN.

4. (Rejected) The network-enabled hub of claim 3, wherein the network-enabled hub is configured to accept packets from the PAN devices where the packets are addressed to network devices that are accessible only via the network-enabled hub.

5. (Rejected) The network-enabled hub of claim 3, further comprising:
at least one software module forming a software platform that allows the wireless radio circuit to connect to both the wireless LAN and the PAN; and
an operating system that enables operation of the network-enabled hub and execution of user-written application-specific application software for the network-enabled hub.

6. (Rejected) The network-enabled hub of claim 1, wherein the second network protocol is a protocol that requires lower average power consumption over time relative to the first network protocol.

7. (Rejected) The network-enabled hub of claim 1, wherein the first network protocol is an 802.11x wireless protocol and the second network protocol is a modification of the 802.11x wireless protocol that is not entirely compliant with the 802.11x wireless protocol of the first network but can be maintained in a common wireless space as the 802.11x wireless protocol.

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.

NOTICE OF APPEAL FROM THE EXAMINER TO THE PATENT TRIAL AND APPEAL BOARD		Docket Number (Optional) 0097725-001US6						
I hereby certify that this correspondence is being facsimile transmitted to the USPTO, EFS-Web transmitted to the USPTO, or deposited with the United States Postal Service with sufficient postage in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, on Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on <u>March 3, 2017</u> . Signature <u>/Philip H. Albert/</u> Typed or printed name <u>Philip H. Albert</u>	In re Application of Katelijin Vleugels et al. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Application Number 14/990,203</td> <td style="width: 50%; padding: 2px;">Filed January 7, 2016</td> </tr> <tr> <td colspan="2" style="padding: 2px;">For APPARATUS AND METHOD FOR INTEGRATING SHORT-RANGE WIRELESS PERSONAL AREA NETWORKS FOR A WIRELESS</td> </tr> <tr> <td style="padding: 2px;">Art Unit 2466</td> <td style="padding: 2px;">Examiner Jean F. Voltaire</td> </tr> </table>		Application Number 14/990,203	Filed January 7, 2016	For APPARATUS AND METHOD FOR INTEGRATING SHORT-RANGE WIRELESS PERSONAL AREA NETWORKS FOR A WIRELESS		Art Unit 2466	Examiner Jean F. Voltaire
Application Number 14/990,203	Filed January 7, 2016							
For APPARATUS AND METHOD FOR INTEGRATING SHORT-RANGE WIRELESS PERSONAL AREA NETWORKS FOR A WIRELESS								
Art Unit 2466	Examiner Jean F. Voltaire							
Applicant hereby appeals to the Patent Trial and Appeal Board from the last decision of the examiner.								
The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) \$ <u>800.00</u>								
☐ Applicant asserts small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by 50%, and the resulting fee is: \$ _____								
☐ Applicant certifies micro entity status. See 37 CFR 1.29. Therefore, the fee shown above is reduced by 75%, and the resulting fee is: \$ _____ Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.								
☐ A check in the amount of the fee is enclosed.								
☐ Payment by credit card. Form PTO-2038 is attached.								
☒ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. <u>040258</u> .								
☒ Payment made via EFS-Web.								
☒ A petition for an extension of time under 37 CFR 1.136(a) (PTO/AIA/22 or equivalent) is enclosed. For extensions of time in reexamination proceedings, see 37 CFR 1.550.								
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.								
I am the								
☐ applicant								
☒ attorney or agent of record Registration number <u>35,819</u>								
☐ attorney or agent acting under 37 CFR 1.34 Registration number _____								
Signature <u>/Philip H. Albert/</u>								
Typed or printed name <u>Philip H. Albert</u>								
Telephone Number <u>415-276-4890</u>								
Date <u>March 3, 2017</u>								
NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.								
☐ * Total of _____ forms are submitted.								

This collection of information is required by 37 CFR 41.20(b)(1) and 41.31. 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, 1.14 and 41.6. 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.

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.

Electronic Acknowledgement Receipt	
EFS ID:	28534347
Application Number:	14990203
International Application Number:	
Confirmation Number:	3115
Title of Invention:	Apparatus and Method for Integrating Short-Range Wireless Personal Area Networks for a Wireless Local Area Network Infrastructure
First Named Inventor/Applicant Name:	Katelijn Vleugels
Customer Number:	83664
Filer:	Philip H. Albert/Cindy Taliva'a
Filer Authorized By:	Philip H. Albert
Attorney Docket Number:	0097725-001US6
Receipt Date:	03-MAR-2017
Filing Date:	07-JAN-2016
Time Stamp:	19:02:52
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 600
RAM confirmation Number	030617INTEFSW00005644040258
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Notice of Appeal Filed	2017-03-03- Notice_Of_Appeal-0097725-00 1US6.pdf	237235	no	2
			2695dd9337653e6a802407a229ec839e4fb0c790		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31108	no	2
			40b9aa534ffbd2db54aa4bfe73fc3e28c18c1bb54		
Warnings:					
Information:					
Total Files Size (in bytes):			268343		
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.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/990,203	01/07/2016	Katelijn Vleugels	0097725-001US6	3115
83664 7590 01/27/2017 Davis Wright Tremaine LLP - SF IP Docketing Dept. Davis Wright Tremaine LLP 1201 Third Avenue, Suite 2200 Seattle, WA 98101			EXAMINER VOLTAIRE, JEAN F	
			ART UNIT 2466	PAPER NUMBER
			NOTIFICATION DATE 01/27/2017	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):

patentdocket@dwt.com

Advisory Action Before the Filing of an Appeal Brief	Application No. 14/990,203	Applicant(s) VLEUGELS ET AL.	
	Examiner JEAN F. VOLTAIRE	Art Unit 2466	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 on 01/04/2017 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 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:
See Continuation Sheet (PTOL-303).

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: 1-7. _____.

Claim(s) withdrawn from consideration: _____.

/JEAN F VOLTAIRE/ Examiner, Art Unit 2466	/JAE Y LEE/ Primary Examiner, Art Unit 2466
--	--

The request for reconsideration has been considered but does NOT place the application in condition of allowance:
At this time, claims 1-7 are pending and will be entered with an explanation provided below.

Regarding independent claim 1, on pages 3-5 of applicants' remarks dated December 11, 2014, the applicants state that Eng does not teach "facilitating communication between a first network protocol and a second network protocol", and "the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol" as recited in independent claim 1.

In response to applicants' remarks, the examiner respectfully disagrees. As stated in the final office action, the rejection of independent claim 1 is based upon the combination of Eng's reference and Quinn's reference, rather than either reference taken alone. Each prior art teaches portions of applicants' claimed invention. Eng is primarily cited for showing the communications between two different wireless network protocols (WLAN) and (WPAN) as depicted in figure 4. Quinn is cited to cure the deficiency of Eng. For instance, Quinn also discloses two different wireless network protocols in which the WPAN (considered as the second network) is an overlay protocol with respect to WLAN (considered as the first network). As mentioned in the final office action, independent claim 1 recites "the second network protocol (WPAN) is an overlay protocol with respect to the first network protocol (WLAN) in that communications using the second network protocol are partially consistent with the first network protocol" without further limitations describing how the WPAN protocol is overlay with the WLAN protocol. Furthermore, the specification of the instant application discloses "the secondary network (WPAN) protocol that is an overlay protocol that is partially compatible with the WLAN protocol, but not entirely" without further details how the communications using the second network protocol are partially consistent with the first network protocol. Thus, the second network (WPAN) protocol, as disclosed in both prior arts of record, is an overlay protocol that is partially compatible with the first network (WLAN) protocol. It would have been obvious to one with ordinary skill in the art at the time of invention to combine the invention of Eng with the teaching of Quinn to include the above features such as the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol in order to improve information handling system networking capacity and efficiency.

NB: The current double patenting rejection is maintained until a Terminal Disclaimer (TD) is filed.

I hereby certify that this correspondence is being filed via EFS-Web
with the United States Patent and Trademark Office

on January 4, 2017

DAVIS WRIGHT TREMAINE LLP

By: /Cindy Taliva`a/
Cindy Taliva`a

PATENT

Attorney Docket No.: 0097725-001US6

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Vleugels, Katelijn et al.

Application No.: 14/990,203

Filed: January 7, 2016

FOR: APPARATUS AND METHOD FOR
INTEGRATING SHORT-RANGE
WIRELESS PERSONAL AREA
NETWORKS FOR A WIRELESS
LOCAL AREA NETWORK
INFRASTRUCTURE

Customer No.: 83664

Confirmation No.: 3115

Examiner: Voltaire, Jean F.

Technology Center/Art Unit: 2466

AMENDMENT AFTER FINAL

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

In response to the Office Action dated October 4, 2016, please enter the following
amendments and remarks:

Amendments to the Claims are reflected in the listing of claims which begins on page 2
of this paper.

Remarks/Arguments begin on page 4 of this paper.

Amendments to the Claims:

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

Listing of Claims:

1. (Original) A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub, comprising:
 - an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability;
 - logic for processing data received via the wireless radio circuit;
 - logic for generating data to be transmitted by the wireless radio circuit;
 - logic for initiating and maintaining network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol; and
 - data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks.
2. (Previously Presented) The network-enabled hub of claim 1, further comprising a routing module for receiving a poll request that contains information required to unambiguously identify a station that is a node in the second network, wherein the routing module coordinates retrieval of information from the station.

3. (Previously Presented) The network-enabled hub of claim 1, wherein the first network connection provides a link via an access point of a wireless LAN and the second network connection provides a link to a personal area network (“PAN”) serving PAN devices, such that network nodes that have access to the wireless LAN can address packets to PAN devices that are nodes on the PAN.

4. (Previously Presented) The network-enabled hub of claim 3, wherein the network-enabled hub is configured to accept packets from the PAN devices where the packets are addressed to network devices that are accessible only via the network-enabled hub.

5. (Previously Presented) The network-enabled hub of claim 3, further comprising:

- at least one software module forming a software platform that allows the wireless radio circuit to connect to both the wireless LAN and the PAN; and
- an operating system that enables operation of the network-enabled hub and execution of user-written application-specific application software for the network-enabled hub.

6. (Previously Presented) The network-enabled hub of claim 1, wherein the second network protocol is a protocol that requires lower average power consumption over time relative to the first network protocol.

7. (Previously Presented) The network-enabled hub of claim 1, wherein the first network protocol is an 802.11x wireless protocol and the second network protocol is a modification of the 802.11x wireless protocol that is not entirely compliant with the 802.11x wireless protocol of the first network but can be maintained in a common wireless space as the 802.11x wireless protocol.

REMARKS/ARGUMENTS

Claims 1–7 are pending in the present application. In this Amendment, no claims are being amended, canceled, or added. Upon entry of this Amendment, claims 1–7 will be pending in the application, of which claim 1 is independent.

Applicant submits that the new claims are supported by the specification as originally filed, such as ¶ 0065, and therefore introduce no new matter. Reconsideration of the rejections of those pending claims is respectfully requested.

Double Patenting Rejection

Claim 1 stands rejected on the ground of non-statutory type double patenting rejection as being said to be unpatentable over claim 1 of U.S. Pat. No. 9,264,991. Following notice that the rejections under 35 U.S.C. § 103, which are addressed herein, have been withdrawn, Applicant will consider filing a Terminal Disclaimer to overcome the double patenting rejection of claim 1.

Rejections under 35 U.S.C. § 103(a)

Claims 1–7 currently stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Pat. No. 6,771,933 (“*Eng*”) in view of U.S. Pat. Pub. No. 2006/0015621 (“*Quinn*”). Applicant respectfully disagrees for the reasons presented below.

Applicant notes, and agrees with, the Examiner’s comment on page 3 of the Office Action regarding the prima facie obviousness rejections depending upon the combination of *Eng* and *Quinn* and that the rejections are not to the references taken alone. Applicant is not attempting to pick and choose portions of the references and understands that a reference is usable as a prior art reference even if it does not have all of the elements of a claim and that an obviousness case is not necessarily overcome by showing that one reference lacks some elements of the claim and another reference lacks some other elements of the claim.

Here, the Applicant’s position is that there is at least one claim element that is not found in *Eng*, and that same claim element is not found in *Quinn*, and that the same claim element is not found in a combination of the two references. A claim is not rendered obvious by references unless the combination of references suggests or discloses all of the elements of the claim.

The Examiner cited to *Eng* as facilitating communication between a first network protocol and a second network protocol, citing to FIG. 4 of *Eng* that shows a first wireless

network (WLAN) and a second wireless network (WPAN). Applicant notes that FIG. 4 of *Eng* shows a label “WLAN/M-BTAP” numbered 411, which are elsewhere (at 1:55-60) defined as a combination of a wireless LAN (WLAN) radio and a master Bluetooth access point radio (abbreviated as “M-BTAP”), with the WLAN examples including IEEE 802.11b, IEEE 802.11a, HiperLAN, or HiperLAN2. As such, the label “WLAN/M-BTAP” covers a device that operates both in a WLAN space and in a Bluetooth space.

Applicant further notes that *Eng* (at 7:8-28) references FIG. 4 of *Eng* and describes how such a “WLAN/M-BTAP” might work. In their example, the master Bluetooth access point (M-BTAP) radio in WLAN/M-BTAP 411 (shown as a rectangular box) can communicate with slave Bluetooth devices 412, 413 (shown as cordless telephone handsets) using the Bluetooth network protocol, thereby forming a Bluetooth WPAN 410. WLAN/M-BTAP 411 also uses a WLAN radio to communicate with WLAN access points 423, 424 (via remote unit 104, various cabling, and other hardware not relevant here). Thus, *Eng* shows a device that communicates with Bluetooth slave devices using a Bluetooth network protocol and communicates with a LAN infrastructure using a WLAN protocol.

Applicant notes that the pending claims are not directed towards using a Bluetooth radio in the same space as a WLAN radio. Indeed, the shortcomings of such an approach are explained in the background section of the specification of the present application. As explained there, a device that uses the Bluetooth protocol and the 802.11 WLAN protocol are not using an overlay protocol because, as previously explained, the Bluetooth network protocol is not an overlay protocol with respect to the WLAN network protocol nor is the WLAN network protocol an overlay protocol with respect to the Bluetooth network protocol. This is the case at least because neither is partially consistent with the other.

The Examiner asserted, at page 3 of the Office Action, that “With respect to the specification of the instant application, and according to BRI, the second network (WPAN) protocol, as disclosed in *Eng* and *Quinn*, is an overlay protocol that is partially compatible with the first network (WLAN) protocol” but does not explain how the Examiner could conclude that the Bluetooth network protocol and the WLAN network protocol are partially compatible.

The Examiner, at the end of page 3 and onto page 4, asserted that “*Quinn* is also cited for showing that the WPAN protocol/second network protocol are overlay with the WLAN protocol/first network protocol in that communications using the WPAN/second network

protocol are partially consistent with the WLAN/first network protocol” but again failed to note that the Bluetooth network protocol and the WLAN network protocol are in fact not at all compatible.

Just as *Eng* does not show the claimed first network protocol and second network protocol where the second network protocol is an overlay protocol with respect to the first wireless network protocol in that communications using the second network protocol are partially consistent with the first network protocol, *Quinn* also does not show that.

The Examiner cited to *Quinn*, FIG. 3 and ¶ [0020] (Office Action, p. 10), but whatever *Quinn* may show, it is not the claimed overlay protocol. *Quinn* describes a number of protocols, such as the 802.11a standard operating at a frequency of 5 GHz, the 802.11b standard operating at 2.4 GHz with the Direct Sequence Spread Spectrum, the 802.11g standard (which *Quinn* incorrectly asserts is “known as Bluetooth operating at 2.4 GHz”), the Bluetooth protocol, and the Ultrawide Band standard (UWB) that uses the frequency range of 3.1 GHz to 10.6 GHz. *Quinn* does not describe or suggest any particular need for making such protocols overlay protocols. It could be that *Quinn*’s multi-mode wireless switches (see item 26 in FIG. 2 of *Quinn*) internally coordinates to avoid interference, but *Quinn* does not even appear to address or comment on wireless interference. Thus, if the Examiner is to cite *Quinn* as teaching the claimed overlay protocol, the Examiner must at least point to something in *Quinn* where one network protocol is an overlay protocol with respect to another network protocol in that communications using the second network protocol are partially consistent with the first network protocol. *Quinn*’s ¶ [0020] merely shows that multiple wireless protocols could be used.

In view of the above, even if it were obvious to one with ordinary skill in the art at the time of invention to combine the teaching of *Quinn* with the teaching of *Eng*, there still would not be a teaching of all of the elements of the claims, because the combination of *Quinn* and *Eng* do not teach an overlay protocol, as described in the present application.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

Appl. No. 14/990,203
Amdt. dated January 4, 2017
Response to Office Action of October 4, 2016

PATENT

Further, the Commissioner is hereby authorized to charge any additional fees or credit any overpayment in connection with this paper to Deposit Account No. 04-0258.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at the number below.

Respectfully submitted,

Date: January 4, 2017

/Jon D. Cooper/
Jon D. Cooper
Reg. No. L0927

DAVIS WRIGHT TREMAINE LLP
1201 Third Avenue, Suite 2200
Seattle, Washington 98101
Tel: (206) 757-8092
Fax: (206) 757-7092

Electronic Acknowledgement Receipt	
EFS ID:	27972032
Application Number:	14990203
International Application Number:	
Confirmation Number:	3115
Title of Invention:	Apparatus and Method for Integrating Short-Range Wireless Personal Area Networks for a Wireless Local Area Network Infrastructure
First Named Inventor/Applicant Name:	Katelijjn Vleugels
Customer Number:	83664
Filer:	Jonathan David Cooper/Cindy Taliva'a
Filer Authorized By:	Jonathan David Cooper
Attorney Docket Number:	0097725-001US6
Receipt Date:	04-JAN-2017
Filing Date:	07-JAN-2016
Time Stamp:	18:11:23
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		2017-01-04- Response_To_Final_OA-00977 25-001US6.pdf	99606 71d606468f2fea5905aa0b8930c1469df46c8e99	yes	7

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Response After Final Action	1	1
	Claims	2	3
	Applicant Arguments/Remarks Made in an Amendment	4	7
Warnings:			
Information:			
Total Files Size (in bytes):		99606	
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.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/990,203	01/07/2016	Katelijn Vleugels	0097725-001US6	3115
83664 7590 10/04/2016 Davis Wright Tremaine LLP - SF IP Docketing Dept. Davis Wright Tremaine LLP 1201 Third Avenue, Suite 2200 Seattle, WA 98101			EXAMINER VOLTAIRE, JEAN F	
			ART UNIT 2466	PAPER NUMBER
			NOTIFICATION DATE 10/04/2016	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):

patentdocket@dwt.com

Office Action Summary	Application No. 14/990,203	Applicant(s) VLEUGELS ET AL.	
	Examiner JEAN F. VOLTAIRE	Art Unit 2466	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 08/24/2016.
☐ 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) 1-7 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) 1-7 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: ____.

1. The present application is being examined under the pre-AIA first to invent provisions.

Response to amendment

2. This action is responsive to communication filed on 24 August 2016.
3. Status of the claims:
 - Claims 2-7 are newly submitted.
4. Claims 1 – 7 are currently pending and have been examined.

Response to remarks/arguments

5. Applicant's remarks/arguments filed on 24 August 2016 with respect to the rejection of independent claim 1 are not persuasive and newly submitted claims 2-7 have been considered but are moot in view of the new ground(s) of rejection.
6. Regarding independent claim 1, on pages 1-2 of applicant's remarks dated 24 August 2016, the applicant states that the combination of Eng and Quinn fails to disclose "wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol." Applicants further state that Eng does not use the claimed first wireless network protocol and a second wireless network protocol that is an overlay protocol with respect to the first protocol.

7. In response to applicant's remarks dated 24 August 2016, the examiner respectfully disagrees. It is noted that the rejection of independent is a prima facie obviousness rejection depending upon the combination of Eng's reference and Quinn's reference, rather than either reference taken alone. As such, Eng is primarily cited for showing two different "wireless network protocols". As depicted in FIG. 4, Eng discloses a first wireless network protocol (WLAN) and a second wireless network protocol (WPAN) such as WLAN/M-BTAP radio that enables network connection with a Bluetooth device (enabling a second radio protocol) while supporting data flow using WLAN (first radio protocol). Moreover, independent claim 1 recites "the second network protocol is an overlay protocol with respect the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol" without further limitations. According to the specification of the instant application: "the secondary network (WPAN) protocol that is an overlay protocol that is partially compatible with the WLAN protocol, but not entirely" without further limitations describing how the WPAN protocol is overlay with the WLAN protocol. Both prior arts, Eng and Quinn, used in the current rejection of independent claim 1 disclose a WLAN (considered as the first wireless network) and a WPAN (considered as the second wireless network). With respect to the specification of the instant application, and according to BRI, the second network (WPAN) protocol, as disclosed in Eng and Quinn, is an overlay protocol that is partially compatible with the first network (WLAN) protocol. Furthermore, Quinn is also cited for showing that the WPAN protocol/second network protocol are overlay with the WLAN protocol/first network protocol in that

communications using the WPAN/second network protocol are partially consistent with the WLAN/first network protocol.

Please see the rejection below.

Double Patenting

8. 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).

9. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No.: 9,264,991 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of U.S. Patent No.: 9,264,991 B1 contains every element of claim 1 of the instant application and as such anticipate claim 1 of the instant application.

Claim Comparison Table

Instant Application 14/990,203	U.S. Patent No.: 9,264,991 B1
Claim 1. A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub,	Claim 1. A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub,

comprising: an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability; logic for processing data received via the wireless radio circuit; logic for generating data to be transmitted by the wireless radio circuit; logic for initiating and maintaining network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second	comprising: an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability; a processor configured to: process data received via the wireless radio circuit; generate data to be transmitted by the wireless radio circuit; initiate and maintain network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are
--	--

network protocol are partially consistent, with the first network protocol; and data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in of one of the first and second networks and the destination node is a node in the other of the first and second networks.	partially consistent with the first network protocol and at least some of the wireless of the communications using the second wireless network protocol impinge at least on at least some antennae used for the first wireless network ; and implement data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks.
--	---

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. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eng et al. (US-PAT-NO: 6,771,933 B1) in view of Quinn (US 2006/0015621 A1).

Regarding claim 1, Eng discloses a network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub (Eng, figure 4 and col 7, lines 8-39 explicitly teaches how a WLAN/M-BTAP facilitates data communications between two or more wireless devices), comprising:

an interface to a wireless radio circuit that can send and receive data wirelessly (Eng, col 7, lines 24-35; a WLAN radio in both first and second WLAN/M-BTAPs serves to communicate with WLAN access points), providing the hub with bi-directional wireless data communication capability (Eng, col 7, lines 34-39; a distributed antenna system effectively extends the WLAN access from back-end to the front-end of the system);

logic for processing data received via the wireless radio circuit (Eng, col 7, lines 8-39; the WLAN/M-BTAP processes received data via WLAN radio); logic for generating data to be transmitted by the wireless radio circuit (Eng, figure 4 and col 7, lines 8-39; data generated by application server 426 and Bluetooth device is transmitted by WLAN radio); logic for initiating and maintaining network connections with nodes of a wireless network external to the network-enabled hub (Eng, figure 4 and col 7, lines 8-39; the WLAN/M-BTAP can initiate and maintain network connections with nodes/Bluetooth, devices/remote and unit/server), maintaining at least a first network connection using a first network protocol (Eng, figure 4 and col 7, lines 8-39; WLAN/M-BTAP maintains network connection with a WLAN access point) and a second network connection using a second network protocol (Eng, figure 4 and col 7, lines 8-39; WLAN/M-BTAP maintains network connection with a Bluetooth device), that can be maintained, at

times, simultaneously with each other (Eng, figure 4 and col 7, lines 40-57; WLAN/M-BTAP maintains uplink and downlink between WLAN and WPAN); and data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node (Eng, figure 4 and col 7, lines 40-57; WLAN/M-BTAP forwards data between nodes in the WLAN and WPAN networks), wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks (Eng, figure 4 and col 7, lines 40-57; WLAN/M-BTAP forwards data between nodes in the WLAN and WPAN networks).

Although Eng teaches communication between a first network protocol and a second network protocol, but Eng appears to be silent as to the second network protocol is an overlay protocol with respect to the first wireless network protocol in that communications using the second network protocol are partially consistent with the first network protocol.

However, Quinn from the same or similar field of endeavor discloses wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol (Quinn, figure 3, [0020]; the WPAN protocol “second network protocol” is overlay with the WLAN protocol “first network protocol” then using the WPAN is partially consistent with the WLAN).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to combine the teaching of Quinn with the teaching of Eng by using the

above features such as the second wireless network protocol (WPAN) is overlay with the first wireless network protocol (WLAN protocol) as taught by Quinn. The motivation for doing so would be to allocate tasks between two or more wireless networks in order to improve information handling system networking capacity and efficiency as supported by Quinn (Quinn, [0007]).

Regarding claim 2, Eng and Quinn disclose the network-enabled hub of claim 1, further comprising a routing module for receiving a poll request that contains information required to unambiguously identify a station that is a node in the second network (Quinn, [0019]; which recites classification of information for allocation to a selected network is performed, for instance, with an allocation switch module 42 that assigns networks to communicate information on a task basis), wherein the routing module coordinates retrieval of information from the station (Quinn, figure 2; which recites the Multi-Mode Wireless Switch 26 coordinates the retrieval of information from the node).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to combine the teaching of Quinn with the teaching of Eng by using the above features such as a routing module for receiving a poll request as taught by Quinn. The motivation for doing so would be to allocate tasks between two or more wireless networks in order to improve information handling system networking capacity and efficiency as supported by Quinn (See paragraph 0007).

.

Regarding claim 3, Eng and Quinn disclose the network-enabled hub of claim 1, wherein the first network connection provides a link via an access point of a wireless LAN (Eng, figure 4, col 7, lines 24-28; which recites providing a link to WLAN access point) and the second network connection provides a link to a personal area network ("PAN") serving PAN devices (Eng, figure 4, col 7, lines 45-57; which recites providing a link to WPAN), such that network nodes that have access to the wireless LAN can address packets to PAN devices that are nodes on the PAN (Eng, figure 4, col 7, lines 8-57; which recites integrated module 421 has access to WLAN and devices in the WPAN).

Regarding claim 4, Eng and Quinn disclose the network-enabled hub of claim 3, wherein the network-enabled hub is configured to accept packets from the PAN devices where the packets are addressed to network devices that are accessible only via the network-enabled hub (Eng, figure 4 and col 7, lines 8-39 explicitly teaches how a WLAN/M-BTAP facilitates data communications between multiple wireless devices).

Regarding claim 5, Eng and Quinn disclose the network-enabled hub of claim 3, further comprising: at least one software module forming a software platform that allows the wireless radio circuit to connect to both the wireless LAN and the PAN (**Quinn**, [0015]; the software control logic to handle the system); and an operating system that enables operation of the network-enabled hub and execution of user-written application-specific application software for the network-enabled hub (Quinn, [0015]; the information

handling system that includes random access memory, one or more processing resources such as CPU (central processing unit)).

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to combine the teaching of Quinn with the teaching of Eng by using the above features such as enabling operation of the network-enabled hub and execution of user-written application-specific application software for the network-enabled hub into the system of Eng as taught by Quinn. The motivation for doing so would be to allocate tasks between two or more wireless networks in order to improve information handling system networking capacity and efficiency as supported by Quinn (Quinn, [0007]).

Regarding claim 6, Eng and Quinn disclose the network-enabled hub of claim 1, wherein the second network protocol is a protocol that requires lower average power consumption over time relative to the first network protocol (Eng, figure 4; which recites second network protocol (WPAN devices) requires lower power consumption compare to the first network protocol (WLAN)).

Regarding claim 7, Eng and Quinn disclose the network-enabled hub of claim 1, wherein the first network protocol is an 802.11x wireless protocol and the second network protocol is a modification of the 802.11x wireless protocol that is not entirely compliant with the 802.11x wireless protocol of the first network but can be maintained in a common wireless space as the 802.11x wireless protocol (Eng, col 1, lines 55-63; which recites a master Bluetooth access point module generally refers to a mater

Bluetooth access point radio (M-BTAP), a combination of a wireless LAN (WLAN) radio (e.g., IEEE 802.11b, IEEE 802.11a, HiperLAN, or HiperLAN2) and a master Bluetooth access point radio (WLAN/M-BTAP), or a combination of a master Bluetooth access point radio and any RF radio known in the art).

Conclusion

14. 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.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN F VOLTAIRE whose telephone number is (571)272-3953. The examiner can normally be reached on Monday-Friday, Alternate Friday, 8:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, FARUK HAMZA can be reached on (571) 272-7969. 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). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEAN F VOLTAIRE/

Examiner, Art Unit 2466

/JAE Y LEE/

Primary Examiner, Art Unit 2466

I hereby certify that this correspondence is being filed via
EFS-Web with the United States Patent and Trademark Office

PATENT
Attorney Docket No.: 0097725-001US6

on August 24, 2016

Davis Wright Tremaine LLP

By /Cindy Taliva/a/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Vleugels, Katelijn et al.

Application No.: 14/990,203

Filed: January 7, 2016

FOR: APPARATUS AND METHOD FOR
INTEGRATING SHORT-RANGE
WIRELESS PERSONAL AREA
NETWORKS FOR A WIRELESS
LOCAL AREA NETWORK
INFRASTRUCTURE

Customer No.: 83664

Confirmation No.: 3115

Examiner: VOLTAIRE, JEAN F

Technology Center/Art Unit: 2466

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

In response to the Office Action mailed February 24, 2016, please enter the following
amendments and remarks:

Amendments to the Claims begin on page 2 of this paper.

Remarks/Arguments begin on page 4 of this paper.

Amendments to the Claims:

1. (Original) A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub, comprising:
 - an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability;
 - logic for processing data received via the wireless radio circuit;
 - logic for generating data to be transmitted by the wireless radio circuit;
 - logic for initiating and maintaining network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol; and
 - data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks.
2. (New) The network-enabled hub of claim 1, further comprising a routing module for receiving a poll request that contains information required to unambiguously identify a station that is a node in the second network, wherein the routing module coordinates retrieval of information from the station.
3. (New) The network-enabled hub of claim 1, wherein the first network connection provides a link via an access point of a wireless LAN and the second network connection provides a link to a personal area network ("PAN") serving PAN devices, such that network nodes that have access to the wireless LAN can address packets to PAN devices that are nodes on the PAN.

4. **(New)** The network-enabled hub of claim 3, wherein the network-enabled hub is configured to accept packets from the PAN devices where the packets are addressed to network devices that are accessible only via the network-enabled hub.

5. **(New)** The network-enabled hub of claim 3, further comprising:
at least one software module forming a software platform that allows the wireless radio circuit to connect to both the wireless LAN and the PAN; and
an operating system that enables operation of the network-enabled hub and execution of user-written application-specific application software for the network-enabled hub.

6. **(New)** The network-enabled hub of claim 1, wherein the second network protocol is a protocol that requires lower average power consumption over time relative to the first network protocol.

7. **(New)** The network-enabled hub of claim 1, wherein the first network protocol is an 802.11x wireless protocol and the second network protocol is a modification of the 802.11x wireless protocol that is not entirely compliant with the 802.11x wireless protocol of the first network but can be maintained in a common wireless space as the 802.11x wireless protocol.

REMARKS/ARGUMENTS

Claim 1 is pending in the Application. In this Amendment, no claims are being amended, no claims are being canceled, and claims 2–7 are being added. Upon entry of this Amendment, claims 1–7 will be pending in the Application, of which claim 1 is independent.

Applicant submits that the new claims are supported by the specification as originally filed and therefore introduce no new matter. Reconsideration of the rejections of those pending claims is respectfully requested.

Double Patenting Rejection

Claim 1 stands rejected on the ground of non-statutory type double patenting rejection as being said to be unpatentable over claim 1 of U.S. Pat. No. 9,264,991.

Following notice that the rejections under 35 U.S.C. § 103, which are addressed herein, have been withdrawn, Applicant will consider filing a Terminal Disclaimer to overcome the double patenting rejection of claim 1.

Rejections under 35 U.S.C. § 103(a)

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being said to be unpatentable over U.S. Pat. No. 6,771,933 (“Eng”) and U.S. Pat. Pub. No. 2006/0015621 (“Quinn”). Applicant appreciates and takes note of the Office’s remarks; however, Applicant respectfully disagrees for the reasons presented below.

The Office Action at p. 12 correctly acknowledges that Eng fails to teach or disclose “wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol.” As best understood, Eng does not use the claimed first wireless network protocol and a second wireless network protocol that is an overlay protocol with respect to the first network protocol. Eng is directed to Bluetooth or WLAN (802.11) communications. Neither Bluetooth nor 802.11 is an overlay protocol of the other at least because those two network protocols are entirely inconsistent with each other. Communications using one of those protocols appears as noise in communications using the other of those protocols, when the communication is occurring in a common wireless space. Applicant notes that with Eng, the Bluetooth communications and the WLAN communications appear to be in separate spaces, so

partial consistency is not a concern with Eng. For example, if Eng's Fig. 4 is construed to have 802.11 communications between WLAN APs 423, 424 and integrated module 421, and WPAN devices are using Bluetooth protocols, it may well be that they are in separate spaces, separated at least by a distance over which optical fibers 110 and 111 span.

In the Office Action, it is asserted that Quinn teaches or suggests at least these features at Fig. 3 and ¶ [0020]. Applicant respectfully disagrees. The Office Action at pp. 12–13 merely cites to Quinn and recites portions of claim 1 without more:

(Quinn, figure 3, [0020]; the WPAN protocol "second network protocol" is overlay with the WLAN protocol "first network protocol" then using the WPAN is partially consistent with the WLAN).

Quinn mentions wireless network protocols such as 802.11, Ultrawide band, cellular and Bluetooth protocols, and as Applicant explained in the parent case, these are not overlay protocols at least because communications using one of those wireless network protocols is not even partially consistent with another one of those wireless network protocols. Applicant explained that the WLAN protocols and the WPAN protocols used in Eng or Quinn are not partially consistent with another. The citations to Quinn in the Office Action simply describe a device that can communicate using a WLAN protocol at some times and communicate using a WPAN protocol at other times. The WLAN protocol and the WPAN protocol in Quinn are not consistent at all with each other and there does not appear to be any suggestion in Quinn that there would need to be any consistency.

Applicant respectfully submits that the Office's proposed combination of Eng and Quinn fails to disclose all elements of Applicant's independent claim 1, and, thus respectfully submits that the Office fails to establish a *prima facie* case of obviousness. In view of the above remarks, Applicant respectfully submits that independent claim 1 is novel and nonobvious over the cited combination of Eng and Quinn. Thus, Applicant respectfully requests withdrawal of the rejection of claim 1 under 35 U.S.C. § 103(a).

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

Appl. No. 14/990,203
Amdt. dated August 24, 2016
Response to Office Action of February 24, 2016

Further, the Commissioner is hereby authorized to charge any additional fees or credit any overpayment in connection with this paper to Deposit Account No. 04-0258.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 206-757-8092.

Respectfully submitted,

Date: August 24, 2016

/Jon D. Cooper/
Jon D. Cooper
Reg. No. L0927

DAVIS WRIGHT TREMAINE LLP
1201 Third Avenue, Suite 2200
Seattle, Washington 98101
Tel: (206) 757-8092
Fax: (206) 757-7092



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.
14/990,203	01/07/2016	Katelijn Vleugels	0097725-001US6	3115
83664 7590 02/24/2016 Davis Wright Tremaine LLP - SF IP Docketing Dept. Davis Wright Tremaine LLP 1201 Third Avenue, Suite 2200 Seattle, WA 98101			EXAMINER VOLTAIRE, JEAN F	
			ART UNIT 2466	PAPER NUMBER
			NOTIFICATION DATE 02/24/2016	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):

patentdocket@dwt.com

Office Action Summary	Application No. 14/990,203	Applicant(s) VLEUGELS ET AL.	
	Examiner JEAN F. VOLTAIRE	Art Unit 2466	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 01/07/2016.
☐ 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 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 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 01/07/2016 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: ____.

1. The present application is being examined under the pre-AIA first to invent provisions.

Status of Claims

2. The following is a non-final Office action in response to the Applicant submission on received 01/07/2016.
3. Claim 1 is currently pending and has been examined.

Foreign Priority

4. No foreign priority is claimed.

Oath/Declaration

5. The applicant's oath/declaration filed on 01/07/2016 has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

Drawings

6. The applicant's drawings submitted on 01/07/2016 are acceptable for examination purposes.

Claim Rejections - 35 USC § 112

7. The following is a quotation of 35 U.S.C. 112(f):

(f) Element in Claim for a Combination. – An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The following is a quotation of pre-AIA 35 U.S.C. 112, sixth paragraph:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

CLAIM INTERPRETATION

Use of the word “means” (or “step for”) in a claim with functional language creates a rebuttable presumption that the claim element is to be treated in accordance with 35 U.S.C. § 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph). The presumption that § 112(f) (pre-AIA § 112, sixth paragraph) is invoked is rebutted when the function is recited with sufficient structure, material, or acts within the claim itself to entirely perform the recited function.

Absence of the word “means” (or “step for”) in a claim creates a rebuttable presumption that the claim element is not to be treated in accordance with 35 U.S.C. § 112(f) (pre-AIA 35 U.S.C. 112, sixth paragraph). The presumption that § 112(f) (pre-AIA § 112, sixth paragraph) is not invoked is rebutted when the claim element recites function but fails to recite sufficiently definite structure, material or acts to perform that function.

Claim elements in this application that use the word “means” (or “step for”) are presumed to invoke § 112(f) except as otherwise indicated in an Office action. Similarly, claim elements that do not use the word “means” (or “step for”) are presumed not to invoke § 112(f) except as otherwise indicated in an Office action.

In **claim 1**, claim limitation “interface providing” has been interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, because it uses/they use a generic placeholder “interface” coupled with functional language “providing the hub with bi-directional wireless data communication capability” without reciting sufficient structure to achieve the function. Furthermore, the generic placeholder is not preceded by a structural modifier.

In **claim 1**, claim limitation “logic for processing” has been interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, because it uses/they use a generic placeholder “logic” coupled with functional language “for processing data received” without reciting sufficient structure to achieve the function. Furthermore, the generic placeholder is not preceded by a structural modifier.

In **claim 1**, claim limitation “logic for generating” has been interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, because it uses/they use a generic placeholder “logic” coupled with functional language “generating data to be transmitted” without reciting sufficient structure to achieve the function. Furthermore, the generic placeholder is not preceded by a structural modifier.

In **claim 1**, claim limitation “logic for initiating” has been interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, because it uses/they use a generic placeholder “logic” coupled with functional language “initiating network connections” without reciting sufficient structure to achieve the function. Furthermore, the generic placeholder is not preceded by a structural modifier.

In **claim 1**, claim limitation “logic for maintaining” has been interpreted under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, because it uses/they use a generic placeholder “logic” coupled with functional language “maintaining network connections” without reciting sufficient structure to achieve the function. Furthermore, the generic placeholder is not preceded by a structural modifier.

Since the claim limitation(s) invokes 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, claim 1 has been interpreted to cover the corresponding structure described in the specification that achieves the claimed function, and equivalents thereof.

A review of the specification shows that the following appears to be the corresponding structure described in the specification for the 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph limitation: Figures 5, 6 and paragraph 37.

If applicant wishes to provide further explanation or dispute the examiner's interpretation of the corresponding structure, applicant must identify the corresponding structure with reference to the specification by page and line number, and to the drawing, if any, by reference characters in response to this Office action.

If applicant does not intend to have the claim limitation(s) treated under 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, applicant may amend the claim(s) so that it/they will clearly not invoke 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph, or present a sufficient showing that the claim recites/recite sufficient structure, material, or acts for performing the claimed function to preclude application of 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph.

For more information, see MPEP § 2173 *et seq.* and Supplementary Examination Guidelines for Determining Compliance With 35 U.S.C. 112 and for Treatment of Related Issues in Patent Applications, 76 FR 7162, 7167 (Feb. 9, 2011).

Double Patenting

8. 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).

9. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No.: 9,264,991 B1. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of U.S. Patent No.: 9,264,991 B1 contains every element of claim 1 of the instant application and as such anticipate claim 1 of the instant application.

Claim Comparison Table

Instant Application 14/990,203	U.S. Patent No.: 9,264,991 B1
Claim 1. A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub,	Claim 1. A network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub,

comprising: an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability; logic for processing data received via the wireless radio circuit; logic for generating data to be transmitted by the wireless radio circuit; logic for initiating and maintaining network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second	comprising: an interface to a wireless radio circuit that can send and receive data wirelessly, providing the hub with bi-directional wireless data communication capability; a processor configured to: process data received via the wireless radio circuit; generate data to be transmitted by the wireless radio circuit; initiate and maintain network connections with nodes of a wireless network external to the network-enabled hub, maintaining at least a first network connection using a first network protocol and a second network connection using a second network protocol, that can be maintained, at times, simultaneously with each other, wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are
--	--

network protocol are partially consistent, with the first network protocol; and data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in of one of the first and second networks and the destination node is a node in the other of the first and second networks.	partially consistent with the first network protocol and at least some of the wireless of the communications using the second wireless network protocol impinge at least on at least some antennae used for the first wireless network ; and implement data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node, wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks.
--	---

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. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eng et al. (US-PAT-NO: 6,771,933 B1) in view of Quinn (US 2006/0015621).

Regarding claim 1, Eng discloses a network-enabled hub, usable for facilitating data communications between two or more wireless devices that are configured to communicate indirectly with each other via the network-enabled hub (**Eng, figure 4 and col 7, lines 8-39 explicitly teaches how a WLAN/M-BTAP facilitates data communications between two or more wireless devices**), comprising:

an interface to a wireless radio circuit that can send and receive data wirelessly (**Eng, col 7, lines 24-35; a WLAN radio in both first and second WLAN/M-BTAPs serves to communicate with WLAN access points**), providing the hub with bi-directional wireless data communication capability (**Eng, col 7, lines 34-39; a distributed antenna system effectively extends the WLAN access from back-end to the front-end of the system**);

logic for processing data received via the wireless radio circuit (**Eng, col 7, lines 8-39; the WLAN/M-BTAP processes received data via WLAN radio**);

logic for generating data to be transmitted by the wireless radio circuit (**Eng, figure 4 and col 7, lines 8-39; data generated by application server 426 and Bluetooth device is transmitted by WLAN radio**);

logic for initiating and maintaining network connections with nodes of a wireless network external to the network-enabled hub (**Eng, figure 4 and col 7, lines 8-39; the WLAN/M-BTAP can initiate and maintain network connections with nodes/Bluetooth, devices/remote and unit/server**), maintaining at least a first network connection using a first network protocol (**Eng, figure 4 and col 7, lines 8-39; WLAN/M-BTAP maintains network connection with a WLAN access point**) and a

second network connection using a second network protocol (**Eng, figure 4 and col 7, lines 8-39; WLAN/M-BTAP maintains network connection with a Bluetooth device**), that can be maintained, at times, simultaneously with each other (**Eng, figure 4 and col 7, lines 40-57; WLAN/M-BTAP maintains uplink and downlink between WLAN and WPAN**); and data forwarding logic, implemented in the network-enabled hub using hardware and/or software, that forwards data between an originating node and a destination node (**Eng, figure 4 and col 7, lines 40-57; WLAN/M-BTAP forwards data between nodes in the WLAN and WPAN networks**), wherein the originating node is a node in one of the first and second networks and the destination node is a node in the other of the first and second networks (**Eng, figure 4 and col 7, lines 40-57; WLAN/M-BTAP forwards data between nodes in the WLAN and WPAN networks**).

Although Eng teaches communication between a first network protocol and a second network protocol, but Eng appears to be silent as to the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol.

However, Quinn from the same or similar field of endeavor discloses wherein the second network protocol is an overlay protocol with respect to the first network protocol in that communications using the second network protocol are partially consistent with the first network protocol (**Quinn, figure 3, [0020]; the WPAN protocol “second**

**network protocol” is overlay with the WLAN protocol “first network protocol”
then using the WPAN is partially consistent with the WLAN).**

Therefore, it would have been obvious to one with ordinary skill in the art at the time of invention to combine the teaching of Quinn with the teaching of Eng by using the above features such as the second network protocol (WPAN) is overlay with the first network protocol (WLAN protocol) as taught by Quinn. The motivation for doing so would be to allocate tasks between two or more wireless networks in order to improve information handling system networking capacity and efficiency as supported by Quinn (Quinn, [0007]).

Conclusion

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

Chow (US-PAT-NO: 6,546,253 B1), Nguyen (US-PAT-NO: 7,286,513 B2) are all cited to show systems which are considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN F VOLTAIRE whose telephone number is (571)272-3953. The examiner can normally be reached on Monday-Friday, Alternate Friday, 8:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, FARUK HAMZA can be reached on (571) 272-7969. 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). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JEAN F VOLTAIRE/

Examiner, Art Unit 2466

/JAE Y LEE/

Primary Examiner, Art Unit 2466