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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 10/28/2021

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
10/28/2021	PAPER

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.

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In re Application of	:	
Sen et al.	:	DECISION ON PETITION
Application No. 13/116,984	:	
Filed: 26 May 2011	:	
Patent No. 10,014,882	:	
Issued: 3 Jul 2018		
Docket No. D13-002		

This is a decision on the renewed petition under 37 CFR 1.78(e), filed September 27, 2021, to accept an unintentionally delayed claim under 35 U.S.C. § 120 for the benefit of priority to the prior-filed applications set forth in the concurrently filed ADS.

The petition is **GRANTED**.

A petition under 37 CFR 1.78(e) must be accompanied by:

> **(1)** the reference required by 35 U.S.C. §120 and 37 CFR 1.78(d)(2) of the prior-filed applications, unless previously submitted;
> **(2)** the petition fee set forth in § 1.17(m); and
> **(3)** a statement that the entire delay between the date the claim was due under 37 CFR 1.78(d)(3) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

Applicant previously filed a petition under 37 CFR 1.78(c) and 1.78(e) on February 13, 2015. However, the petition was dismissed in a decision mailed on March 24, 2017. The petition was dismissed because Applicant did not submit the proper reference (the ADS improperly indicated that application No. 12/328,917 was a divisional of application No. 11/621,014). Applicant filed a renewed petition on April 7, 2017. However, that petition was dismissed in a decision mailed on June 8, 2018. The petition was dismissed because Applicant made a benefit claim to provisional application No. 60/286,850, but intermediate application No. 12/328,917 did not make a claim for benefit to that provisional application. Applicant was instructed to file a petition under 37 CFR 1.78(c) in 12/328,917 to add or correct the benefit claims under 35 U.S.C. 119(e) to the prior-filed provisional application.

Applicant filed a renewed petition on February 16, 2020. However, the petition was dismissed in a decision mailed on March 19, 2020. The petition was dismissed because the amendment submitted with the petition was not proper. The amendment stated that application 11/621,014 is a divisional of "U.S. Patent 10,131,163", instead of referring to the application as an application

number. Secondly, 12/328,917 did not claim benefit of 11/621,014 or include a relationship between 11/621,014 and 10/131,163. The decision noted that a grantable petition under 37 CFR 1.78 would need to be filed in 12/328,917, along with a certificate of correction and certificate of correction fee before the petition to make this benefit claim could be granted in the instant application. In addition, the decision pointed out that the amendment did not comply with 37 CFR 1.121 because the amendment did not use strike-throughs or double brackets or underlining to show what is being changed.

Applicant filed another renewed petition on April 1, 2020. However, the petition was dismissed in a decision mailed on January 8, 2021. The decision explained that while Petitioner submitted the required statement of unintentional delay, additional information was required in this instance as the unintentionally delayed benefit claim petition was filed more than two years after the date the benefit claim was due. *See Clarification of the Practice for Requiring Additional Information in Petitions Filed in Patent Applications and Patents Based on Unintentional Delay,* 85 FR 12222 (March 2, 2020). Therefore, Petitioner must provide sufficient information of the facts and circumstances surrounding the entire delay to support a conclusion that the entire delay was unintentional. *Id* at 12223.

Applicant then filed a renewed petition on March 19, 2021. However, the petition was dismissed in a decision mailed on July 22, 2021. The decision explained that had not shown that the entire period of delay was unintentional, in particular the over 1 and ½ year period of delay in responding to the June 8, 2018 decision (a renewed petition in response was not filed until February 16, 2020).

With the instant renewed petition, Petitioner has provided a satisfactorily explanation for the entire period of delay, including the filing of the initial petition on February 13, 2015, and responding to the June 8, 2018 decision on February 16, 2020. The other requirements for a grantable petition (a properly marked up ADS identifying the applications to which benefit is sought and the petition fee) were previously satisfied with the earlier filed petitions.

Patentee is advised that this decision grants the petition to accept the unintentionally delayed domestic benefit claim to the prior filed application(s) because the petition requirements of 37 CFR 1.78(e) and the formal requirements for claiming domestic benefit (see MPEP 211.01 et. seq.) have been met. This acceptance should not be construed as meaning that this application is entitled to the benefit of the prior-filed application(s). Whether a claimed invention in a nonprovisional application is entitled to the benefit of the filing date of a prior-filed application on the basis of the disclosure thereof is determined during examination if it becomes necessary to do so (e.g., intervening reference and interference proceeding). See MPEP 211.05.

A Certificate of Correction was mailed on July 14, 2020. As such, no further action will be undertaken.

Any questions concerning this matter may be directed to Attorney Advisor Cliff Congo at (571) 272-3207.

/DOUGLAS I WOOD/
Attorney Advisor, OPET

Enc: corrected Filing Receipt

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/116,984	05/26/2011	2648	572	D13-002	20	4

CONFIRMATION NO. 6645

CORRECTED FILING RECEIPT

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

OC000000129444112

Date Mailed: 10/28/2021

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;
Steve Shattil, Cheyenne, WY;

Applicant(s)

Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;
Steve Shattil, Cheyenne, WY;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/349,097 05/27/2010
and is a CIP of 12/328,917 12/05/2008 PAT 7965761
which is a DIV of 11/621,014 01/08/2007 PAT 7593449
which is a DIV of 10/131,163 04/24/2002 PAT 7430257

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 06/09/2011
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/116,984**
Projected Publication Date: Not Applicable
Non-Publication Request: No
Early Publication Request: No
**** SMALL ENTITY ****
Title

Method and Apparatus for Fast Prototyping of Wireless Transceivers

Preliminary Class

455

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative,

this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984
Filing Date: 5/26/2011
First named Inventor: Sen
Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers
Examiner: West, Lewis G
G.A.U.: 2648
Atty. Docket No. D13-002

RENEWED PETITION FOR UNINTENTIONALLY DELAYED PRIORITY CLAIM

September 27, 2021

Mail Stop Petitions
Commissioner of Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Decision on Petitions mailed on 07/22/2021. The renewed petition under 37 CFR 1.78(c) filed on 07/22/2021 was denied. The USPTO requires additional information concerning whether a delay in seeking acceptance of a delayed benefit claim was unintentional where the petition to accept such benefit claim was filed more than two years after the date the benefit claim was due.

Applicant submits herewith a renewed petition under 37 CFR 1.78(c) and an ADS to correct the Priority Claim. The accompanying amendment was corrected to include underlining to show what is being changed and to correct typographical errors noted in the Decision mailed on

Samsung Exhibit 1092, Page 9 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

03/19/2020. A petition under 37 CFR 1.78 to correct an erroneous priority claim that was resubmitted for Appl. No. 12/328,917 on 08/26/2020 was granted on 12/29/2020.

A petition to accept an Unintentionally Delayed Domestic Benefit Claim under 37 CFR 1.78(c) is included herewith.

1) The reference required by 35 U.S.C. 119(e) and 37 CFR 1.78(a)(3) is included in an amendment to the Specification submitted herewith showing the correct priority claim. This amendment contains no new matter.
2) The surcharge set forth in 37 CFR 1.17(m) is included herewith.
3) Applicant states that the entire delay between the date the benefit claim was due and the date the benefit claim was filed was unintentional.

Additional information concerning whether the delay in seeking acceptance of a delayed benefit claim was unintentional is submitted herewith.

This letter is accompanied by a Declaration of Jonathan Hunter, Chief Executive Officer of Applicant, Department 13 LLC.

Samsung Exhibit 1092, Page 10 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

AMENDMENT TO THE SPECIFICATION

In the Specification, please REPLACE the text in Column 1, Lines 8-11 with:

"—This application is a Continuation-in-Part of U.S. Pat. Appl. No. 12/328,917, filed December 05, 2008, now U.S. Pat. No. 7,965,761, which is a Divisional of U.S. Pat. Appl. No. 11/621,014, filed January 8, 2007, now U.S. Pat. No. 7,593,449, which is a Divisional of U.S. Pat. Appl. No. 10,131,163, filed April 24, 2002, now U.S. Pat. No. 7,430,257; and this application claims priority under 35 U.S.C. 119(e) to U.S. Provisional Application Ser. No. 61/349,097, entitled "Method and Apparatus for Fast Prototyping of Wireless Transceivers," filed May 27, 2010. —"

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IPR2025-00780

ADDITIONAL INFORMATION SHOWING THAT THE DELAY IN SEEKING ACCEPTANCE OF A DELAYED BENEFIT CLAIM WAS UNINTENTIONAL

Applicant, Department 13, LLC attests that it had the authority to file the domestic benefit claim for appl. no. 13/116,984 from 5/26/2011 (the filing date of appl. no. 13/116,984) until 6/19/2020 (Declaration, par. 5). Applicant believes it had the entire right, title, and interest in the instant application upon its filing date because Applicant contends that each of the inventors had a duty to assign the instant application to Applicant (Declaration, Par. 3 and 4).

Regarding period A (the delay in reply that originally resulted in abandonment)

- Applicant attests that it became aware that the benefit claim had been unintentionally overlooked before 9/26/2011 (Declaration, par. 7).
- Applicant attests that the delay in filing the initial petition was unintentional because Applicant received regular updates from its employees on progress toward correcting the priority claim and was satisfied from these updates that everything possible was being done to correct the priority claim (Declaration, par. 8).

Regarding period B (the delay in filing a renewed petition on 2/16/2020, over 1 and ½ years after a decision dismissing a petition was mailed on 6/8/2018), Applicant attests that Applicant underwent voluntary administration and conveyed a security interest in '984 to AET (Reel/frame 045284/0587) on 3/16/2018 to satisfy its creditors (Declaration, par. 13), and that Applicant was assured that creditors' counsel was handling the matter (Declaration, par. 14). On 2/14/2020, the security interest was released by AET (Reel/frame 051825/0715) and Applicant learned that the renewed petition had not been filed, so Applicant filed the renewed petition on 2/16/2020 (Declaration, par. 15, 16).

Applicant did not deliberately abandon its benefit claim at any point during the period of 5/26/2011 to 6/19/2020. To the contrary, Applicant purchased the patents to which the instant application claims priority for the purpose of making the benefit claim.

Respectfully submitted,

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

/ Steven J. Shattil/

Steven J. Shattil, Reg. No. 40,170
P.O. Box 17355
Boulder, CO 80308-0355
(720) 234-4351

Samsung Exhibit 1092, Page 13 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

PTO/SB/14 (11-08)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

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

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Robi		Sen	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	McClean	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

Mailing Address of Applicant:

Address 1	8000 Birnam Wood Dr.		
Address 2			
City	McClean	State/Province	VA
Postal Code	22102	Country	US

Applicant 2

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ian	Charles	Starnes	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Great Falls	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

Mailing Address of Applicant:

Address 1	10143 Yroktown Dr.		
Address 2			
City	Great Falls	State/Province	VA
Postal Code	22066	Country	US

Applicant 3

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Steve		Shattil	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Cheyenne	State/Province	WY	Country of Residence	US

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Citizenship under 37 CFR 1.41(b)	US		
Mailing Address of Applicant:			
Address 1	PO Box 17355		
Address 2			
City	Boulder	**State/Province**	CO
Postal Code	80308	**Country**	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☒ **An Address is being provided for the correspondence Information of this application.**

Name 1	Steven Shattil	Name 2	
Address 1	PO Box 17355		
Address 2			
City	Boulder	State/Province	CO
Country	US	Postal Code	80308
Phone Number	7202344351	Fax Number	
Email Address	genghiscomm@gmail.com	Add Email	Remove Email

Application Information:

Title of the Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers		
Attorney Docket Number	D13-002	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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

Representative Information:

PTO/SB/14 (11-08)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	○ Customer Number	◉ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix	
	Steven		Shattil		Remove

Registration Number	40170

Additional Representative Information blocks may be generated within this form by selecting the **Add** button.

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13116984	non provisional of	61349097	2010-05-27

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13116984	Continuation in part of	12328917	2008-12-05	7965761	2011-06-21

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12328917	Division of	11621014	2007-01-08	7593449	2009-09-22

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11621014	Division of	10131163	2002-04-24	7430257	2008-09-30

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

			Remove
Application Number	Country[i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			◉ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

PTO/SB/14 (11-08)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Steven J Shattil/			Date (YYYY-MM-DD)	2020-04-01
First Name	Steven	Last Name	Shattil	Registration Number	40170

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Robi Sen, *et al.*	Docket No.: D13-002
Application No.: 13/116,984	Confirmation No.: 6645
Filed: May 26, 2011	Art Unit: 2648
For: Method and Apparatus for Fast Prototyping of Wireless Transceivers	Examiner: West, Lewis G

DECLARATION OF JONATHAN HUNTER

1. I, Jonathan Hunter, was employed at Department 13, LLC (D13) located at 6811 Benjamin Franklin Dr. Ste. 240, Columbia, Maryland 21046, as Chief Executive Officer.

2. D13 was the assignee of the present invention until 06/19/2020.

3. D13 believes the statement in the Petition Request of 03/19/2021 that D13 did not have the entire right, title, and interest in the instant application before 6/2/2012 is incorrect, because Applicants Shattil and Starnes had a duty to assign the application to D13 on the filing date.

4. D13 believes the statement in the Petition Request of 03/19/2021 that D13 did not have the entire right, title, and interest in the instant application before 12/9/2015, because Applicant Sen had a duty to assign the application to D13 on the filing date.

5. D13 had the authority to file the domestic benefit claim for appl. no. 13/116,984 from 5/26/2011 (the filing date of appl. no. 13/116,984) until 6/19/2020.

6. D13 was informed by Applicants before 9/26/2011 that a priority claim of application 13/116,984 to the chain of patent appl nos. 12/328,917; 11/621,014; 10/131,163 had been unintentionally overlooked.

7. Before 9/26/2011, upon discovering that the benefit claim had been unintentionally overlooked, D13 instructed its employees to work with outside counsel to correct the priority claim in order for appl. no. 13/116,984 to claim the priority benefit of appl. no. 10/131,163.

8. D13 received regular updates from its employees on progress toward correcting the priority claim and was satisfied from these updates that everything possible was being done to correct the priority claim, and that no conduct of D13 constituted a delay in correcting the priority claim.

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9. It was D13's understanding that Pat. No. 7.965,761, which issued from appl. no. 12/328,917, contained an error in its Related U.S. Application Data that broke the priority chain to appl. no. 10/131,163.

10. Appl. no. 12/328,917 was not owned by D13, its affiliates, or the Applicants from 5/26/2011 until 3/15/2018, so it was beyond D13's ability to correct the priority claim in Pat. No. 7.965,761 before 3/15/2018.

11. D13 purchased 12/328,917 on 3/15/2018 so it could correct its priority claim and make a grantable petition to correct the priority claim of appl. no. 13/116,984.

12. D13 did not become aware that there was a delay in filing the initial petition until the Petition Decision mailed on 01/08/2021, as D13 is unable to find any Patent Rule or Statute that requires an Assignee to file a petition that is impossible to grant due to circumstances that are beyond the Assignee's control.

13. Regarding period B, from 6/18/2018 when the second petition was dismissed to 2/16/2020 when the third petition was filed, D13 underwent voluntary administration and conveyed a security interest in '984 to AET (Reel/frame 045284/0587) on 3/16/2018 to satisfy its creditors.

14. D13 instructed its employees to work with the administrator to assist in filing the third petition, and the employees were assured that creditors' counsel was handling the matter.

15. On 2/14/2020, the security interest was released by AET, now Sargon (Reel/frame 051825/0715), and D13 learned that the third petition had not been filed.

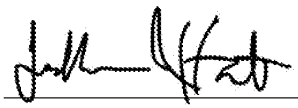
16. D13 promptly filed the third petition on 2/16/2020.

DECLARATION

As a person signing below:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date: Sept 7, 2021



Jonathan Hunter

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Electronic Acknowledgement Receipt	
EFS ID:	43878141
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	STEVEN J SHATTIL - PO BOX 17355 - BOULDER CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	27-SEP-2021
Filing Date:	26-MAY-2011
Time Stamp:	17:36:20
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	Petition for review by the Office of Petitions	D13_002_Petition_Request_corrected.pdf	102228 871f7e310270e1da3fa2ffcadb019320bbd9490b	no	5
Warnings:					
Information:					
2	Application Data Sheet	sb0014p.pdf	137732 b998b1e0a7a55fdca814625f4b7e8c0adcd25263	no	5
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Affidavit-not covered under specific rule	Declaration_p.pdf	147456 6103794bdd2cb216fe8bf5ce7c9296b3e85b07f8	no	3
Warnings:					
Information:					
		Total Files Size (in bytes):	387416		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 07/22/2021

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
07/22/2021	PAPER

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.

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

In re Application of	:	
Sen et al.	:	DECISION ON PETITION
Application No. 13/116,984	:	
Filed: 26 May 2011	:	
Patent No. 10,014,882	:	
Issued: 3 Jul 2018		
Docket No. D13-002		

This is a decision on the renewed petition under 37 CFR §§ 1.78(c) and 1.78(e), filed March 19, 2021, to accept an unintentionally delayed claim under 35 U.S.C. §§ 119(e) and 120 for the benefit of priority to the prior-filed applications set forth in the concurrently filed ADS.

The petition is **DISMISSED**.

A petition under 37 CFR §§ 1.78(c) and 1.78(e) must be accompanied by:

> **(1)** the reference required by 35 U.S.C. §§ 119(e) and 120 and 37 CFR §§ 1.78(a)(3) and 1.78(d)(2) of the prior-filed applications, unless previously submitted;
> **(2)** the petition fee set forth in § 1.17(m); and
> **(3)** a statement that the entire delay between the date the claim was due under 37 CFR §§ 1.78(a)(4) and 1.78(d)(3) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

Applicant previously filed a petition under 37 CFR 1.78(c) and 1.78(e) on February 13, 2015. However, the petition was dismissed in a decision mailed on March 24, 2017. The petition was dismissed because Applicant did not submit the proper reference (the ADS improperly indicated that application No. 12/328,917 was a divisional of application No. 11/621,014). Applicant filed a renewed petition on April 7, 2017. However, that petition was dismissed in a decision mailed on June 8, 2018. The petition was dismissed because Applicant made a benefit claim to provisional application No. 60/286,850, but intermediate application No. 12/328,917 did not make a claim for benefit to that provisional application. Applicant was instructed to file a petition under 37 CFR 1.78(c) in 12/328,917 to add or correct the benefit claims under 35 U.S.C. 119(e) to the prior-filed provisional application.

Applicant filed a renewed petition on February 16, 2020. However, the petition was dismissed in a decision mailed on March 19, 2020. The petition was dismissed because the amendment

submitted with the petition was not proper. The amendment stated that application 11/621,014 is a divisional of "U.S. Patent 10,131,163", instead of referring to the application as an application number. Secondly, 12/328,917 did not claim benefit of 11/621,014 or include a relationship between 11/621,014 and 10/131,163. The decision noted that a grantable petition under 37 CFR 1.78 would need to be filed in 12/328,917, along with a certificate of correction and certificate of correction fee before the petition to make this benefit claim could be granted in the instant application. In addition, the decision pointed out that the amendment did not comply with 37 CFR 1.121 because the amendment did not use strike-throughs or double brackets or underlining to show what is being changed.

Applicant filed another renewed petition on April 1, 2020. However, the petition was dismissed in a decision mailed on January 8, 2021. The decision explained that while Petitioner submitted the required statement of unintentional delay, additional information was required in this instance as the unintentionally delayed benefit claim petition was filed more than two years after the date the benefit claim was due. *See Clarification of the Practice for Requiring Additional Information in Petitions Filed in Patent Applications and Patents Based on Unintentional Delay,* 85 FR 12222 (March 2, 2020). Therefore, Petitioner must provide sufficient information of the facts and circumstances surrounding the entire delay to support a conclusion that the entire delay was unintentional. *Id* at 12223.

MPEP § 711.03(c)(II)(D) states, in pertinent part:

> There are three periods to be considered during the evaluation of a petition under 37 CFR 1.137:
>
> (A) the delay in reply that originally resulted in the abandonment;
>
> (B) the delay in filing an initial petition pursuant to 37 CFR 1.137 to revive the application; and
>
> (C) the delay in filing a grantable petition pursuant to 37 CFR 1.137 to revive the application.
>
> As discussed above, the abandonment of an application is considered to be a deliberately chosen course of action, and the resulting delay cannot be considered as "unintentional" within the meaning of 37 CFR 1.137, where the applicant deliberately permits the application to become abandoned. See *Application of G*, 11 USPQ2d at 1380. Likewise, where the applicant deliberately chooses not to seek or persist in seeking the revival of an abandoned application, or where the applicant deliberately chooses to delay seeking the revival of an abandoned application, the resulting delay in seeking revival of the abandoned application cannot be considered as "unintentional" within the meaning of 37 CFR 1.137.

The same analysis will be applied to the instant petition under 37 CFR 1.78.

With regard to period (A) above, petitioner has not provided an adequate explanation as to when it was determined that the benefit claim had been delayed and explained any delay in filing the initial petition after discovering that the benefit claim had been delayed. With the instant renewed petition, Petitioner has not explained when it was discovered that the benefit claim was not timely submitted. Such information must be provided on renewed petition. In addition, Petitioner's statement that the entire delay before the filing of the first petition is irrelevant is incorrect – whichever party had the right to prosecute the application at that time should explain the delay. It is noted that petitioner states that "the entire delay at least between the assignment date 6/2/2012 and the filing of the first petition on 2/13/2015 was unintentional." Petitioner must provide an adequate explanation, however, that the *entire* delay was unintentional.

Additionally, with regard to period (B) above, petitioner has not explained the delay in filing a renewed petition on February 16, 2020, over 1 and ½ years after a decision dismissing a petition was mailed June 8, 2018.

When addressing the delay, petitioner is reminded that an intentional course of action is not rendered unintentional when, upon reconsideration, the petitioner changes his or her mind as to the course of action that should have been taken. *See In re Maldague*, 10 USPQ2d 1477, 1478 (Comm'r Pat. 1988). Petitioner's failure to carry the burden of proof to establish that the "entire" delay was "unintentional" may lead to the denial of a petition under 37 CFR 1.78, regardless of the circumstances that originally resulted in the failure to timely submit the domestic benefit claim.

Petitioner should note that the party whose delay is relevant is the party having the right or authority to file the domestic benefit claim in the above-identified application. When the applicant assigns the entire right, title, and interest in an invention to a third party (and thus does not retain any legal or equitable interest in the invention), the applicant's delay is irrelevant in evaluating whether the delay was unintentional. *See Kim v. Quigg*, 718 F. Supp. 1280, 1284, 12 USPQ2d 1604, 1607-08 (E.D. Va. 1989). *See* MPEP 711.03(c)(II)(C)-(F) for additional guidance on the information required to establish that the entire delay was unintentional.

Further correspondence with respect to this matter should be delivered through one of the following mediums:

By mail:	Mail Stop PETITIONS Commissioner for Patents Post Office Box 1450 Alexandria, VA 22313-1450
By fax:	(571) 273-8300 ATTN: Office of Petitions
By internet:	EFS-Web

Any questions concerning this matter may be directed to Attorney Advisor Cliff Congo at (571) 272-3207.

/DOUGLAS I WOOD/
Attorney Advisor, OPET

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984
Filing Date: 5/26/2011
First named Inventor: Sen
Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers
Examiner: West, Lewis G
G.A.U.: 2648
Atty. Docket No. D13-002

RENEWED PETITION FOR UNINTENTIONALLY DELAYED PRIORITY CLAIM

March 19, 2021

Mail Stop Petitions
Commissioner of Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Decision on Petitions mailed on 01/08/2021. The renewed petition under 37 CFR 1.78(c) filed on 04/01/2020 was denied. The USPTO requires additional information concerning whether a delay in seeking acceptance of a delayed benefit claim was unintentional where the petition to accept such benefit claim was filed more than two years after the date the benefit claim was due.

Applicant submits herewith a renewed petition under 37 CFR 1.78(c) and an ADS to correct the Priority Claim. The accompanying amendment was corrected to include underlining to show what is being changed and to correct typographical errors noted in the Decision mailed on

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03/19/2020. A petition under 37 CFR 1.78 to correct an erroneous priority claim that was resubmitted for Appl. No. 12/328,917 on 08/26/2020 was granted on 12/29/2020.

A petition to accept an Unintentionally Delayed Domestic Benefit Claim under 37 CFR 1.78(c) is included herewith.

1) The reference required by 35 U.S.C. 119(e) and 37 CFR 1.78(a)(3) is included in an amendment to the Specification submitted herewith showing the correct priority claim. This amendment contains no new matter.
2) The surcharge set forth in 37 CFR 1.17(m) is included herewith.
3) Applicant states that the entire delay between the date the benefit claim was due and the date the benefit claim was filed was unintentional.

Additional information concerning whether the delay in seeking acceptance of a delayed benefit claim was unintentional is submitted herewith.

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IPR2025-00780

AMENDMENT TO THE SPECIFICATION

In the Specification, please REPLACE the text in Column 1, Lines 8-11 with:

"—This application is a Continuation-in-Part of U.S. Pat. Appl. No. 12/328,917, filed December 05, 2008, now U.S. Pat. No. 7,965,761, which is a Divisional of U.S. Pat. Appl. No. 11/621,014, filed January 8, 2007, now U.S. Pat. No. 7,593,449, which is a Divisional of U.S. Pat. Appl. No. 10,131,163, filed April 24, 2002, now U.S. Pat. No. 7,430,257; and this application claims priority under 35 U.S.C. 119(e) to U.S. Provisional Application Ser. No. 61/349,097, entitled "Method and Apparatus for Fast Prototyping of Wireless Transceivers," filed May 27, 2010. —"

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ADDITIONAL INFORMATION SHOWING THAT THE DELAY IN SEEKING ACCEPTANCE OF A DELAYED BENEFIT CLAIM WAS UNINTENTIONAL

On 5/26/2011, Applicants Ian Starnes, Robi Sen, and Steve Shattil filed the instant application, 13/116,984 ('984).
On 6/21/2011, Application 12/328,917 ('917) issued as U.S. 7965761.
9/26/2011 is the 37 CFR 1.78 due date for filing the reference required by 35 U.S.C. 120.

Applicants sought to claim priority to '917 before the 37 CFR 1.78 due date.

The delay resulted from '917 having an incorrect priority claim when it issued as U.S. 7965761. The priority claim of '917 needed to be corrected in order to have an unbroken chain of priority to Application 10/131,163 ('163). Specifically, '917 was filed as a DIV of 11/621,014 ('014), which is a DIV of '163. An error by the USPTO omitted the reference to '014, which broke the priority chain to '163.

The issue was complicated by the fact that '917 was owned by a different party. However, Applicant Steve Shattil, who is the sole inventor of '917, had retained the right to file continuation-in-part applications that claim priority to '917.

The issue was further complicated by the fact that the owner of '917 was unresponsive to Applicant. Since the ownership of '917 had changed hands several times, and the assignment records listed an anonymous shell company, the true owner of '917 was unknown to Applicant. So Applicant diligently pursued numerous schemes to discover the identity and contact the owner, including contacting multiple law firms who represented the owner, contacting the registered agent, probing for information from previous assignees, counsel, and brokers of '917 and other assets assigned to the owner, contacting inventors of other patents owned by the owner, contacting state regulators, employing proxies to attempt to contact the owner, and so on. Eventually, one of these schemes proved successful, and resulted in the purchase of '917 and subsequent correction of its priority claim.

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Both Department 13 and the Applicants worked diligently and continuously for the entire period from before the 37 CFR 1.78 due date for filing the reference required by 35 U.S.C. 120 up to (and past) the petition date, in order to effect the claim of priority to '163 via '917. At no time did the petitioner change their mind as to the course of action to be taken. Thus, the entire delay was unintentional.

On 6/2/2012, Applicants Starnes and Shattil assigned '984 to Department 13 (Reel/frame 036957/0719). However, Department 13 did not have the entire right, title, and interest in the instant application until 12/9/2015, when Applicant Sen assigned '984 to Department 13.

Also, Department 13 did not have the right to make a claim of priority to '917, as this right was not conveyed in Applicant Shattil's assignment (Reel/frame 036957/0719). Thus, Department 13 did not have the right or authority to make the petition for the priority claim to '917 before the petition date 02/13/2015. Thus, the entire delay between the due date for filing the required reference and the petition date was unintentional.

In summary,

1) Department 13 could not make a valid priority claim to '163 before '917 was corrected. This required cooperation from '917's owner or control of '917, neither of which Department 13 had.

2) Department 13 did not have the entire right, title, and interest in the instant application before the first petition was filed.

3) Department 13 did not have the right to make a claim of priority to '917 before the petition was filed.

MPEP 711.03(c)II(E) states,

> "*The question under 37 CFR 1.137 is whether the delay on the part of the party having the right or authority to reply to avoid abandonment (or not reply) was unavoidable or unintentional. When the applicant assigns the entire right, title, and interest in an invention to a third party (and thus does not retain any legal or equitable interest in the*

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invention), the applicant's delay is irrelevant in evaluating whether the delay was unavoidable or even unintentional."

The period between the filing date of the instant application (5/26/2011) and the assignment of the instant application (6/2/2012) by Applicants Starnes and Shattil to Department 13 is irrelevant in evaluating whether Department 13's delay was unintentional because Department 13 did not have the entire right, title, and interest in the instant application before 6/2/2012.

Furthermore, Department 13 did not have the entire right, title, and interest in the instant application before 12/9/2015, when Applicant Sen assigned the instant application to Department 13. There had been a dispute between Applicant Sen and Department 13 as to who owned the instant application, so there was ambiguity as to which party had the right or authority to file the petition. For at least this reason, the entire delay before the filing of the first petition on 2/13/2015 is irrelevant in evaluating whether the delay was unintentional.

Furthermore, Applicant Shattil owned the right to claim priority to '917, but Shattil's assignment of '984 to Department 13 did not include this right. Shattil and Department 13 did not come to an agreement concerning the necessary rights before 2/13/2015. So Department 13 did not have the right or authority to make the petition for the priority claim to '917 before the petition date. Thus, the entire delay at least between the assignment date 6/2/2012 and the filing of the first petition on 2/13/2015 was unintentional.

Respectfully submitted,

/ Steven J. Shattil/

Steven J. Shattil, Reg. No. 40,170
P.O. Box 17355
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Samsung Exhibit 1092, Page 34 of 507
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

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

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Robi		Sen	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	McClean	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

Mailing Address of Applicant:

Address 1	8000 Birnam Wood Dr.		
Address 2			
City	McClean	State/Province	VA
Postal Code	22102	Country	US

Applicant 2

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ian	Charles	Starnes	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Great Falls	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

Mailing Address of Applicant:

Address 1	10143 Yroktown Dr.		
Address 2			
City	Great Falls	State/Province	VA
Postal Code	22066	Country	US

Applicant 3

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Steve		Shattil	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Cheyenne	State/Province	WY	Country of Residence	US

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Citizenship under 37 CFR 1.41(b)	US		
Mailing Address of Applicant:			
Address 1	PO Box 17355		
Address 2			
City	Boulder	**State/Province**	CO
Postal Code	80308	**Country**	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☒ **An Address is being provided for the correspondence Information of this application.**

Name 1	Steven Shattil	Name 2	
Address 1	PO Box 17355		
Address 2			
City	Boulder	State/Province	CO
Country	US	Postal Code	80308
Phone Number	7202344351	Fax Number	
Email Address	genghiscomm@gmail.com	Add Email	Remove Email

Application Information:

Title of the Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers		
Attorney Docket Number	D13-002	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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

Representative Information:

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	○ Customer Number	◉ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix	
	Steven		Shattil		Remove

Registration Number	40170

Additional Representative Information blocks may be generated within this form by selecting the **Add** button.

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13116984	non provisional of	61349097	2010-05-27

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13116984	Continuation in part of	12328917	2008-12-05	7965761	2011-06-21

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12328917	Division of	11621014	2007-01-08	7593449	2009-09-22

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11621014	Division of	10131163	2002-04-24	7430257	2008-09-30

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

			Remove
Application Number	Country[i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			◉ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Steven J Shattil/			Date (YYYY-MM-DD)	2020-04-01
First Name	Steven	Last Name	Shattil	Registration Number	40170

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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.**

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	42231941
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	STEVEN J SHATTIL - PO BOX 17355 - BOULDER CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	19-MAR-2021
Filing Date:	26-MAY-2011
Time Stamp:	16:00:01
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	Petition for review by the Office of Petitions	D13_002_Petition_Request_03_19_2021.pdf	125053 826660e299ff4cdb033417ac7f5a44791a3dad8f	no	6
Warnings:					
Information:					
2	Application Data Sheet	sb0014p.pdf	137732 b998b1e0a7a55fdca814625f4b7e8c0adcd25263	no	5
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
		Total Files Size (in bytes):	262785		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 01/08/2021

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
01/08/2021	PAPER

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.

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

In re Application of	:	
Sen et al.	:	DECISION ON PETITION
Application No. 13/116,984	:	
Filed: 26 May 2011	:	
Patent No. 10,014,882	:	
Issued: 3 Jul 2018		
Docket No. D13-002		

This is a decision on the renewed petition under 37 CFR §§ 1.78(c) and 1.78(e), filed April 1, 2020, to accept an unintentionally delayed claim under 35 U.S.C. §§ 119(e) and 120 for the benefit of priority to the prior-filed applications set forth in the concurrently filed ADS.

The petition under 37 CFR 1.78(c) and 37 CFR 1.78(e) is **DISMISSED.**

A petition under 37 CFR 1.78(c) and 1.78(e) must be accompanied by:

> (1) the reference required by 35 U.S.C. §§ 119(e) and 120 and 37 CFR §§ 1.78(a)(3) and 1.78(d)(2) of the prior-filed applications, unless previously submitted;
> (2) the petition fee set forth in § 1.17(m); and
> (3) a statement that the entire delay between the date the claim was due under 37 CFR §§ 1.78(a)(4) and 1.78(d)(3) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

Applicant previously filed a petition under 37 CFR 1.78(c) and 1.78(e) on February 13, 2015. However, the petition was dismissed in a decision mailed on March 24, 2017. The petition was dismissed because Applicant did not submit the proper reference (the ADS improperly indicated that application No. 12/328,917 was a divisional of application No. 11/621,014). Applicant filed a renewed petition on April 7, 2017. However, that petition was dismissed in a decision mailed on June 8, 2018. The petition was dismissed because Applicant made a benefit claim to provisional application No. 60/286,850, but intermediate application No. 12/328,917 did not make a claim for benefit to that provisional application. Applicant was instructed to file a petition under 37 CFR 1.78(c) in 12/328,917 to add or correct the benefit claims under 35 U.S.C. 119(e) to the prior-filed provisional application.

Applicant filed a renewed petition on February 16, 2020. However, the petition was dismissed in a decision mailed on March 19, 2020. The petition was dismissed because the amendment submitted with the petition was not proper. The amendment stated that application 11/621,014 is a divisional of "U.S. Patent 10,131,163", instead of referring to the application as an application number. Secondly, 12/328,917 did not claim benefit of 11/621,014 or include a relationship between 11/621,014 and 10/131,163. The decision noted that a grantable petition under 37 CFR 1.78 would need to be filed in 12/328,917, along with a certificate of correction and certificate of correction fee before the petition to make this benefit claim could be granted in the instant application. In addition, the decision pointed out that the amendment did not comply with 37 CFR 1.121 because the amendment did not use strike-throughs or double brackets or underlining to show what is being changed.

The petition does not satisfy item (3) above. Petitioner has submitted the required statement of unintentional delay. However, the Director may require additional information where there is a question whether the delay was unintentional.

The USPTO requires additional information concerning whether a delay in seeking acceptance of a delayed benefit claim was unintentional where the petition to accept such benefit claim was filed more than two years after the date the benefit claim was due. See *Clarification of the Practice for Requiring Additional Information in Petitions Filed in Patent Applications and Patents Based on Unintentional Delay*, 85 FR 12222 (March 2, 2020).

In this instance, the petition under 37 CFR 1.78 was filed more than two years after the date the benefit claim was due. Therefore, applicant must provide sufficient information of the facts and circumstances surrounding the entire delay to support a conclusion that the entire delay was unintentional. *Id.* at 12223.

When addressing the delay, petitioner is reminded that an intentional course of action is not rendered unintentional when, upon reconsideration, the petitioner changes his or her mind as to the course of action that should have been taken. *See In re Maldague*, 10 USPQ2d 1477, 1478 (Comm'r Pat. 1988). Petitioner's failure to carry the burden of proof to establish that the "entire" delay was "unintentional" may lead to the denial of a petition under 37 CFR 1.78, regardless of the circumstances that originally resulted in the failure to timely submit the domestic benefit claim.

Petitioner should note that the party whose delay is relevant is the party having the right or authority to file the domestic benefit claim in the above-identified application. When the applicant assigns the entire right, title, and interest in an invention to a third party (and thus does not retain any legal or equitable interest in the invention), the applicant's delay is irrelevant in evaluating whether the delay was unintentional. *See Kim v. Quigg*, 718 F. Supp. 1280, 1284, 12 USPQ2d 1604, 1607-08 (E.D. Va. 1989). *See* MPEP 711.03(c)(II)(C)-(F) for additional guidance on the information required to establish that the entire delay was unintentional.

If reconsideration of this decision is desired, a renewed petition under 37 CFR 1.78(c) is required. No further petition fee is due on renewed petition.

Further correspondence with respect to this matter should be delivered through one of the following mediums:

By mail:	Mail Stop PETITIONS Commissioner for Patents Post Office Box 1450 Alexandria, VA 22313-1450
By fax:	(571) 273-8300 ATTN: Office of Petitions
By internet:	EFS-Web

Any questions concerning this matter may be directed to Attorney Advisor Cliff Congo at (571) 272-3207.

/DOUGLAS I WOOD/
Attorney Advisor, OPET

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO.	: 10,014,882 B2
APPLICATION NO.	: 13/116984
DATED	: July 3, 2018
INVENTOR(S)	: Robi Sen, Ian Charles Starnes and Steve Shattil

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Specification

Column 1, Lines 8-11; cancel the text beginning with "This application is" and ending "filed May 27, 2010." and insert the following:
--This application is a Continuation-in-Part of U.S. Pat. Appl. No. 12/328,917, filed December 05, 2008, now U.S. Pat. No. 7,965,761, which is a Divisional of U.S. Pat. Appl. No. 11/621,014, filed January 8, 2007, now U.S. Pat. No. 7,593,449, which is a Divisional of U.S. Pat. Appl. No. 10/131,163, filed April 24, 2002, now U.S. Pat. No. 7,430,257; and this application claims priority under 35 U.S.C. 119(e) to U.S. Provisional Application Ser. No. 61/349,097, entitled "Method and Apparatus for Fast Prototyping of Wireless Transceivers.--

Signed and Sealed this
Fourteenth Day of July, 2020

Andrei Iancu
Director of the United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 06/24/2020

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
06/24/2020	PAPER

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.

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

Patent No.: 10014882
Issue Date: 07/03/2018
Appl. No.: 13/116,984
Filed: 05/26/2011

PART (A) RESPONSE FOR CERTIFICATES OF CORRECTION

This is a decision on the Certificate of Correction request filed 01 April 2020.

The request for issuance of Certificate of Correction for the above-identified correction(s) under the provisions of 37 CFR 1.322 and/or 1.323 is hereby:

(Check one)
☑ Approved ☐ Approved in Part ☐ Denied

Comments: ____

PART (B) PETITION UNDER 37 CFR 1.324 OR 37 CFR 1.48

☐ This is a decision on the petition filed ____ to correct inventorship under 37 CFR 1.324.

☐ This is a decision on the request under 37 CFR 1.48, petition filed ____. In view of the fact that the patent has already issued, the request under 37 CFR 1.48 has been treated as a petition to correct inventorship under 37 CFR 1.324.

The petition is hereby: ☐ Granted ☐ Dismissed

Comment: ____

The patented filed is being forwarded to Certificate of Corrections Branch for issuance of a certificate naming only the actual inventor or inventors.

/WESLEY L KIM/
Supervisory Patent Examiner, Art Unit 2648
Technology Center 2600
Phone: (571)272-7867

Certificates of Correction Branch email: CustomerServiceCoC@uspto.gov CoC Central Phone Number: (703) 756-1814

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

PETITION FOR UNINTENTIONALLY DELAYED PRIORITY CLAIM

April 1, 2020

Mail Stop Petitions
Commissioner of Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Decision on Petitions mailed on 3/19/2020. Applicant submits herewith a renewed petition under 37 CFR 1.78(c) and an ADS to correct the Priority Claim. The accompanying amendment was corrected to include underlining to show what is being changed and to correct typographical errors noted in the Decision. A petition under 37 CFR 1.78 is filed for Appl. No. 12/328,917. A certificate of correction and certificate of correction fee is filed for this application.

A petition to accept an Unintentionally Delayed Domestic Benefit Claim under 37 CFR 1.78(c) is included herewith.

Samsung Exhibit 1092, Page 49 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

1) The reference required by 35 U.S.C. 119(e) and 37 CFR 1.78(a)(3) is included in an amendment to the Specification submitted herewith showing the correct priority claim. This amendment contains no new matter.
2) The surcharge set forth in 37 CFR 1.17(m) is included herewith.
3) Applicant states that the entire delay between the date the benefit claim was due and the date the benefit claim was filed was unintentional.

Samsung Exhibit 1092, Page 50 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

AMENDMENT TO THE SPECIFICATION

In the Specification, please REPLACE the text in Column 1, Lines 8-11 with:

"—This application is a Continuation-in-Part of U.S. Pat. Appl. No. 12/328,917, filed December 05, 2008, now U.S. Pat. No. 7,965,761, which is a Divisional of U.S. Pat. Appl. No. 11/621,014, filed January 8, 2007, now U.S. Pat. No. 7,593,449, which is a Divisional of U.S. Pat. Appl. No. 10,131,163, filed April 24, 2002, now U.S. Pat. No. 7,430,257; and this application claims priority under 35 U.S.C. 119(e) to U.S. Provisional Application Ser. No. 61/349,097, entitled "Method and Apparatus for Fast Prototyping of Wireless Transceivers," filed May 27, 2010. —"

Respectfully submitted,

/ Steven J. Shattil/

Steven J. Shattil, Reg. No. 40,170
P.O. Box 17355
Boulder, CO 80308-0355
(720) 234-4351

Samsung Exhibit 1092, Page 51 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

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

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Robi		Sen	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	McClean	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

Mailing Address of Applicant:

Address 1	8000 Birnam Wood Dr.		
Address 2			
City	McClean	State/Province	VA
Postal Code	22102	Country	US

Applicant 2

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ian	Charles	Starnes	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Great Falls	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

Mailing Address of Applicant:

Address 1	10143 Yroktown Dr.		
Address 2			
City	Great Falls	State/Province	VA
Postal Code	22066	Country	US

Applicant 3

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Steve		Shattil	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Cheyenne	State/Province	WY	Country of Residence	US

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Citizenship under 37 CFR 1.41(b)	US		
Mailing Address of Applicant:			
Address 1	PO Box 17355		
Address 2			
City	Boulder	**State/Province**	CO
Postal Code	80308	**Country**	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☒ **An Address is being provided for the correspondence Information of this application.**

Name 1	Steven Shattil	Name 2	
Address 1	PO Box 17355		
Address 2			
City	Boulder	State/Province	CO
Country	US	Postal Code	80308
Phone Number	7202344351	Fax Number	
Email Address	genghiscomm@gmail.com	Add Email	Remove Email

Application Information:

Title of the Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers		
Attorney Docket Number	D13-002	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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

Representative Information:

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	○ Customer Number	◉ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix	
	Steven		Shattil		Remove

Registration Number	40170

Additional Representative Information blocks may be generated within this form by selecting the **Add** button.

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Expired				Remove
Application Number	Continuity Type		Prior Application Number		Filing Date (YYYY-MM-DD)
13116984	non provisional of		61349097		2010-05-27
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13116984	Continuation in part of	12328917	2008-12-05	7965761	2011-06-21
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12328917	Division of	11621014	2007-01-08	7593449	2009-09-22
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11621014	Division of	10131163	2002-04-24	7430257	2008-09-30

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

			Remove
Application Number	Country[i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			◉ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Steven J Shattil/			Date (YYYY-MM-DD)	2020-04-01
First Name	Steven	Last Name	Shattil	Registration Number	40170

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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.**

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	13116984
Filing Date:	26-May-2011
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven J Shattil
Attorney Docket Number:	D13-002

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
CERTIFICATE OF CORRECTION	2811	1	150	150

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**150**

Electronic Acknowledgement Receipt	
EFS ID:	39035465
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	STEVEN J SHATTIL - PO BOX 17355 - BOULDER CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	01-APR-2020
Filing Date:	26-MAY-2011
Time Stamp:	15:42:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$150

RAM confirmation Number	E202041F44022047
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	Request for Certificate of Correction	Cert_Correction_CoverLetter.pdf	50756 1254744473695768 6b016ca63ca091e202c9380b	no	1
Warnings:					
Information:					
2	Request for Certificate of Correction	Cert_of_Corr_sb0044.pdf	180517 bf379be7b6c0b6c6429ac4cd5b5d13859b847e91	no	2
Warnings:					
Information:					
3	Petition for review by the Office of Petitions	D13_002_Petition_Request_04_01_2020.pdf	85665 0a4df248143fe071af4fb12a2bdc957f8e70da03	no	3
Warnings:					
Information:					
4	Petition for review by the Office of Petitions	sb0014p.pdf	137732 b998b1e0a7a55fdca814625f4b7e8c0adcd25263	no	5
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	30379 7645aa3aa82c239f32643eb16172ab52cdbc1d29	no	2
Warnings:					
Information:					

Total Files Size (in bytes):	485049

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

CERTIFICATE OF CORRECTION

April 1, 2020

Commissioner for Patents

Office of Data Management Attention: Certificates of Correction Branch

P.O. Box 1450, Alexandria, VA 22313-1450

Dear Sir:

A Certificate of Correction is filed herewith to correct the priority claim indicated in the RELATED APPLICATIONS section. The correction submitted herewith provides the text that is in the Petition for Unintentionally Delayed Priority Claim filed on 04/01/2020.

Respectfully submitted,

/Steven J Shattil/

Steven J. Shattil, Reg. No. 40,170

P.O. Box 17355

Boulder, CO 80308-0355

(720) 234-4351

Samsung Exhibit 1092, Page 62 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

PTO/SB/44 (09-07)
Approved for use through 01/31/2020. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 10,014,882

APPLICATION NO.: 13/116,984

ISSUE DATE : July 3, 2018

INVENTOR(S) : Robi Sen, Ian Charles Starnes, Steve Shattil

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1, lines 8-11; cancel the text beginning with "This application is" and ending "filed May 27, 2010." and insert the following:

--This application is a Continuation-in-Part of U.S. Pat. Appl. No. 12/328,917, filed December 05, 2008, now U.S. Pat. No. 7,965,761, which is a Divisional of U.S. Pat. Appl. No. 11/621,014, filed January 8, 2007, now U.S. Pat. No. 7,593,449, which is a Divisional of U.S. Pat. Appl. No. 10,131,163, filed April 24, 2002, now U.S. Pat. No. 7,430,257; and this application claims priority under 35 U.S.C. 119(e) to U.S. Provisional Application Ser. No. 61/349,097, entitled "Method and Apparatus for Fast Prototyping of Wireless Transceivers.--

MAILING ADDRESS OF SENDER (Please do not use Customer Number below):

Steven J Shattil
PO Box 17355, Boulder, CO 80308

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Attention Certificate of Corrections Branch, 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.

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 03/19/2020

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
03/19/2020	PAPER

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.

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

In re Application of	:	
Sen et al.	:	
Application No. 13/116,984	:	DECISION ON PETITION
Filed: 26 May 2011	:	
Patent No. 10,014,882	:	
Issued: 3 Jul 2018	:	
Docket No. D13-002		

This is a decision on the renewed petition filed February 16, 2020, under 37 CFR §§ 1.78(c) and 1.78(e) to accept an unintentionally delayed claim under 35 U.S.C. §§ 119(e) and 120 for the benefit of priority to the prior-filed applications set forth in the concurrently filed amendment.

The petition is again **DISMISSED**

A petition under 37 CFR §§ 1.78(c) and 1.78(e) must be accompanied by:

> **(1)** the reference required by 35 U.S.C. §§ 119(e) and 120 and 37 CFR §§ 1.78(a)(3) and 1.78(d)(2) of the prior-filed applications, unless previously submitted;
> **(2)** the petition fee set forth in § 1.17(m); and
> **(3)** a statement that the entire delay between the date the claim was due under 37 CFR §§ 1.78(a)(4) and 1.78(d)(3) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

Applicants previously filed a petition under 37 CFR 1.78(c) and 1.78(e) on February 13, 2015. However, the petition was dismissed in a decision mailed on March 24, 2017. The petition was dismissed because Applicants did not submit the proper reference (the ADS improperly indicated that application No. 12/328,917 was a divisional of application No. 11/621,014). Applicants filed a renewed petition on April 7, 2017. However, that petition was dismissed in a decision mailed on June 8, 2018. The petition was dismissed because Applicant made a benefit claim to provisional application No. 60/286,850, but intermediate application No. 12/328,917 did not receipt a claim for benefit to that provisional application. Applicant was instructed to file a petition under 37 CFR 1.78(c) in 12/328,917 to add or correct the benefit claims under 35 U.S.C. 119(e) to the prior-filed provisional application.

The instant petition does not meet requirement (1) above. The amendment submitted with the petition is not proper. First, the amendment states that Application No. 11/621,014 is a divisional of "U.S. Patent 10,131,163" instead of referring to the application as an application number. Secondly, Application No. 12/328,917 does not claim benefit of 11/621,014 or include a relationship between 11/621,014 and 10/131,163. A grantable petition under 37 CFR 1.78 would need to be filed in Application No. 12/328,917, along with a certificate of correction and certificate of correction fee before the petition to make this benefit claim can be granted in the subject application. Lastly, the amendment does not comply with 37 CFR 1.121 because the amendment does not use strike-throughs or double brackets or underlining to show what is being changed.

In addition, as the instant application has issued as a patent, Applicant must submit a Certificate of Correction and pay the $150 Certificate of Correction fee.

If reconsideration of this decision is desired, a renewed petition under 37 CFR 1.78(c) and an ADS (complying with the provisions of 37 CFR § 1.76) or an amendment to correct the above matters is required. No additional petition fee is due on renewed petition.

Further correspondence with respect to this matter should be delivered through one of the following mediums:

By mail:	Mail Stop PETITIONS Commissioner for Patents Post Office Box 1450 Alexandria, VA 22313-1450
By fax:	(571) 273-8300 ATTN: Office of Petitions
By internet:	EFS-Web[1]

Any questions concerning this matter may be directed to Attorney Advisor Cliff Congo at (571) 272-3207.

/DOUGLAS I WOOD/
Attorney Advisor, OPET

[1] www.uspto.gov/ebc/efs_help.html (for help using EFS-Web call the Patent Electronic Business Center at (866) 217-9197)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

PETITION FOR UNINTENTIONALLY DELAYED PRIORITY CLAIM

February 16, 2020

Mail Stop Petitions
Commissioner of Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Decision on Petitions mailed on 6/8/2018. Applicant submits herewith a renewed petition under 37 CFR 1.78(c) and an ADS to correct the Priority Claim. This application claims priority to U.S. Pat Appl. 12/328,917 (the '917 application), which now has its priority claim corrected by a Certificate of Correction. This petition is made so that Pat. Appl. No. 13/116,984 recites correct priority in view of the correction to the '917 application.

A petition to accept an Unintentionally Delayed Domestic Benefit Claim under 37 CFR 1.78(c) is included herewith.

Samsung Exhibit 1092, Page 68 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

1) The reference required by 35 U.S.C. 119(e) and 37 CFR 1.78(a)(3) is included in an amendment to the Specification submitted herewith showing the correct priority claim. This amendment contains no new matter.
2) The surcharge set forth in 37 CFR 1.17(m) is included herewith.
3) Applicant states that the entire delay between the date the benefit claim was due and the date the benefit claim was filed was unintentional.

Samsung Exhibit 1092, Page 69 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

AMENDMENT TO THE SPECIFICATION

In the Specification, please REPLACE the text in Column 1, Lines 8-11 with

"—This application is a Continuation-in-Part of U.S. Pat. Appl. No. 12/328,917, filed December 05, 2008, now U.S. Pat. No. 7,965,761, which is a Divisional of U.S. Pat. No. 11/621,014, filed January 8, 2007, now U.S. Pat. No. 7,593,449, which is a Divisional of U.S. Pat. No. 10,131,163, filed April 24, 2002, now U.S. Pat. No. 7,430,257; and this application claims Priority from Provisional Appl. No. 61/349,097, filed May 27, 2010. —"

Respectfully submitted,

/ Steven J. Shattil/

Steven J. Shattil, Reg. No. 40,170
P.O. Box 17355
Boulder, CO 80308-0355
(720) 234-4351

Samsung Exhibit 1092, Page 70 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Electronic Patent Application Fee Transmittal

Application Number:	13116984
Filing Date:	26-May-2011
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven J Shattil
Attorney Docket Number:	D13-002

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PET. DELAY SUB OR RESTORE PRIORITY-CLAIM	2454	1	1000	1000
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1000**

Electronic Acknowledgement Receipt	
EFS ID:	38600738
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	STEVEN J SHATTIL - PO BOX 17355 - BOULDER CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	16-FEB-2020
Filing Date:	26-MAY-2011
Time Stamp:	17:21:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1000

RAM confirmation Number	E20202FH22421040
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	Petition for review by the Office of Petitions	D13_002_Petition_Request_02_17_2020.pdf	85318 c84e2ea08dd7c7e943c6617072971ed5350c59ec	no	3
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30610 3c250fad14663cbfa0bbbc8ba70c5b8a79352f61	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	115928		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5965373

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
SARGON CT PTY LTD	02/14/2020

RECEIVING PARTY DATA

Name:	DEPARTMENT 13, INC. C/O RESAGENT, INC.
Street Address:	405 NORTH KING STREET
Internal Address:	SUITE 500
City:	WILMINGTON
State/Country:	DELAWARE
Postal Code:	19801-3700

PROPERTY NUMBERS Total: 4

Property Type	Number
Patent Number:	8929550
Patent Number:	9673920
Application Number:	13595142
Application Number:	13116984

CORRESPONDENCE DATA

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 2128598000
Email: teas@friedfrank.com
Correspondent Name: SHANNON COLLINS C/O FRIED FRANK
Address Line 1: ONE NEW YORK PLAZA
Address Line 4: NEW YORK, NEW YORK 10004

ATTORNEY DOCKET NUMBER:	5769-1
NAME OF SUBMITTER:	KIMBERLY BARR
SIGNATURE:	/Kimberly Barr/
DATE SIGNED:	02/14/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 3

source=Release of Security Interest in Patents (AET)#page1.tif
source=Release of Security Interest in Patents (AET)#page2.tif
source=Release of Security Interest in Patents (AET)#page3.tif

RELEASE OF SECURITY INTEREST IN PATENTS

This RELEASE OF SECURITY INTEREST IN PATENTS, dated as of February 14, 2020 (this "Release"), is made by **Sargon CT Pty Ltd** (formerly AET Corporate Trust Pty Limited) ACN 106 424 088 in its capacity as trustee for the D13 Security Trust, with an address at Locked Bag 3015, Australia Square, Sydney New South Wales 2000, Australia, as secured party (in such capacity, the **"Secured Party"**), in favor of **DEPARTMENT 13, INC.,** a Delaware corporation (the "**Grantor**"), with an address at c/o Resagent, Inc., The Renaissance Centre, 405 North King Street, Suite 500, Wilmington, Delaware 19801-3700. Capitalized terms used but not otherwise defined herein shall have the meanings set forth in the Patent Rider (as defined below).

WITNESSETH:

WHEREAS, the Grantor and the Secured Party entered into that certain Rider to Security Agreement - Patents, dated as of the 16th of March, 2018 (the "Patent Rider"), which was incorporated into and made part of that certain Guaranty and Security Agreement between the Grantor and the Secured Party dated as of 16th of March, 2018, pursuant to which the Grantor pledged and granted to the Secured Party a security interest in and to all of its right, title and interest in, to and under the Patent Collateral (as defined therein), including without limitation, the United States Letters Patent and the inventions described therein and claims therein and applications set forth on Schedule A hereto;

WHEREAS, the Patent Rider was recorded with the United States Patent and Trademark Office on March 20, 2018 at Reel 045284 and Frame 0587; and

WHEREAS, Grantor has requested and the Secured Party has agreed to provide a document suitable for recording in the United States Patent and Trademark Office evidencing and effecting the release, relinquishment and discharge of its lien and security interest in and to the Patent Collateral.

NOW, THEREFORE, in consideration of the premises, and for good and valuable consideration, the receipt of which is hereby acknowledged, the Secured Party does hereby, in each case, without recourse, representation or warranty of any kind whatsoever, (a) terminate the lien and security interests created under the Patent Rider in the Patent Collateral, (b) discharge and release its lien and security interest in and to the Patent Collateral, and (c) reassign any and all rights, title and interest it has in the Patent Collateral to the Grantor.

The Secured Party enters into this Release in its capacity as trustee of the Security Trust (as defined in the Security Trust Deed, dated on or about March 16, 2018 among Department 13 International Limited, the Grantor and the Secured Party (the "Security Trust Deed")) and in no other capacity. Each party acknowledges and agrees that clause 2.13 of the Security Trust Deed operates with respect to this Release as if set out in full with the necessary changes. The Secured Party enters into this Release on instructions from the Majority Noteholders (as defined in the Security Trust Deed).

THIS RELEASE SHALL BE DEEMED TO BE A CONTRACT UNDER THE LAW OF THE STATE OF DELAWARE WITHOUT REGARD TO ITS CONFLICT OF LAWS PRINCIPLES THAT WOULD REQUIRE THE APPLICATION OF ANY OTHER LAW.

[Remainder of Page Intentionally Left Blank]

Samsung Exhibit 1092, Page 77 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

EXECUTED by **SARGON CT PTY LTD (formerly AET Corporate Trust Pty Limited) ACN 106 424 088 IN ITS CAPACITY AS TRUSTEE FOR THE D13 SECURITY TRUST** by its Attorney who certifies that he/she has not received notice of any revocation of the Power of Attorney dated 2 November 2018 in the presence of:

Signature of Attorney

Vincent Touchard — Senior Manager Client Services

Name (printed)

Signature of Witness

Susanny Tann

Name (printed)

Signature of Attorney

Georgina Glavis — Relationship Manager

Name (printed)

Schedule A

Country	Application No.	Status	Patent No.	Issue (Filing) Date	Title
U.S.	13/595,142	Abandoned	n/a	(08/27/2012)	Distributed Wireless Communications for Tactical Network Dominance
U.S.	13/757,032	Issued	8,929,550	01/06/2015 (02/01/13)	LPI/LPD Communication Systems
U.S.	13/116,984	Issued	9,641,199	05/02/2017 (05/26/2011)	Method and Apparatus for Fast Prototyping of Wireless Transceivers
U.S.	14/109,928	Issued	9,673,920	06/06/2017 (12/18/13)	Intrusion Detection and Radio Fingerprint Tracking

Samsung Exhibit 1092, Page 79 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	07/03/2018	10014882	D13-002	6645

7590 06/13/2018

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 162 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;
Steve Shattil, Cheyenne, WY;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

Office of Petitions: Routing Sheet



Application No. 13/116,984

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

- [ ] **GRANTED**
- [X] **DISMISSED**
- [ ] **DENIED**

Office of Petitions: Decision Count Sheet

Mailing Month: 6

Application No.: 13116984

13116984

For US serial numbers: enter number only, no slashes or commas. Ex: 10123456
For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345

Deciding Official: Cliff Congo

Count (1) - Palm Credit 13/116,984

Decision: DISMISSED

FINANCE WORK NEEDED
☐ Select Check Box for YES

DISMISSED

Decision Type: 535 - 37 CFR 1.78(a)(3) & (a)(6) UNINTENTIONAL DELAY F

535

Notes:

Count (2)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Count (3)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Initials of Approving Official (if required)

If more than 3 decisions, attach 2nd count sheet & mark this box ☐

Printed on: 6/7/2018

Office of Petitions Internal Document - Ver. 5.0

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 06/08/2018

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
06/08/2018	PAPER

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.

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

In re Application of	:	
Sen, et al.	:	
Application No. 13/116,984	:	DECISION ON PETITIONS
Filed: May 26, 2011	:	UNDER 37 CFR 1.78(c) AND (e)
Attorney Docket No. D13-002	:	

This is a decision on the "PETITION FOR UNINTENTIONALLY DELAYED PRIORITY CLAIM", filed April 7, 2017, which is being treated as a petition under 37 CFR §§ 1.78(c) and 1.78(e) to accept an unintentionally delayed claim under 35 U.S.C. §§ 119(e) and 120 for the benefit of priority to the prior-filed applications set forth in the concurrently filed ADS.

The petition is **DISMISSED.**

A petition under 37 CFR §§ 1.78(c) and 1.78(e) must be accompanied by:

(1) the reference required by 35 U.S.C. §§ 119(e) and 120 and 37 CFR §§ 1.78(a)(3) and 1.78(d)(2) of the prior-filed applications, unless previously submitted;
(2) the petition fee set forth in § 1.17(m); and
(3) a statement that the entire delay between the date the claim was due under 37 CFR §§ 1.78(a)(4) and 1.78(d)(3) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

Applicants previously filed a petition under 37 CFR 1.78(c) and 1.78(e) on February 13, 2015. However, the petition was dismissed in a decision mailed on March 24, 2017. The petition was dismissed because Applicants did not submit the proper reference (the ADS improperly indicated that application No. 12/328,917 was a divisional of application No. 11/621,014).

The petition lacks item (1).

Where an application claims a benefit under 35 U.S.C. 120 of a chain of applications, the application must make a reference to the first (earliest) application and every intermediate application. See Sampson v. Ampex Corp., 463 F.2d 1042, 1044-45, 174 USPQ 417, 418-19 (2d Cir. 1972); Sticker Indus. Supply Corp. v. Blaw-Knox Co., 405 F.2d 90, 93, 160 USPQ 177, 179 (7th Cir. 1968); Hovlid v. Asari, 305 F.2d 747, 751, 134 USPQ 162, 165 (9th Cir. 1962). See also MPEP 201.11. In addition, every intermediate application must also make a reference to the first (earliest) application and every application after the first application and before such intermediate application. MPEP 201.06(d).

Petitioner should review the claim for priority to ensure that a reference is made to the first application and to every intermediate application. In this regard, a review of Office records reveals that Application No. 12/328,917 does not recite a claim for benefit of prior-filed Application No. 60/286,850.

A petition under 37 CFR 1.78(c) to accept an unintentionally delayed claim, along with an application data sheet (ADS) (for applications filed before September 16, 2012, an amendment to the specification may be filed instead of an ADS)[1] and a request for a Certificate of Correction under 37 CFR 1.323, must be filed in prior Application No. 12/328,917 to add or correct the benefit claims under 35 U.S.C. §§ 119(e) to the prior-filed provisional application.

Upon the granting of a petition under 37 CFR 1.78 in Application No. 12/328,917 to correct the benefit claims to the prior-filed application, a renewed petition under 37 CFR 1.78 may be granted in the subject application.

Further correspondence with respect to this matter should be delivered through one of the following mediums:

By mail:	Mail Stop PETITIONS Commissioner for Patents Post Office Box 1450 Alexandria, VA 22313-1450
By fax:	(571) 273-8300 ATTN: Office of Petitions
By internet:	EFS-Web[2]

Any questions concerning this matter may be directed to the undersigned at (571) 272-3231.

/dwood/

Douglas I. Wood
Attorney Advisor
Office of Petitions

---

[1] See 37 CFR 1.78(h)

[2] www.uspto.gov/ebc/efs_help.html (for help using EFS-Web call the Patent Electronic Business Center at (866) 217-9197)

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/02/2017	9641199	D13-002	6645

7590 04/12/2017

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;
Steve Shattil, Cheyenne, WY;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

PETITION FOR UNINTENTIONALLY DELAYED PRIORITY CLAIM

April 7, 2017

Mail Stop Petitions

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Decision on Petitions mailed on March 24, 2017. Applicant requests reconsideration of this decision. Applicant submits herewith a renewed petition under 37 CFR 1.78(c) and an ADS to correct the matter indicated in the Decision mailed on March 24, 2017.

A petition to accept an Unintentionally Delayed Domestic Benefit Claim under 37 CFR 1.78(c) is included herewith.

1) The reference required by 35 U.S.C. 119(e) and 37 CFR 1.78(a)(3) is included in an amended Application Data Sheet submitted herewith showing the correct priority claim. This amendment contains no new matter.

Samsung Exhibit 1092, Page 87 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

2) The surcharge set forth in 37 CFR 1.17(m) is included herewith.
3) Applicant states that the entire delay between the date the benefit claim was due and the date the benefit claim was filed was unintentional.

Respectfully submitted,

/ Steven J. Shattil/

Steven J. Shattil, Reg. No. 40,170
P.O. Box 17355
Boulder, CO 80308-0355
(720) 234-4351

Samsung Exhibit 1092, Page 88 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

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

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Robi		Sen	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	McClean	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

Mailing Address of Applicant:

Address 1	8000 Birnam Wood Dr.		
Address 2			
City	McClean	State/Province	VA
Postal Code	22102	Country	US

Applicant 2

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ian	Charles	Starnes	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Great Falls	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

Mailing Address of Applicant:

Address 1	10143 Yroktown Dr.		
Address 2			
City	Great Falls	State/Province	VA
Postal Code	22066	Country	US

Applicant 3

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Steve		Shattil	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Cheyenne	State/Province	WY	Country of Residence	US

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Citizenship under 37 CFR 1.41(b)	US		
Mailing Address of Applicant:			
Address 1	PO Box 17355		
Address 2			
City	Boulder	**State/Province**	CO
Postal Code	80308	**Country**	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☒ **An Address is being provided for the correspondence Information of this application.**

Name 1	Steven Shattil	Name 2	
Address 1	PO Box 17355		
Address 2			
City	Boulder	State/Province	CO
Country	US	Postal Code	80308
Phone Number	7202344351	Fax Number	
Email Address	genghiscomm@gmail.com	Add Email	Remove Email

Application Information:

Title of the Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers		
Attorney Docket Number	D13-002	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		Suggested Figure for Publication (if any)	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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

Representative Information:

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	○ Customer Number	◉ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix	
	Steven		Shattil		Remove

Registration Number	40170

Additional Representative Information blocks may be generated within this form by selecting the **Add** button.

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Expired				Remove
Application Number	Continuity Type		Prior Application Number		Filing Date (YYYY-MM-DD)
13116984	non provisional of		61349097		2010-05-27
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13116984	Continuation in part of	12328917	2008-12-05	7965761	2011-06-21
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12328917	Division of	10131163	2002-04-24	7430257	2008-09-30
Prior Application Status	Expired				Remove
Application Number	Continuity Type		Prior Application Number		Filing Date (YYYY-MM-DD)
10131163	non provisional of		60286850		2001-04-26

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

			Remove
Application Number	Country[i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			◉ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Steven J Shattil/			Date (YYYY-MM-DD)	2017-03-31
First Name	Steven	Last Name	Shattil	Registration Number	40170

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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.**

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	13116984
Filing Date:	26-May-2011
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven J Shattil
Attorney Docket Number:	D13-002

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PET. DELAY SUB OR RESTORE PRIORITY-CLAIM	2454	1	850	850
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**850**

Electronic Acknowledgement Receipt	
EFS ID:	28867095
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	STEVEN J SHATTIL - PO BOX 17355 - BOULDER CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	07-APR-2017
Filing Date:	26-MAY-2011
Time Stamp:	15:26:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$850

RAM confirmation Number	041017INTEFSW15283200
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	Petition for review by the Office of Petitions	D13_002_Petition_Request.pdf	95224 27c168cacded483cdae0f95a70f8c97c643a8820	no	2
Warnings:					
Information:					
2	Application Data Sheet	sb0014_copy.pdf	115516 15da9bfc86c8a08267d6cfb9704b44df96e1f559	no	5
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Fee Worksheet (SB06)	fee-info.pdf	30752 c2f82ca8e804a22ecc3ae1ae173cf5f5f484a57a	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	241492		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Office of Petitions: Routing Sheet



Application No. 13/116,984

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

- [ ] **GRANTED**
- [X] **DISMISSED**
- [ ] **DENIED**

Office of Petitions: Decision Count Sheet

Mailing Month: 3

Application No.: 13116984

13116984

For US serial numbers: enter number only, no slashes or commas. Ex: 10123456
For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345

Deciding Official: Cliff Congo

Count (1) - Palm Credit 13/116,984

Decision: DISMISSED

FINANCE WORK NEEDED
☐ Select Check Box for YES

DISMISSED

Decision Type: 535 - 37 CFR 1.78(a)(3) & (a)(6) UNINTENTIONAL DELAY F

535

Notes:

Count (2)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Count (3)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Initials of Approving Official (if required)

If more than 3 decisions, attach 2nd count sheet & mark this box ☐

Printed on: 3/7/2017

Office of Petitions Internal Document - Ver. 5.0

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 03/24/2017

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
03/24/2017	PAPER

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.

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

In re Application of	:	
Sen, et al.	:	
Application No. 13/116,984	:	DECISION ON PETITIONS
Filed: May 26, 2011	:	UNDER 37 CFR 1.78(c) AND (e)
Attorney Docket No. D13-002	:	

This is a decision on the "AMENDMENT AND PETITION FOR UNINTENTIONALLY DELAYED PRIORITY CLAIM AND REQUEST FOR CORRECTED FILING RECEIPT", filed February 13, 2015, which is being treated under 37 CFR §§ 1.78(c) and 1.78(e) to accept an unintentionally delayed claim under 35 U.S.C. §§ 119(e) and 120 for the benefit of priority to the prior-filed applications set forth in the concurrently filed ADS.

The petition is **DISMISSED**.

A petition under 37 CFR §§ 1.78(c) and 1.78(e) must be accompanied by:

> **(1)** the reference required by 35 U.S.C. §§ 119(e) and 120 and 37 CFR §§ 1.78(a)(3) and 1.78(d)(2) of the prior-filed applications, unless previously submitted;
> **(2)** the petition fee set forth in § 1.17(m); and
> **(3)** a statement that the entire delay between the date the claim was due under 37 CFR §§ 1.78(a)(4) and 1.78(d)(3) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional.

The instant petition does not meet requirement (1) above. The reference is not proper, because application No. 12/328,917 is not a divisional of application No. 11/621,014, as specified in the ADS. Please see examiner's amendment mailed with Notice of Allowance on February 22, 2011 in prior application No. 12/328,917. See also patent No. 7,965,761. It is acknowledged that this is inconsistent with the preliminary amendment filed December 5, 2008.

If reconsideration of this decision is desired, a renewed petition under 37 CFR 1.78(c) and an ADS to correct the above matter is required (or correction of the reference in the prior filed application is required).

Further correspondence with respect to this matter should be delivered through one of the following mediums.

By mail:	Mail Stop Petitions Commissioner for Patents Post Office Box 1450 Alexandria, VA 22313-1450
By fax:	(571)273-8300 Attn: Office of Petitions
By internet:	EFS-Web[1]

Any questions concerning this matter may be directed to Attorney Advisor Cliff Congo at (571) 272-3207. All other inquiries concerning either the examination procedures or status of the application should be directed to the Technology Center.

This application is being forwarded to the Office of Data Management for processing into a patent.

Any questions concerning this matter may be directed to Attorney Advisor Cliff Congo at (571) 272-3207.

/Nancy Johnson/

Nancy Johnson
Attorney Advisor
Office of Petitions

[1] www.uspto.gov/ebc/efs_help.html (for help using EFS-Web call the Patent Electronic Business Center at (866)217-9197)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

ISSU 09/12/2016
STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

Steven J Shattil	(Depositor's name)
/Steven J Shattil/	(Signature)
09/30/2016	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

TITLE OF INVENTION: Method and Apparatus for Fast Prototyping of Wireless Transceivers

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	12/12/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEST, LEWIS G	2648	455-073000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 Steven J Shattil
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Genghiscomm Holdings, LLC
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Boulder, CO

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies .....

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☒ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number ..... (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Steven J Shattil/ Date 09/30/2016
Typed or printed name Steven J Shattil Registration No. 40170

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Samsung Exhibit 1092, Page 106 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Electronic Patent Application Fee Transmittal

Application Number:	13116984
Filing Date:	26-May-2011
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven J Shattil
Attorney Docket Number:	D13-002

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
UTILITY APPL ISSUE FEE	2501	1	480	480
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**480**

Electronic Acknowledgement Receipt	
EFS ID:	27091327
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	STEVEN J SHATTIL - PO BOX 17355 - BOULDER CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	30-SEP-2016
Filing Date:	26-MAY-2011
Time Stamp:	15:51:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$480

RAM confirmation Number	100316INTEFSW15525100
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	Issue Fee Payment (PTO-85B)	D13_002_PTOL_85_PartB.pdf	282964 4c4be1769489a42b978415e020648febaf8b68b1	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32421 21975067ee7928ea16186ae9f346ac419c84d936	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	315385		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

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 NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/116,984	05/26/2011	2648	572	D13-002	20	4

CONFIRMATION NO. 6645

CORRECTED FILING RECEIPT

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

OC000000086027874

Date Mailed: 09/23/2016

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

Inventor(s)

Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;
Steve Shattil, Cheyenne, WY;

Applicant(s)

Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;
Steve Shattil, Cheyenne, WY;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/349,097 05/27/2010
and is a CIP of 12/328,917 12/05/2008 PAT 7965761
which is a DIV of 11/621,014 01/08/2007 PAT 7593449
which is a DIV of 10/131,163 04/24/2002 PAT 7430257
which claims benefit of 60/286,850 04/26/2001

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 06/09/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/116,984**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

Method and Apparatus for Fast Prototyping of Wireless Transceivers

Preliminary Class

455

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications:

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

7590 09/12/2016

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER
WEST, LEWIS G

ART UNIT	PAPER NUMBER
2648	

DATE MAILED: 09/12/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

TITLE OF INVENTION: Method and Apparatus for Fast Prototyping of Wireless Transceivers

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	12/12/2016

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

7590 09/12/2016

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

TITLE OF INVENTION: Method and Apparatus for Fast Prototyping of Wireless Transceivers

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	12/12/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEST, LEWIS G	2648	455-073000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 09/12/2016

STEVEN J SHATTIL
PO BOX 17355
BOULDER, CO 80308

EXAMINER	
WEST, LEWIS G	
ART UNIT	PAPER NUMBER
2648	

DATE MAILED: 09/12/2016

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

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

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

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

Notice of Allowability	Application No. 13/116,984	Applicant(s) SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	AIA (First Inventor to File) Status No

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

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *AFCP 2.0 request*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *1-20*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☒ Other *PTO 2323*.

/LEWIS WEST/
Primary Examiner, Art Unit 2648

Applicant-Initiated Interview Summary	**Application No.** 13/116,984	**Applicant(s)** SEN ET AL.	
	Examiner LEWIS WEST	**Art Unit** 2648	

All participants (applicant, applicant's representative, PTO personnel):

(1) *LEWIS WEST*. (3)_____.

(2) *STEVE SHATIL*. (4)_____.

Date of Interview: *31 August 2016*.

Type: ☒ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☒ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☒102 ☐103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: *1-20*.

Identification of prior art discussed: *KOENCK*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Based on applicant's proposed amendment and explanation as laid out in the agenda (attached); the examiner suggested filing an AFCP 2.0 request. Applicant did so post haste and thus this interview summary is attached to the response to the AFCP amendment.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☒ Attachment

/LEWIS WEST/ Primary Examiner, Art Unit 2648	

Samsung Exhibit 1092, Page 120 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Notice of References Cited	Application/Control No. 13/116,984	Applicant(s)/Patent Under Reexamination SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2010/0056200 A1	03-2010	TOLONEN; Pertti	H04B1/3805	455/552.1
*	B	US-2012/0252387 A1	10-2012	Haskins; Christopher B.	H04B1/0014	455/131
*	C	US-8,391,913 B2	03-2013	Zimmer; Vincent J.	G06F9/5077	375/316
*	D	US-2013/0315211 A1	11-2013	Balan; Horia Vlad	H04B7/0697	370/336
*	E	US-9,026,790 B2	05-2015	Bolton; Martin	H04N21/2389	375/240.01
*	F	US-2010/0185541 A1	07-2010	Hassan; Amer A.	G06F8/36	705/34
*	G	US-2007/0078924 A1	04-2007	Hassan; Amer A.	G06F21/125	709/200
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

OK TO ENTER: /L.W./ (09/07/2016)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT AFTER FINAL

August 31, 2016

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on July 1, 2016.

A certification and request for reconsideration under the After Final Consideration Pilot Program 2.0 accompanies this letter.

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

Remarks/Arguments begin on page 5.

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

CPC- SEARCHED		
Symbol	Date	Examiner
H04B 1/0003	07/28/2015	LW

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	550.1, 556.1, 66.1, 575.1, 73, 418	10/30/2012	LW

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	10/30/2012	LW
updated search	11/12/2013	LW
updated search	09/26/2014	LW
updated search	07/28/2015	LW
updated search	11/16/2015	LW
updated search	03/07/2016	LW
update search	06/22/16	LW
H04B 1/0003 w text	07/28/2015	LW
updated searches	09/06/2016	LW

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	H04B1/0003	09/06/2016	LW

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	**Art Unit**
	LEWIS WEST	2648

CPC						
Symbol					**Type**	**Version**
H04B		1	/	0003	F	2013-01-01
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CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
			/					
			/					

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/LEWIS WEST/ Primary Examiner.Art Unit 2648	09/06/2016	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	**Art Unit**
	LEWIS WEST	2648

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
		H	0	4	B	1 / 00 (2006.01.01)						
CROSS REFERENCE(S)												
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)											

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/LEWIS WEST/ Primary Examiner.Art Unit 2648	09/06/2016	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office — Part of Paper No. 20160906

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	**Art Unit**
	LEWIS WEST	2648

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

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/LEWIS WEST/ Primary Examiner.Art Unit 2648	09/06/2016	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

West, Lewis G.

From: genghiscomm <genghiscomm@gmail.com>
Sent: Monday, August 29, 2016 2:36 PM
To: West, Lewis G.
Subject: Interview Agenda for 13/116.984 (D13-002)
Attachments: D13-002 Proposed Claim Amendment.docx

Dear Examiner,

The following is the proposed agenda for the interview on 8/31/2016 at 2pm EST.

Sincerely,

Steven J Shattil

Reg. No. 40170

1. Proposed claim amendment to the independent claims (Attached)

"first physical-layer algorithm corresponding to a first radio protocol" and "second physical-layer algorithm corresponding to the first radio protocol" is intended to distinguish the radio's physical layer over the physical layer of any signaling protocol between the cooperating devices, as well as any physical-layer signaling that carries information subject to only higher-layer processing of the first radio protocol.

2. Support for the claims

FIG. 1 in the application depicts separate transceiver components (Pulse-shaping filter, Equalizer, Mux/Demux, and Coder/Decoder) which each perform a portion of the radio's physical-layer processing. Transceiver components 121-124 each comprise a specific CPU and a specific memory adapted to perform its corresponding physical-layer function. Support is found throughout the published application, such as:

Paragraph [0036]: "Each object 120-124 comprises a CPU, a storage medium for storing software, and an interface. For example, object 121, which is a pulse-shaping filter, comprises CPU 131, memory 141, and interface 151."

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And Paragraph [0066]: “algorithms for processing signals inside the object may be hidden if those details are not pertinent to the object definition.”

3. Overview of Prior Art

a. The amended claims should be distinguishable over Koenck because Koenck doesn’t mention modulators, multiplexers, equalizers, or any other physical-layer radio components. Koenck does not anticipate performing these physical-layer functions algorithmically. Instead, Koenck teaches software control of radio hardware (Par. 30). Koenck does not mention software-defined radio.

b. The amended claims should be distinguishable because Koenck does not split up the radio physical-layer processing between separate devices. While Koenck mentions separate processors for the “base module” and the “data and communication module” in Par 102, the base modules performs none of the radio physical-layer functions. Par. 101 states that the data stream and the interactive control appear the same to the base module no matter how the “data and communication module 200” communicates.

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IPR2025-00780

Claims – Proposed Amendments

1. (Currently Amended) A first device, comprising:

a first processor;

a communication network interface; and

a first memory including processor-executable code for a first component of a software-defined radio that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a first physical-layer algorithm ~~processing~~ corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer algorithm ~~processing~~ corresponding to the first radio protocol.

2. (Previously Amended) The first device recited in Claim 1, wherein the first memory further comprises signal processing instructions configured for identifying other devices and their capabilities.
3. (Previously Amended) The first device recited in Claim 1, further configured for routing signals between a plurality of devices.
4. (Previously Amended) The first device recited in Claim 1, further configured for self organizing with the second device to create a communication network.
5. (Previously Amended) The first device recited in Claim 1, further configured for interfacing with a controller device.
6. (Previously Amended) The first device recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Previously Amended) The first device recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Previously Amended) The first device recited in Claim 1, comprising a plurality of devices.
9. (Previously Amended) The first device recited in Claim 1, further configured to write software.

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

10. (Previously Amended) The first device recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.

11. (Currently Amended) A wireless transceiver comprising a plurality of devices, each device comprising:

a processor;

a communication network interface; and

a memory

including processor-executable code for one software component of a software-defined radio that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a physical-layer algorithm ~~processing~~ corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with an other device comprising an other processor and an other memory including processor-executable code for an other component of the software-defined radio, the other memory comprising a set of signal processing instructions configured to perform an other physical-layer algorithm ~~processing~~ corresponding to the first radio protocol.

12. (Previously Amended) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of devices.

13. (Previously Amended) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of devices is configured for routing signals between the plurality of devices.

14. (Previously Amended) The wireless transceiver recited in Claim 11, wherein the plurality of devices is configured for self organizing to create a communication network.

15. (Previously Amended) The wireless transceiver recited in Claim 11, wherein each device is configured for interfacing with a controller device.

16. (Previously Amended) The wireless transceiver recited in Claim 11, comprising a second plurality of devices configured for performing similar signal processing on different signals.

17. (Currently Amended) A device configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the device's identity to at least one other device;

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

a signal-processing means comprising a processor and a non-transitory computer-readable medium comprising first signal processing instructions of a software-defined radio that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a first physical-layer algorithm ~~processing~~ corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer algorithm ~~processing~~ corresponding to the first radio protocol.

18. (Previously Amended) The device recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another device.

19. (Previously Amended) The device recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of devices, each of the plurality of devices comprising:

a processor;

a communication interface; and

a memory including processor-executable code for a first component of a software-defined radio that is distributed across the plurality of devices;

providing each of the plurality of devices with a set of signal processing instructions for performing a different one of a plurality of physical-layer algorithms ~~processing~~ corresponding to a first radio protocol; and

coordinating the plurality of devices to cooperatively process the first radio protocol signals.

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

AFCP 2.0 Decision	Application No.	Applicant(s)
	13/116,984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

This is in response to the After Final Consideration Pilot request filed 31 August 2016.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

   ☐ An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.

   ☐ A non-broadening amendment to at least one independent claim was not submitted.

   ☐ A proper AFCP 2.0 request was submitted in response to the most recent final rejection.

   ☐ Other:

2. **Proper Request**

   A. After final amendment submitted with the request will not be treated under AFCP 2.0.
   The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

   ☐ The after final amendment will be treated under pre-pilot procedure.

   B. Updated search and/or completed additional consideration.
   The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

   ☒ 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.

   ☐ 2. The after final amendment would not overcome all of the rejections in the most recent final Office action. See attached interview summary for further details.

   ☐ 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.

   ☐ 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.

   ☐ 5. Other:

   Examiner Note: Please attach an interview summary when necessary as described above.

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Doc Code: A.NE.AFCP
Document Description: After Final Consideration Pilot Program Request

PTO/SB/434 (05-13)

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

Practitioner Docket No.:	Application No.:	Filing Date:
D13-002	13116984	5/26/2011
First Named Inventor:	Title:	
Sen	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.

1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (*e.g.*, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c).
2. The above-identified application contains an outstanding final rejection.
3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect.
4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection.
5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response.
6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web).
7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.]
8. By filing this certification and request, applicant acknowledges the following:
    - Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0.
    - The examiner will verify that the AFCP 2.0 submission is compliant, *i.e.*, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions:
        - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, by mailing an advisory action.
        - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview.
            - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate.
            - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.

Signature	Date
/Steven J Shattil/	08/31/2016
Name (Print/Typed) Steven J Shattil	Practitioner Registration No. 40170

***Note**: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.*

☐ * Total of _____ forms are submitted.

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:	26804228
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	31-AUG-2016
Filing Date:	26-MAY-2011
Time Stamp:	16:50:30
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	Applicant Arguments/Remarks Made in an Amendment	D13_002_OA10_response.pdf	132287 cd7559578364b38902e1950050f36e80b9239203	no	10
Warnings:					
Information:					
2	After Final Consideration Program Request	sb0434.pdf	225991 8fc7bb51484d6d1edbb129ef89f4c387fb3051e3	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	358278		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT AFTER FINAL

August 31, 2016

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on July 1, 2016.

A certification and request for reconsideration under the After Final Consideration Pilot Program 2.0 accompanies this letter.

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

Remarks/Arguments begin on page 5.

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Claims - Amendments

1. (Currently Amended) A first device, comprising:

a first processor;

a communication network interface; and

a first memory including processor-executable code for a first component of a software-defined radio (SDR) that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a first physical-layer SDR algorithm ~~processing~~ corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the SDR ~~software-defined radio~~, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer SDR algorithm ~~processing~~ corresponding to the first radio protocol.

2. (Previously Amended) The first device recited in Claim 1, wherein the first memory further comprises signal processing instructions configured for identifying other devices and their capabilities.
3. (Previously Amended) The first device recited in Claim 1, further configured for routing signals between a plurality of devices.
4. (Previously Amended) The first device recited in Claim 1, further configured for self organizing with the second device to create a communication network.
5. (Previously Amended) The first device recited in Claim 1, further configured for interfacing with a controller device.
6. (Previously Amended) The first device recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Previously Amended) The first device recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Previously Amended) The first device recited in Claim 1, comprising a plurality of devices.
9. (Previously Amended) The first device recited in Claim 1, further configured to write software.

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10. (Previously Amended) The first device recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. (Currently Amended) A wireless transceiver comprising a plurality of devices, each device comprising:

a processor;

a communication network interface; and

a memory

including processor-executable code for one software component of a software-defined radio (SDR) that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a physical-layer SDR algorithm ~~processing~~ corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with an other device comprising an other processor and an other memory including processor-executable code for an other component of the SDR ~~software-defined radio~~, the other memory comprising a set of signal processing instructions configured to perform an other physical-layer SDR algorithm ~~processing~~ corresponding to the first radio protocol.

12. (Previously Amended) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of devices.
13. (Previously Amended) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of devices is configured for routing signals between the plurality of devices.
14. (Previously Amended) The wireless transceiver recited in Claim 11, wherein the plurality of devices is configured for self organizing to create a communication network.
15. (Previously Amended) The wireless transceiver recited in Claim 11, wherein each device is configured for interfacing with a controller device.
16. (Previously Amended) The wireless transceiver recited in Claim 11, comprising a second plurality of devices configured for performing similar signal processing on different signals.
17. (Currently Amended) A device configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the device's identity to at least one other device;

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a signal-processing means comprising a processor and a non-transitory computer-readable medium comprising first signal processing instructions of a software-defined radio (SDR) that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a first physical-layer SDR algorithm ~~processing~~ corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the SDR ~~software-defined radio~~, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer SDR algorithm ~~processing~~ corresponding to the first radio protocol.

18. (Previously Amended) The device recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another device.

19. (Previously Amended) The device recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of devices, each of the plurality of devices comprising:

a processor;

a communication interface; and

a memory including processor-executable code for a first component of a software-defined radio (SDR) that is distributed across the plurality of devices;

providing each of the plurality of devices with a set of signal processing instructions for performing a different one of a plurality of physical-layer SDR algorithms ~~processing~~ corresponding to a first radio protocol; and

coordinating the plurality of devices to cooperatively process the first radio protocol signals.

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Remarks - Claims

Claims 1-20 are pending.

Independent claims 1, 11, 17, and 20 were amended to replace the term “physical-layer processing” with “physical-layer SDR (software-defined radio) algorithm.” This amendment more precisely defines the scope of the claims, and support for the amendment can be found throughout the disclosure, such as Paragraphs [0004], [0012], [0066], and [0073] of the published application. No new matter was added.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on July 1, 2016. Applicant thanks the Examiner for the careful consideration given to this application. Reconsideration and allowance of the present application is now respectfully requested in view of the following remarks.

In the Response to Arguments section of the Examination Report, the Patent Office states that there is no specific language in the specification regarding a specific memory holding a specific physical layer software process.

FIG. 1 is a block diagram of a transceiver comprising transceiver components, each of which performs a separate physical-layer process. Transceiver components 121-124 each comprise a specific CPU and a specific memory adapted to perform its corresponding physical-layer functions. The Specification states:

> Paragraph [0036]: "Each object 120-124 comprises a CPU, a storage medium for storing software, and an interface. For example, object 121, which is a pulse-shaping filter, comprises CPU 131, memory 141, and interface 151."
>
> and Paragraph [0035]: "Transceiver components 120-124 are referred to as objects for the purpose of relating some functional aspects of the invention to principles of Object-Oriented Design in software development. Object-Oriented Design is known in the art as a process of planning a system of interacting objects for the purpose of solving a software problem. In some aspects of the invention, Object-Oriented Design relates to systems of interacting objects that comprise both hardware and software for the purpose of solving both hardware and software problems related to communications in a wireless network and/or functional aspects of a wireless transceiver."

The Examination report states that Koenck discloses separate modules, each able to process on the physical layer, as the physical layer is used in any communication process. So each module must perform on the physical layer (i.e., on physical signals) in order to function.

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Applicant's amendment to the independent claims replaced the term "processing" with the more specific term "SDR algorithm." For example, Claim 1 recites, among other things,

> "a first device… configured to perform a first physical-layer SDR algorithm corresponding to a first radio protocol" and
> "a second device… configured to perform a second physical-layer SDR algorithm corresponding to the first radio protocol."

Paragraph [0004] of the published application describes software-defined radio in the context of "physical-layer algorithms" as "components that were typically implemented in special-purpose hardware are instead implemented in software by a general-purpose processor."

This amendment clarifies that the physical-layer SDR algorithms for a particular radio protocol are performed by multiple devices. While Koenck processes physical-layer signals in separate modules, the first module (i.e., the data and communication module 200) processes the physical layer of the signal corresponding to the radio protocol, whereas the second module (i.e., the base module) processes signals that are in no way related to the physical layer of the radio protocol. Furthermore, Koenck does not mention software-defined radio.

The Examination Report states that Koenck discloses in at least Paragraph [0102] that the microprocessors cooperate to perform in a manner that is consistent with that of Applicant's claims and disclosure.

In view of the amendment to the claims, Koenck neither mentions software-defined radio, nor discloses multiple modules operating on the physical layer of the same radio protocol.

Firstly, there is no mention in Koenck of modulators, multiplexers, equalizers, or any other physical-layer radio components. There is certainly no suggestion of implementing such physical-layer radio components using software algorithms. There is no mention of software-defined radio.

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Secondly, Koenck teaches that the base module performs none of the physical-layer radio processing, since the data stream and the interactive control appear the same to the base module no matter how the "data and communication module 200" communicates:

> Paragraph [0101]: "The data and communication module 200 may be removed and replaced with a number of other modules. In those modules, th transceiver 228 may be, for example, any RF radio, such as a spread spectrum, UHF, or cellular transceiver. The commonality between all communication modules is the microprocessor 225 and the associated communication protocol back to the microprocessor 205 of the base module 201. In other words, the program function represented by the interface circuit 226 and interacting with the microprocessor 225 permits the interactive control and data stream between th base module 201 and the data and communication module 200 to appear the same to the base module 201 no matter how the module 200 communicates."

Thus, any physical-layer radio processing is performed solely by a single device, i.e., the data and communication module 200. While the base module 201 must operate on physical signals, there is no teaching in Koenck to suggest that those signals have any of the physical-layer characteristics of the radio signals.

Applicant submits that the amended claims are patentable over Koenck.

35 U.S.C. 102 rejections

Claims 1-20 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pub. No. 20040017824 (Koenck).

Applicant respectfully traverses these rejections.

As explained above, Koenck fails to mention software-defined radio. Koenck does not teach any algorithms for implementing any physical-layer components of a radio. Koenck fails to mention physical-layer radio components that could possibly be implemented in software. For example, Koenck does not mention modulators, multiplexers, or equalizers.

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As explained above with respect to Koenck, there is no disclosure that the signals processed by the base module comprise any physical-layer features of the radio signals processed by the data and communication module. Instead, Koenck teaches that the base module sees the same control and data stream irrespective of any radio protocol used.

Thus, Koenck fails to teach each and every feature recited in Claim 1.

The independent claims 11, 17, and 20 recite similar features, and therefore should be patentable for at least the same reasons above. The dependent claims 2-10, 12-16, 18, and 19 contain the same limitations as their respective independent claims, and therefore should be patentable for at least the same reasons above.

For at least these reasons, it is respectfully submitted that the claims 1-20 are allowable over Koenck.

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Conclusion

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

/ Steven J. Shattil/

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PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 08/31/2016	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
MARQUITA JONES

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 07/01/2016

Steven J Shattil
PO Box 17355
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EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
07/01/2016	PAPER

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.

Office Action Summary	Application No. 13/116,984	Applicant(s) SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	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 *06/06/2016*.

☐ 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) *1-20* 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) *1-20* 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: _____.

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

Response to Arguments

Applicant's arguments filed 06/06/2016 have been fully considered but they are not persuasive.

Koenck discloses separate modules each with memories, and each able to process on the physical layer. The physical layer is inherently used in any communication process as it carries the signal itself and acts as the channel to carry the physical signal. So each module must perform on at least the physical layer in order to function. Koenck discloses in at least 0102 that the microprocessors cooperate to perform the functions in a manner consistent with that of applicant's claims and specification, so that software processes are carried out by the first and second device which must include the physical layer processing. The statement that the physical layer is transceiver dependent is moot to applicant's argument as it simply reflects the basic fact that the type of transceiver determines the physical layer, generally speaking wired or wireless. All communication processing in higher layer includes lower layers, the communications cannot exist without the physical layer which carries the signal. There is no specific language in applicant's specification regarding a specific memory holding a specific physical layer software process; while it is implicit that software is stored in memories applicant’s assertion that there is something further in their application should be supported by pointing out where this is, so if there is some misinterpretation by the examiner it can be reconsidered. Applicant’s specification appears to only support the fact that any software or data can be stored in a memory.

Claim Rejections - 35 USC § 102

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Koenck (US 2004/0017824)

Regarding claim 1, Koenck discloses a first device comprising:

A first processor; a communication network interface; a first memory including processor-executable code for a first component of a software defined radio that is distributed across a plurality of devices, comprising:

A set of signal processing instruction configured to perform a first physical layer processing corresponding to a first radio protocol; and

A set of signal processing instruction configured to cooperatively process first radio protocol signal with a second device comprising a second processor and a second memory including processor executable code for a second component of the software defined radio, the

second memory comprising a set of signal processing instructions configured to perform a second physical layer processing corresponding to the first protocol. [0042-0046]

2 The first device recited in claim 1, wherein the first memory further comprises signal processing instructions configured for identifying other devices and their capabilities. [0042, the modules are isolated based on their function meaning they are identified and configured to process with their capabilities]

3. The first device recited in Claim 1, further configured for routing signals between a plurality of devices. [0042-0043]

4. The first device recited in Claim 1, further configured for self-organizing with the second device to create a communication network. [0042-0043]

5. The first device recited in Claim 1, further configured for interfacing with a controller device. [base processing unit, 0098 microprocessor control.]

6. The first device recited in Claim 1, further comprising at least one of a data source and a data sink. [0042-0044, data is collected, meaning there is a data source]

7. The first device recited in Claim 1, further configured for adapting its signal processing for different signal inputs. [0044]

8. The first device recited in Claim 1, comprising a plurality of devices. [0042-0044]

9. The first device recited in Claim 1, further configured to write software. [0100]

10. The first device recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions. [0100; Typical on board ROM allows the microprocessor to be programmed to interact with a number of devices in accordance with the stored program. The

microprocessor interacts with an interface circuit 226 which may be an analog or mixed analog and digital interface circuit. The program for interacting with the interface circuit 226 may also be stored within an on board ROM.]

11. A wireless transceiver comprising a plurality of devices, each device comprising:

A processor; a communication network interface; and a memory; and including processor executable code for one software component of a software defined radio that is distributed across a plurality of devices, comprising;

A set of signal processing instructions configured to perform a physical layer processing corresponding to a first radio protocol;

A set of signal processing instruction configured to cooperatively process first radio protocol signal with an other device comprising an other processor and an other memory including processor executable code for an other component of the software defined radio, the other memory comprising a set of signal processing instructions configured to perform an other physical layer processing corresponding to the first protocol. [0042-0046]

12. The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of devices. [0042-0044]

13. The wireless transceiver recited in Claim 11, wherein at least one of the plurality of devices is configured for routing signals between the plurality of devices. [the base communication device routes signals between RF protocol modules and at least antenna modules]

14. The wireless transceiver recited in Claim 11, wherein the plurality of devices is configured for self-organizing to create a communication network. [0042-0043]

15. The wireless transceiver recited in Claim 11, wherein each device is configured for interfacing with a controller device. [0042]

16. The wireless transceiver recited in Claim 11, comprising a second plurality of devices configured for performing similar signal processing on different signals. [0042-0044, each module is capable of signal processing on radios for communications, which makes it similar]

17. A device configured for rapid prototyping of a wireless transceiver, comprising: an identification means configured for automatically conveying the device's identity to at least on other device; [0044, the base processor recognizes the difference in operating characteristics of attached devices, meaning their identity's are distinguished]

A signal processing means comprising a processor and a non-transitory computer readable medium comprising first signal processing instructions of a software-defined radio that is distributed across a plurality of devices, comprising;

a set of signal processing instructions configured to perform a first physical-laver processing corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer processing corresponding to the first radio protocol. [0028; 0042-0046]

18, the device recited in claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another device. [the radio module extends the functionality of the communications module.]

19, the device recited in claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter. [0043-0044, data is at least collected (one function) and communicated {a second function}]

20, a method for assembling a wireless transceiver the method comprising: communicatively coupling together a plurality of devices, each of the plurality of devices comprising:

A processor; a communication interface; and a memory including processor executable code for a first component of a software defined radio that is distributed across the plurality of devices;

Providing each of the plurality of devices with a set of signal processing instruction for performing a differing one of a plurality of physical layer processing corresponding to a first radio protocol; coordinating the plurality of devices to cooperatively process the first radio protocol signals. [0028; 0042-0046]

Conclusion

THIS ACTION IS MADE FINAL. 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 mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEWIS WEST whose telephone number is (571)272-7859. The examiner can normally be reached on Monday-Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wesley Kim can be reached on 571-272-7867. 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.

/LEWIS WEST/

Primary Examiner, Art Unit 2648

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

CPC- SEARCHED		
Symbol	Date	Examiner
H04B 1/0003	07/28/2015	LW

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	550.1, 556.1, 66.1, 575.1, 73, 418	10/30/2012	LW

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	10/30/2012	LW
updated search	11/12/2013	LW
updated search	09/26/2014	LW
updated search	07/28/2015	LW
updated search	11/16/2015	LW
updated search	03/07/2016	LW
update search	06/22/16	LW

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

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

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

CLAIM		DATE								
Final	Original	10/30/2012	11/12/2013	03/21/2014	09/26/2014	07/28/2015	11/16/2015	03/07/2016	06/22/2016	
	1	✓	✓	✓	✓	✓	✓	✓	✓	
	2	✓	✓	✓	✓	✓	✓	✓	✓	
	3	✓	✓	✓	✓	✓	✓	✓	✓	
	4	✓	✓	✓	✓	✓	✓	✓	✓	
	5	✓	✓	✓	✓	✓	✓	✓	✓	
	6	✓	✓	✓	✓	✓	✓	✓	✓	
	7	✓	✓	✓	✓	✓	✓	✓	✓	
	8	✓	✓	✓	✓	✓	✓	✓	✓	
	9	✓	✓	✓	✓	✓	✓	✓	✓	
	10	✓	✓	✓	✓	✓	✓	✓	✓	
	11	✓	✓	✓	✓	✓	✓	✓	✓	
	12	✓	✓	✓	✓	✓	✓	✓	✓	
	13	✓	✓	✓	✓	✓	✓	✓	✓	
	14	✓	✓	✓	✓	✓	✓	✓	✓	
	15	✓	✓	✓	✓	✓	✓	✓	✓	
	16	✓	✓	✓	✓	✓	✓	✓	✓	
	17	✓	✓	✓	✓	✓	✓	✓	✓	
	18	✓	✓	✓	✓	✓	✓	✓	✓	
	19	✓	✓	✓	✓	✓	✓	✓	✓	
	20	✓	✓	✓	✓	✓	✓	✓	✓	

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IPR2025-00780

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT

June 6, 2016

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on March 10, 2016.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper. Remarks/Arguments begin on page 5 of this paper.

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IPR2025-00780

Claims - Amendments

1. (Previously Amended) A first device, comprising:

a first processor;

a communication network interface; and

a first memory including processor-executable code for a first component of a software-defined radio that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer processing corresponding to the first radio protocol.

2. (Currently Amended) The first device recited in Claim 1, wherein the first memory further comprises signal processing instructions configured for identifying other devices and their capabilities.
3. (Previously Amended) The first device recited in Claim 1, further configured for routing signals between a plurality of devices.
4. (Previously Amended) The first device recited in Claim 1, further configured for self organizing with the second device to create a communication network.
5. (Previously Amended) The first device recited in Claim 1, further configured for interfacing with a controller device.
6. (Previously Amended) The first device recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Previously Amended) The first device recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Previously Amended) The first device recited in Claim 1, comprising a plurality of devices.
9. (Previously Amended) The first device recited in Claim 1, further configured to write software.

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10. (Previously Amended) The first device recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. (Previously Amended) A wireless transceiver comprising a plurality of devices, each device comprising:

a processor;

a communication network interface; and

a memory

including processor-executable code for one software component of a software-defined radio that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a physical-layer processing corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with an other device comprising an other processor and an other memory including processor-executable code for an other component of the software-defined radio, the other memory comprising a set of signal processing instructions configured to perform an other physical-layer processing corresponding to the first radio protocol.

12. (Previously Amended) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of devices.
13. (Previously Amended) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of devices is configured for routing signals between the plurality of devices.
14. (Previously Amended) The wireless transceiver recited in Claim 11, wherein the plurality of devices is configured for self organizing to create a communication network.
15. (Previously Amended) The wireless transceiver recited in Claim 11, wherein each device is configured for interfacing with a controller device.
16. (Previously Amended) The wireless transceiver recited in Claim 11, comprising a second plurality of devices configured for performing similar signal processing on different signals.
17. (Previously Amended) A device configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the device's identity to at least one other device;

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
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a signal-processing means comprising a processor and a non-transitory computer-readable medium comprising first signal processing instructions of a software-defined radio that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer processing corresponding to the first radio protocol.

18. (Previously Amended) The device recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another device.

19. (Previously Amended) The device recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Previously Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of devices, each of the plurality of devices comprising:

a processor;

a communication interface; and

a memory including processor-executable code for a first component of a software-defined radio that is distributed across the plurality of devices;

providing each of the plurality of devices with a set of signal processing instructions for performing a different one of a plurality of physical-layer processing corresponding to a first radio protocol; and

coordinating the plurality of devices to cooperatively process the first radio protocol signals.

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Remarks - Claims

Claims 1-20 are pending.

Claim 2 was amended to correct the deficiency in antecedent basis noted by the Office.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on March 10, 2016. Applicant thanks the Examiner for the careful consideration given to this application. Reconsideration and allowance of the present application is now respectfully requested in view of the following remarks.

35 U.S.C. 112 rejection

Claims 2 was rejected under 35 U.S.C. 112 (pre-AIA), second paragraph.

The amendment to Claim 2 corrects the deficient antecedent basis noted by the Office. Thus, Applicant respectfully requests reconsideration of the 35 U.S.C. 112 rejection.

35 U.S.C. 102 rejections

Claims 1-20 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pub. No. 20040017824 (Koenck).

Applicant respectfully traverses these rejections.

Claim 1 recites, among other things

> a first device… configured to perform a first physical-layer processing corresponding to a first radio protocol; and
>
> …a second device… configured to perform a second physical-layer processing corresponding to the first radio protocol.

With respect to Claim 1, Par. [0004]-[0005] of the published application explains that in software-defined radio, radio components that were typically implemented in hardware are now implemented via Physical-Layer algorithms in software by a general-purpose processor.

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However, Koenck teaches that all the physical-layer processing corresponding to a particular radio protocol is performed by a single device, not partitioned across multiple devices. FIG. 1B shows the software protocol stack split between the base module 201 and the data and communication module 200. All the functionality of the physical layer 259 is performed by the microprocessor 225 of the data and communication module 200 (Par. [0104]):

> *"Specifically, the functionality of the upper layers of the protocol stack (i.e., sessions layer 251, transport layer 253, and network layer 255) is performed by the microprocessor 205 of the base module 201 while the functionality of the lower layers (i.e., data link layer 257 and physical layer 259 is performed by the microprocessor 225 of the data and communication module 200."*

Par. [0109] states that the physical layer 259 performs radio modem functions and is therefore very radio transceiver dependent. So while the overall system shown in Koenck is modular, the physical layer processing does not comprise modular components. Thus, Koenck fails to teach "a software-defined radio that is distributed across a plurality of devices," such as recited in the independent Claim 1, or the "first device… configured to perform a first physical-layer processing corresponding to a first radio protocol; and… second device… configured to perform a second physical-layer processing corresponding to the first radio protocol."

The Patent Office cites Pars. [0042]-[0046] of Koenck as allegedly teaching the claimed features. However, upon careful reading of Koenck, it is clear that while the microprocessor 225 can operate with multiple transceivers 228 (e.g., Pars. [0100]-[0101]), there is no teaching to suggest a software-defined radio's physical-layer processing corresponding to a first radio protocol being distributed across multiple devices. Thus, Koenck fails to teach each and every feature recited in Claim 1.

The independent claims 11, 17, and 20 recite similar features, and therefore should be patentable for at least the same reasons above. The dependent claims 2-10, 12-16, 18, and 19 contain the same limitations as their respective independent claims, and therefore should be patentable for at least the same reasons above.

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For at least these reasons, it is respectfully submitted that the claims 1-20 are allowable over Koenck.

Applicants may not have presented all possible arguments or have refuted the characterizations of either the claims or the prior art as found in the Examination Report. However, the lack of such arguments or refutations is not intended to act as a waiver of such arguments or as concurrence with such characterizations.

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Conclusion

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

/ Steven J. Shattil/

Steven J. Shattil, Reg. No. 40,170
P.O. Box 17355
Boulder, CO 80308-0355
(720) 234-4351

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IPR2025-00780

Electronic Acknowledgement Receipt	
EFS ID:	25975155
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	06-JUN-2016
Filing Date:	26-MAY-2011
Time Stamp:	12:27:22
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	Amendment/Req. Reconsideration-After Non-Final Reject	D13_002_OA9_response.pdf	152622 d6eff35c032e9e9309c1734f98a224d469c2e4bb	no	9
Warnings:					
Information:					
		Total Files Size (in bytes):	152622		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 03/10/2016

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
03/10/2016	PAPER

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.

Office Action Summary	Application No. 13/116,984	Applicant(s) SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	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 *02/18/2016*.

☐ 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) *1-20* 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) *1-20* 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: _____.

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

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot because the arguments do not apply to any of the references being used in the current rejection. Applicant's significant claim changes necessitated the new grounds of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claim 2 recites the limitation "memory" in the claim. There is insufficient antecedent basis for this limitation in the claim. Claim 1 recites a first and second memory, and claim 2 does not properly refer back to one or the other, only memory, but not specifying which one.

Claim Rejections - 35 USC § 102

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under pre-AIA 35 U.S.C. 102(b) as being anticipated by Koenck (US 2004/0017824)

Regarding claim 1, Koenck discloses a first device comprising:

A first processor; a communication network interface; a first memory including processor-executable code for a first component of a software defined radio that is distributed across a plurality of devices, comprising:

A set of signal processing instruction configured to perform a first physical layer processing corresponding to a first radio protocol; and

A set of signal processing instruction configured to cooperatively process first radio protocol signal with a second device comprising a second processor and a second memory including processor executable code for a second component of the software defined radio, the

second memory comprising a set of signal processing instructions configured to perform a second physical layer processing corresponding to the first protocol. [0042-0046]

2 The first device recited in claim 1, wherein the memory further comprises signal processing instructions configured for identifying other devices and their capabilities. [0042, the modules are isolated based on their function meaning they are identified and configured to process with their capabilities]

3. The first device recited in Claim 1, further configured for routing signals between a plurality of devices. [0042-043]

4. The first device recited in Claim 1, further configured for self-organizing with the second device to create a communication network. [0042-0043]

5. The first device recited in Claim 1, further configured for interfacing with a controller device. [base processing unit, 0098 microprocessor control.]

6. The first device recited in Claim 1, further comprising at least one of a data source and a data sink. [0042-0044, data is collected, meaning there is a data source]

7. The first device recited in Claim 1, further configured for adapting its signal processing for different signal inputs. [0044]

8. The first device recited in Claim 1, comprising a plurality of devices. [0042-0044]

9. The first device recited in Claim 1, further configured to write software. [0100]

10. The first device recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions. [0100; Typical on board ROM allows the microprocessor to be programmed to interact with a number of devices in accordance with the stored program. The

microprocessor interacts with an interface circuit 226 which may be an analog or mixed analog and digital interface circuit. The program for interacting with the interface circuit 226 may also be stored within an on board ROM.]

11. A wireless transceiver comprising a plurality of devices, each device comprising:

A processor; a communication network interface; and a memory; and including processor executable code for one software component of a software defined radio that is distributed across a plurality of devices, comprising;

A set of signal processing instructions configured to perform a physical layer processing corresponding to a first radio protocol;

A set of signal processing instruction configured to cooperatively process first radio protocol signal with an other device comprising an other processor and an other memory including processor executable code for an other component of the software defined radio, the other memory comprising a set of signal processing instructions configured to perform an other physical layer processing corresponding to the first protocol. [0042-0046]

12. The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of devices. [0042-0044]

13. The wireless transceiver recited in Claim 11, wherein at least one of the plurality of devices is configured for routing signals between the plurality of devices. [the base communication device routes signals between RF protocol modules and at least antenna modules]

14. The wireless transceiver recited in Claim 11, wherein the plurality of devices is configured for self-organizing to create a communication network. [0042-0043]

15. The wireless transceiver recited in Claim 11, wherein each device is configured for interfacing with a controller device. [0042]

16. The wireless transceiver recited in Claim 11, comprising a second plurality of devices configured for performing similar signal processing on different signals. [0042-0044, each module is capable of signal processing on radios for communications, which makes it similar]

17. A device configured for rapid prototyping of a wireless transceiver, comprising: an identification means configured for automatically conveying the device's identity to at least on other device; [0044, the base processor recognizes the difference in operating characteristics of attached devices, meaning their identity's are distinguished]

A signal processing means comprising a processor and a non-transitory computer readable medium comprising first signal processing instructions of a software-defined radio that is distributed across a plurality of devices, comprising;

a set of signal processing instructions configured to perform a first physical-laver processing corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer processing corresponding to the first radio protocol. [0028; 0042-0046]

18, the device recited in claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another device. [the radio module extends the functionality of the communications module.]

19, the device recited in claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter. [0043-0044, data is at least collected (one function) and communicated {a second function}]

20, a method for assembling a wireless transceiver the method comprising: communicatively coupling together a plurality of devices, each of the plurality of devices comprising:

A processor; a communication interface; and a memory including processor executable code for a first component of a software defined radio that is distributed across the plurality of devices;

Providing each of the plurality of devices with a set of signal processing instruction for performing a differing one of a plurality of physical layer processing corresponding to a first radio protocol; coordinating the plurality of devices to cooperatively process the first radio protocol signals. [0028; 0042-0046]

Conclusion

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 LEWIS WEST whose telephone number is (571)272-7859. The examiner can normally be reached on Monday-Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wesley Kim can be reached on 571-272-7867. 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.

/LEWIS WEST/
Primary Examiner, Art Unit 2648

Notice of References Cited	Application/Control No. 13/116,984	Applicant(s)/Patent Under Reexamination SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2004/0017824 A1	01-2004	Koenck, Steven E.	G06F1/1626	370/466
	B	US-				
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

CPC- SEARCHED		
Symbol	Date	Examiner
H04B 1/0003	07/28/2015	LW

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	550.1, 556.1, 66.1, 575.1, 73, 418	10/30/2012	LW

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	10/30/2012	LW
updated search	11/12/2013	LW
updated search	09/26/2014	LW
updated search	07/28/2015	LW
updated search	11/16/2015	LW
updated search	03/07/2016	LW

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

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

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

CLAIM		DATE								
Final	Original	10/30/2012	11/12/2013	03/21/2014	09/26/2014	07/28/2015	11/16/2015	03/07/2016		
	1	✓	✓	✓	✓	✓	✓	✓		
	2	✓	✓	✓	✓	✓	✓	✓		
	3	✓	✓	✓	✓	✓	✓	✓		
	4	✓	✓	✓	✓	✓	✓	✓		
	5	✓	✓	✓	✓	✓	✓	✓		
	6	✓	✓	✓	✓	✓	✓	✓		
	7	✓	✓	✓	✓	✓	✓	✓		
	8	✓	✓	✓	✓	✓	✓	✓		
	9	✓	✓	✓	✓	✓	✓	✓		
	10	✓	✓	✓	✓	✓	✓	✓		
	11	✓	✓	✓	✓	✓	✓	✓		
	12	✓	✓	✓	✓	✓	✓	✓		
	13	✓	✓	✓	✓	✓	✓	✓		
	14	✓	✓	✓	✓	✓	✓	✓		
	15	✓	✓	✓	✓	✓	✓	✓		
	16	✓	✓	✓	✓	✓	✓	✓		
	17	✓	✓	✓	✓	✓	✓	✓		
	18	✓	✓	✓	✓	✓	✓	✓		
	19	✓	✓	✓	✓	✓	✓	✓		
	20	✓	✓	✓	✓	✓	✓	✓		

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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

Application Number	13116984	Filing Date	2011-05-26	Docket Number (if applicable)	D13-002	Art Unit	2648
First Named Inventor	Sen			Examiner Name	West, Lewis G		

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

SUBMISSION REQUIRED UNDER 37 CFR 1.114

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

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

- ☒ Consider the arguments in the Appeal Brief or Reply Brief previously filed on 2016-02-18
- ☐ Other _____

☐ Enclosed

- ☐ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

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

☐ Other _____

FEES

☐ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No _____

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (07-09)
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Steven J Shattil/	Date (YYYY-MM-DD)	2016-03-02
Name	Steven J Shattil	Registration Number	40170

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

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	13116984
Filing Date:	26-May-2011
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven J Shattil
Attorney Docket Number:	D13-002

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 1 month with $0 paid	2251	1	100	100
Miscellaneous:				
RCE- 2nd and Subsequent Request	2820	1	850	850
		Total in USD ($)		**950**

Electronic Acknowledgement Receipt	
EFS ID:	25081422
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	02-MAR-2016
Filing Date:	26-MAY-2011
Time Stamp:	16:31:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$950

RAM confirmation Number	3070
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	Extension of Time	sb0022.pdf	186161 fe77aaa3b3da09b5c7c67b0f626cf09351295e69	no	2
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	sb0030e_fill.pdf	697707 9b86dee08ecaebc21a3af0c9e0039d5e1aca76a6	no	3
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32326 5215bc03bf4521ce138675227f2dd3de088f6180	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	916194		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

PTO/SB/22 (03-13)
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)	Docket Number (Optional) D13-002
Application Number 13116984	Filed 05/26/2011
For Method and Apparatus for Fast Prototyping of Wireless Transceivers	
Art Unit 2648	Examiner West, Lewis G

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

		Fee	Small Entity Fee	Micro Entity Fee	
☑	One month (37 CFR 1.17(a)(1))	$200	$100	$50	$ 100
☐	Two months (37 CFR 1.17(a)(2))	$600	$300	$150	$
☐	Three months (37 CFR 1.17(a)(3))	$1,400	$700	$350	$
☐	Four months (37 CFR 1.17(a)(4))	$2,200	$1,100	$550	$
☐	Five months (37 CFR 1.17(a)(5))	$3,000	$1,500	$750	$

☑ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
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 has already been authorized to charge fees in this application to a Deposit Account.

☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number _____.

☑ Payment made via EFS-Web.

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/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. 37 CFR 3.73(b) statement is enclosed (Form PTO/SB/96).

☑ attorney or agent of record. Registration number 40170.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Steven J Shattil/ — Signature

03/02/2016 — Date

Steven J Shattil — Typed or printed name

720-234-4351 — Telephone Number

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 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 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.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 03/02/2016	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	**0**

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/MARTHA NEWMAN/

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

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 02/23/2016

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
02/23/2016	PAPER

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.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 13/116,984	**Applicant(s)** SEN ET AL.	
	Examiner LEWIS WEST	**Art Unit** 2648	**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 02/18/2016 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☒ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance;

(2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:

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

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

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

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

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

NOTICE OF APPEAL

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

AMENDMENTS

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

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

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

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

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

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

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

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

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

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

AFFIDAVIT OR OTHER EVIDENCE

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

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

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

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

REQUEST FOR RECONSIDERATION/OTHER

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

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: 1-20.
Claim(s) withdrawn from consideration: .

/LEWIS WEST/
Primary Examiner, Art Unit 2648

Continuation of 3. NOTE: Significant changes have been added to all independent claims..

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IPR2025-00780

DO NOT ENTER: /L.W./ (02/21/2016)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984
Filing Date: 5/26/2011
First named Inventor: Sen
Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers
Examiner: West, Lewis G
G.A.U.: 2648
Atty. Docket No. D13-002

AFTER FINAL AMENDMENT

February 18, 2016

Commissioner of Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Final Office Action mailed on November 18, 2015. Amendments to the independent claims were made without broadening their scope. Applicant is willing to participate in an Examiner interview.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper. Remarks/Arguments begin on page 7 of this paper.

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Claims - Amendments

1. (Currently Amended) A first device, ~~electronic object~~ comprising:

~~a hardware component, comprising:~~

~~a hardware interface for communicatively coupling to a second electronic object configured to function as a different component of the transceiver;~~

a first processor ~~central processing unit~~;

a communication network interface; and

a first memory ~~for storing software and data; and~~

~~the memory~~ including processor-executable code for a first ~~Object-Oriented Design (OOD) software~~ component of a software-defined radio ~~transceiver program~~ that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol ~~for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal~~; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer processing corresponding to the first radio protocol

~~a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and~~

~~an OOD software interface for enabling a second OOD software component of the radio transceiver program residing on a second electronic object to invoke at least one operation in the first OOD software component, wherein the second OOD software component comprises instructions for performing a different one of the plurality of steps~~.

2. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, wherein the memory further comprises signal processing instructions ~~discovery component is~~ configured for identifying other devices ~~electronic objects~~ and their capabilities.

3. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured for routing signals between a plurality of devices ~~electronic objects~~.
4. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured for self organizing with the second device ~~electronic object~~ to create a communication network.
5. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured for interfacing with a controller device.
6. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, comprising a plurality of devices ~~electronic objects~~.
9. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured to write software.
10. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. (Currently Amended) A wireless transceiver comprising a plurality of devices ~~electronic objects~~, each device ~~electronic object~~ comprising:

~~a hardware component, comprising:~~

~~a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;~~

a processor ~~central processing unit~~;

a communication network interface; and

a memory ~~for storing at least one of software and data; and~~

~~the memory~~ including processor-executable code for one ~~an Object-Oriented Design (OOD)~~ software component of a software-defined radio that is distributed across a plurality of devices ~~radio transceiver program~~, comprising:

a set of signal processing instructions configured to perform a physical-layer processing corresponding to a first radio protocol ~~for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal~~;

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~~a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object~~; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with an other device comprising an other processor and an other memory including processor-executable code for an other component of the software-defined radio, the other memory comprising a set of signal processing instructions configured to perform an other physical-layer processing corresponding to the first radio protocol

~~an OOD software interface for enabling at least one other OOD software component of the radio transceiver program residing on at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps~~.

12. (Currently Amended) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of devices ~~electronic objects~~.
13. (Currently Amended) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of devices ~~electronic objects~~ is configured for routing signals between the plurality of devices ~~electronic objects~~.
14. (Currently Amended) The wireless transceiver recited in Claim 11, wherein the plurality of devices ~~electronic objects~~ is configured for self organizing to create a communication network.
15. (Currently Amended) The wireless transceiver recited in Claim 11, wherein each device ~~electronic object~~ is configured for interfacing with a controller device.
16. (Currently Amended) The wireless transceiver recited in Claim 11, comprising a second plurality of devices ~~electronic objects~~ configured for performing similar ~~the same~~ signal processing on different signals.
17. (Currently Amended) A device ~~An electronic object~~ configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the device's ~~electronic object's~~ identity to at least one other device ~~electronic object configured to function as a different component in the transceiver~~;

a signal-processing means comprising a processor ~~computer processing unit~~ and a non-transitory computer-readable medium comprising first signal processing instructions of a software-defined radio that is distributed across a plurality of devices, comprising: ~~an Object-Oriented Design (OOD) software component of a radio transceiver program configured for performing one of a plurality of steps for converting a received radio signal into a digital baseband signal~~

a set of signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer processing corresponding to the first radio protocol

~~an OOD software interface means for enabling at least one other OOD software component of the radio transceiver program residing in non-transitory memory on the at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps~~.

18. (Currently Amended) The device ~~electronic object~~ recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another device ~~electronic object~~.

19. (Currently Amended) The device ~~electronic object~~ recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of devices ~~electronic objects~~, each of the plurality of devices ~~electronic objects~~ comprising:

~~a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;~~

a processor ~~central processing unit~~;

a communication interface; and

a memory including processor-executable code for a first component of a software-defined radio that is distributed across the plurality of devices; ~~for storing at least one of software and data~~;

providing each of the plurality of devices ~~electronic objects~~ with a set of signal processing instructions for performing a different one of a plurality of physical-layer processing corresponding to a first radio protocol ~~steps of a radio transceiver program configured for converting a received radio signal to a digital baseband signal~~;

~~conveying each electronic object's identity to at least one other electronic object in the transceiver;~~ and

coordinating the plurality of devices to cooperatively process the first radio protocol signals

~~providing for an Object-Oriented Design (OOD) software interface for enabling a first OOD software component of the radio transceiver program residing on a first electronic object to invoke at least one operation in a second OOD software component of the radio transceiver program residing on a second electronic object.~~

Remarks

The independent claims were amended to precisely recite novel features. Minor editorial amendments were made to the dependent claims as required by the amendment to their respective base claims. No new matter was added.

With respect to Claim 1, Pars. [0004]-[0005] of the published application explain that in software-defined radio, radio components that were typically implemented in hardware are now implemented via Physical-Layer algorithms in software by a general-purpose processor. But some radio transceiver components can't be implemented in software (e.g., LNAs, bandpass filters, clocking circuits, ADCs), so the flexibility offered by software-defined radio in adapting to different radio protocols is limited by the hardware.

To solve this problem, Applicant created a software-defined radio that is a distributed computer program whose software components reside on different devices, each with its own processor and memory. Although each software-defined radio component resides on a different device and performs a different operation, they function cooperatively as a single radio (e.g., Par. [0011]). Thus, when an upgrade to a software component requires a corresponding hardware upgrade, it doesn't require replacing the entire hardware platform.

At Pages 3 and 4, the Examination Report mailed 11/18/2015 rejects claim 1 under 35 U.S.C. 102 as being anticipated by US 2009/0156252 (Harris). At pages 5-8, independent claims 11, 17, and 20 were rejected based on the same rationale as the claim 1 rejection. In view of the amendment to the independent claims, these rejections are respectfully traversed for at least the following reasons.

Claim 1 recites, among other things,

1) a first component of a software-defined radio that is distributed across a plurality of devices;

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IPR2025-00780

2) a set of signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol; and
3) a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device.

The independent claims 11, 17, and 20 recite similar features.

Software-defined radio is discussed, for example, in Pars. [0004]-[0005] in the published application, and specific examples of a distributed software-defined radio are disclosed throughout the specification and drawings, such as in FIGs. 1, 2, 6-9 and the related discussions in the specification.

signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol is discussed, for example, in Par. [0004], and specific examples are disclosed in FIGs. 1, 2, 6-9 and the related discussions in the specification.

Signal processing instructions configured to cooperatively process first radio protocol signals with a second device is discussed, for example, in Par. [0011], with specific examples disclosed throughout the specification and drawings.

It is respectfully submitted that none of the cited references discloses these features.

Pars. [0027-0030], [0033], and [0037] of Harris are cited in the rejection of Claim 1 to teach the features "enabling a second OOD software component of the radio transceiver program residing on a second electronic object to invoke at least one operation in the first OOD software component for performing a different one of the plurality of steps.

However, a close look at the Harris reference fails to reveal a software-defined radio, let alone a distributed software-defined radio. Harris fails to disclose software that might suggest software-defined radio, such as software that performs Physical-layer processing. Finally, while the USB standard, such as mentioned in Harris, defines compatibility between devices, there is no

teaching in Harris or in the USB standard to suggest cooperative processing, particularly with respect to signal processing associated with a radio protocol. The distinction between "compatible" and "cooperative" is an important one. In computer networks, "compatible" means capable of being connected to another device without the use of special equipment or software, whereas "cooperative" signifies working together willingly for a common purpose.

For at least these reasons, it is respectfully submitted that the amended claims 1-20 are allowable over Harris.

Applicants may not have presented all possible arguments or have refuted the characterizations of either the claims or the prior art as found in the Examination Report. However, the lack of such arguments or refutations is not intended to act as a waiver of such arguments or as concurrence with such characterizations.

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Conclusion

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

/ Steven J. Shattil/

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Boulder, CO 80308-0355
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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AFTER FINAL AMENDMENT

February 18, 2016

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Final Office Action mailed on November 18, 2015. Amendments to the independent claims were made without broadening their scope. Applicant is willing to participate in an Examiner interview.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper. Remarks/Arguments begin on page 7 of this paper.

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IPR2025-00780

Claims - Amendments

1. (Currently Amended) A first device, ~~electronic object~~ comprising:

~~a hardware component, comprising:~~

~~a hardware interface for communicatively coupling to a second electronic object configured to function as a different component of the transceiver;~~

a first processor ~~central processing unit~~;

a communication network interface; and

a first memory ~~for storing software and data; and~~

~~the memory~~ including processor-executable code for a first ~~Object-Oriented Design (OOD) software~~ component of a software-defined radio ~~transceiver program~~ that is distributed across a plurality of devices, comprising:

a set of signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol ~~for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal~~; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer processing corresponding to the first radio protocol

~~a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and~~

~~an OOD software interface for enabling a second OOD software component of the radio transceiver program residing on a second electronic object to invoke at least one operation in the first OOD software component, wherein the second OOD software component comprises instructions for performing a different one of the plurality of steps~~.

2. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, wherein the memory further comprises signal processing instructions ~~discovery component is~~ configured for identifying other devices ~~electronic objects~~ and their capabilities.

3. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured for routing signals between a plurality of devices ~~electronic objects~~.
4. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured for self organizing with the second device ~~electronic object~~ to create a communication network.
5. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured for interfacing with a controller device.
6. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, comprising a plurality of devices ~~electronic objects~~.
9. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured to write software.
10. (Currently Amended) The first device ~~electronic object~~ recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. (Currently Amended) A wireless transceiver comprising a plurality of devices ~~electronic objects~~, each device ~~electronic object~~ comprising:

~~a hardware component, comprising:~~

~~a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;~~

a processor ~~central processing unit~~;

a communication network interface; and

a memory ~~for storing at least one of software and data; and~~

~~the memory~~ including processor-executable code for one ~~an Object-Oriented Design (OOD)~~ software component of a software-defined radio that is distributed across a plurality of devices ~~radio transceiver program~~, comprising:

a set of signal processing instructions configured to perform a physical-layer processing corresponding to a first radio protocol ~~for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal~~;

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
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~~a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object~~; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with an other device comprising an other processor and an other memory including processor-executable code for an other component of the software-defined radio, the other memory comprising a set of signal processing instructions configured to perform an other physical-layer processing corresponding to the first radio protocol

~~an OOD software interface for enabling at least one other OOD software component of the radio transceiver program residing on at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps~~.

12. (Currently Amended) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of devices ~~electronic objects~~.
13. (Currently Amended) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of devices ~~electronic objects~~ is configured for routing signals between the plurality of devices ~~electronic objects~~.
14. (Currently Amended) The wireless transceiver recited in Claim 11, wherein the plurality of devices ~~electronic objects~~ is configured for self organizing to create a communication network.
15. (Currently Amended) The wireless transceiver recited in Claim 11, wherein each device ~~electronic object~~ is configured for interfacing with a controller device.
16. (Currently Amended) The wireless transceiver recited in Claim 11, comprising a second plurality of devices ~~electronic objects~~ configured for performing similar ~~the same~~ signal processing on different signals.
17. (Currently Amended) A device ~~An electronic object~~ configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the device's ~~electronic object's~~ identity to at least one other device ~~electronic object configured to function as a different component in the transceiver~~;

a signal-processing means comprising a processor ~~computer processing unit~~ and a non-transitory computer-readable medium comprising first signal processing instructions of a software-defined radio that is distributed across a plurality of devices, comprising: ~~an Object-Oriented Design (OOD) software component of a radio transceiver program configured for performing one of a plurality of steps for converting a received radio signal into a digital baseband signal~~

a set of signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol; and

a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device comprising a second processor and a second memory including processor-executable code for a second component of the software-defined radio, the second memory comprising a set of signal processing instructions configured to perform a second physical-layer processing corresponding to the first radio protocol

~~an OOD software interface means for enabling at least one other OOD software component of the radio transceiver program residing in non-transitory memory on the at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps~~.

18. (Currently Amended) The device ~~electronic object~~ recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another device ~~electronic object~~.

19. (Currently Amended) The device ~~electronic object~~ recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of devices ~~electronic objects~~, each of the plurality of devices ~~electronic objects~~ comprising:

~~a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;~~

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a processor ~~central processing unit~~;

a communication interface; and

a memory including processor-executable code for a first component of a software-defined radio that is distributed across the plurality of devices; ~~for storing at least one of software and data~~;

providing each of the plurality of devices ~~electronic objects~~ with a set of signal processing instructions for performing a different one of a plurality of physical-layer processing corresponding to a first radio protocol ~~steps of a radio transceiver program configured for converting a received radio signal to a digital baseband signal~~;

~~conveying each electronic object's identity to at least one other electronic object in the transceiver;~~ and

coordinating the plurality of devices to cooperatively process the first radio protocol signals

~~providing for an Object-Oriented Design (OOD) software interface for enabling a first OOD software component of the radio transceiver program residing on a first electronic object to invoke at least one operation in a second OOD software component of the radio transceiver program residing on a second electronic object.~~

Remarks

The independent claims were amended to precisely recite novel features. Minor editorial amendments were made to the dependent claims as required by the amendment to their respective base claims. No new matter was added.

With respect to Claim 1, Pars. [0004]-[0005] of the published application explain that in software-defined radio, radio components that were typically implemented in hardware are now implemented via Physical-Layer algorithms in software by a general-purpose processor. But some radio transceiver components can't be implemented in software (e.g., LNAs, bandpass filters, clocking circuits, ADCs), so the flexibility offered by software-defined radio in adapting to different radio protocols is limited by the hardware.

To solve this problem, Applicant created a software-defined radio that is a distributed computer program whose software components reside on different devices, each with its own processor and memory. Although each software-defined radio component resides on a different device and performs a different operation, they function cooperatively as a single radio (e.g., Par. [0011]). Thus, when an upgrade to a software component requires a corresponding hardware upgrade, it doesn't require replacing the entire hardware platform.

At Pages 3 and 4, the Examination Report mailed 11/18/2015 rejects claim 1 under 35 U.S.C. 102 as being anticipated by US 2009/0156252 (Harris). At pages 5-8, independent claims 11, 17, and 20 were rejected based on the same rationale as the claim 1 rejection. In view of the amendment to the independent claims, these rejections are respectfully traversed for at least the following reasons.

Claim 1 recites, among other things,

1) a first component of a software-defined radio that is distributed across a plurality of devices;

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

2) a set of signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol; and
3) a set of signal processing instructions configured to cooperatively process first radio protocol signals with a second device.

The independent claims 11, 17, and 20 recite similar features.

Software-defined radio is discussed, for example, in Pars. [0004]-[0005] in the published application, and specific examples of a distributed software-defined radio are disclosed throughout the specification and drawings, such as in FIGs. 1, 2, 6-9 and the related discussions in the specification.

signal processing instructions configured to perform a first physical-layer processing corresponding to a first radio protocol is discussed, for example, in Par. [0004], and specific examples are disclosed in FIGs. 1, 2, 6-9 and the related discussions in the specification.

Signal processing instructions configured to cooperatively process first radio protocol signals with a second device is discussed, for example, in Par. [0011], with specific examples disclosed throughout the specification and drawings.

It is respectfully submitted that none of the cited references discloses these features.

Pars. [0027-0030], [0033], and [0037] of Harris are cited in the rejection of Claim 1 to teach the features "enabling a second OOD software component of the radio transceiver program residing on a second electronic object to invoke at least one operation in the first OOD software component for performing a different one of the plurality of steps.

However, a close look at the Harris reference fails to reveal a software-defined radio, let alone a distributed software-defined radio. Harris fails to disclose software that might suggest software-defined radio, such as software that performs Physical-layer processing. Finally, while the USB standard, such as mentioned in Harris, defines compatibility between devices, there is no

teaching in Harris or in the USB standard to suggest cooperative processing, particularly with respect to signal processing associated with a radio protocol. The distinction between "compatible" and "cooperative" is an important one. In computer networks, "compatible" means capable of being connected to another device without the use of special equipment or software, whereas "cooperative" signifies working together willingly for a common purpose.

For at least these reasons, it is respectfully submitted that the amended claims 1-20 are allowable over Harris.

Applicants may not have presented all possible arguments or have refuted the characterizations of either the claims or the prior art as found in the Examination Report. However, the lack of such arguments or refutations is not intended to act as a waiver of such arguments or as concurrence with such characterizations.

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Conclusion

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

/ Steven J. Shattil/

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(720) 234-4351

Samsung Exhibit 1092, Page 218 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
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Electronic Acknowledgement Receipt	
EFS ID:	24954210
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	18-FEB-2016
Filing Date:	26-MAY-2011
Time Stamp:	16:22:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Response After Final Action	D13_002_OA7_response.pdf	129709 0d8193a74028beaf7d5bb00295e8ee6752a06d7e	no	10
Warnings:					
Information:					
		Total Files Size (in bytes):	129709		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **02/18/2016**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	**0**

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/KAREN VESTAL/

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

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 11/18/2015

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
11/18/2015	PAPER

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.

Office Action Summary	**Application No.** 13/116,984	**Applicant(s)** SEN ET AL.	
	Examiner LEWIS WEST	**Art Unit** 2648	**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 *11/02/2015*.

☐ 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) *1-20* 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) *1-20* 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: _____.

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

Response to Arguments

Applicant's arguments filed 11/02/2015 have been fully considered but they are not persuasive.

The invention of Harris is disclose in paragraph 0048 {as already clearly cited} as being runnable in at least windows XP; which is an object oriented program environment. Further Python as cited in 0049 is also object oriented; as is Java. Further when C is referered to in the art in a windows environment it generally refers to the Visual C++ object oriented programming, as window uses this language to pull information from dynamic link libraries in order to operate.

Applicant may not merely pick and choose parts of the reference and ignore those which contradict his arguments.

The program must have hardware in order to operate, software in and of itself cannot create a radio signal.

Claim Rejections - 35 USC § 102

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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

A person shall be entitled to a patent unless –

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

Claims 1-9 and 11-20 are rejected under pre-AIA 35 U.S.C. 102(e) as being anticipated by Harris (US 2009/0156252).

Regarding claim 1, Harris discloses a first electronic object comprising:

a hardware component, comprising a hardware interface for communicatively coupling to a second electronic object configured to function as a different component of the transceiver; a central processing unit; and a memory for storing software and data; [0027-0029] and

the memory including processor executable code for a first object oriented design software component of a radio transceiver program, comprising:

a set of signal processing instruction for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal; [0027 the package may be functional as a CDMA transceiver, thus converting received radio to digital baseband ;0048; it may be running windows based or Macintosh based both of which are Object Oriented]

a discovery component configured for conveying the electronic objects identity to the at least one other electronic object; [0028] and

and OOD software interface for enabling a second OOD software component of the radio transceiver program residing on a second electronic object to invoke at least one operation in the first OOD software component, wherein the second OOD software component comprises instruction for performing a different one of the plurality of steps. [0027-0030; 0033; 0037; the

device may be composed of the basic phone module, as well as the communication module which controls operation of the first module as here claimed to allow communications]

2. The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities. [0028]

3. The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects. [0032, 0040]

4. The electronic object recited in Claim 1, further configured for self-organizing with the second electronic object to create a communication network. [0028]

5. The electronic object recited in Claim 1, further configured for interfacing with a controller device. [0032-0033]

6. The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink. [0027 memory may be a source or sink for data]

7. The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs. [0028 plug and play]

8. The electronic object recited in Claim 1, comprising a plurality of electronic objects. [0028-0040]

9. The electronic object recited in Claim 1, further configured to write software. [0036, 0049 the device is programmable and expressly described as updatable upon connection to a network, and parameters may be input and written to the device.]

11. A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

a hardware component, comprising a hardware interface tbr communicatively coupling to at least one other

electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

the memory including processor executable code for an Object-Oriented Design (OOD) software component of a radio transceiver

program, comprising:

a set of signal processing instructions for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal

a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

an OOD software interface for enabling at least one other OOD software component of the radio transceiver program residing on the at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instruction for performing a different one of the plurality of steps. [0027-0040; See the rejection of claim 1 above]

12. The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects. [0032, 0040]

13. The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects. [0032, 0040]

14. The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self-organizing to create a communication network. [0028, plug and play, connected devices are networked automatically]

15. The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device. [0032-0033]

16. The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals. [0028-0040]

17. An electronic object configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

a signal-processing means comprising a computer processing unit and a non-transitory computer-readable medium comprising first signal processing instructions of an Object-Oriented Design (OOD) software component of a radio transceiver program configured for performing one of a plurality of steps for converting a received radio signal into a digital baseband signal and

an OOD software interface means for enabling at least one other OOD software component of the radio transceiver program residing in non-transitory memory on the at least one other electronic object to invoke at least one operation in the OOD software component,

wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps. [0027-0040, see rejection of claim 1 above]

18. (Original) The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object. [functionality is extended, 0027-0040]

19. (Original) The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter. [0027, plug and play, see also figures, modules are adaptable to different connections and functions]

20. a method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;

a central processing unit; and

a memory for storing at least one of software and data;

providing each of the plurality of electronic objects with a set of signal processing instructions for performing a different one of a plurality of steps of a radio transceiver program configured for converting a received radio signal to a digital baseband signal

conveying each electronic object's identity to at least one other electronic object in the transceiver; and

providing for an Object-Oriented Design (OOD) software interface for enabling a first OOD software component of the radio transceiver program residing on a first electronic object to invoke at least one operation in a second OOD software component of the radio transceiver program residing on a second electronic object. [0027-0040, see the rejection of claim 1]

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 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 negatived by the manner in which the invention was made.

Claim 10 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Harris.

10. Harris discloses the electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions. [0036, the device is programmable and the identity may be updated in order to allow log-ins]

but is silent as to updating said identity. Examiner takes official notice that it was notorious to one of ordinary skill in the art at the time of the invention to update the identity of a device when reprogramming to allow other users. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to update its identity upon updates to its set of signal processing instructions in order to allow the device and/or modules to be used by a new user if the device is sold or given away, due to the original user upgrading or changing devices.

Conclusion

THIS ACTION IS MADE FINAL. 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 mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEWIS WEST whose telephone number is (571)272-7859. The examiner can normally be reached on Monday-Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wesley Kim can be reached on 571-272-7867. 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.

/LEWIS WEST/
Primary Examiner, Art Unit 2648

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

CPC- SEARCHED		
Symbol	Date	Examiner
H04B 1/0003	07/28/2015	LW

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	550.1, 556.1, 66.1, 575.1, 73, 418	10/30/2012	LW

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	10/30/2012	LW
updated search	11/12/2013	LW
updated search	09/26/2014	LW
updated search	07/28/2015	LW
updated search	11/16/2015	LW

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

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

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

CLAIM		DATE								
Final	Original	10/30/2012	11/12/2013	03/21/2014	09/26/2014	07/28/2015	11/16/2015			
	1	✓	✓	✓	✓	✓	✓			
	2	✓	✓	✓	✓	✓	✓			
	3	✓	✓	✓	✓	✓	✓			
	4	✓	✓	✓	✓	✓	✓			
	5	✓	✓	✓	✓	✓	✓			
	6	✓	✓	✓	✓	✓	✓			
	7	✓	✓	✓	✓	✓	✓			
	8	✓	✓	✓	✓	✓	✓			
	9	✓	✓	✓	✓	✓	✓			
	10	✓	✓	✓	✓	✓	✓			
	11	✓	✓	✓	✓	✓	✓			
	12	✓	✓	✓	✓	✓	✓			
	13	✓	✓	✓	✓	✓	✓			
	14	✓	✓	✓	✓	✓	✓			
	15	✓	✓	✓	✓	✓	✓			
	16	✓	✓	✓	✓	✓	✓			
	17	✓	✓	✓	✓	✓	✓			
	18	✓	✓	✓	✓	✓	✓			
	19	✓	✓	✓	✓	✓	✓			
	20	✓	✓	✓	✓	✓	✓			

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT

November 2, 2015

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on July 31, 2015.

The three-month due date for responding to this Office Action falls on a Saturday, and this response is filed on the next succeeding business day under 37 CFR 1.7. Therefore, no extension of time is believed due.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper. Remarks/Arguments begin on page 6 of this paper.

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IPR2025-00780

Claims - Amendments

1. (Currently Amended) A first electronic object comprising:

a hardware component, comprising:

a hardware interface for communicatively coupling to a second electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing software and data; and

the memory including processor-executable code for a first Object-Oriented Design (OOD) software component of a radio transceiver program, comprising:

a set of signal processing instructions for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal;

a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and

an OOD software interface for enabling a second OOD software component of the radio transceiver program residing on a second electronic object to invoke at least one operation in the first OOD software component, wherein the second OOD software component comprises instructions for performing a different one of the plurality of steps.

2. (Original) The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities.
3. (Original) The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects.
4. (Previously Amended) The electronic object recited in Claim 1, further configured for self organizing with the second electronic object to create a communication network.
5. (Original) The electronic object recited in Claim 1, further configured for interfacing with a controller device.
6. (Original) The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Original) The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs.

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IPR2025-00780

8. (Original) The electronic object recited in Claim 1, comprising a plurality of electronic objects.
9. (Original) The electronic object recited in Claim 1, further configured to write software.
10. (Original) The electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. (Currently Amended) A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

a hardware component, comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

the memory including processor-executable code for an Object-Oriented Design (OOD) software component of a radio transceiver program, comprising:

a set of signal processing instructions for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal;

a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

an OOD software interface for enabling at least one other OOD software component of the radio transceiver program residing on at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps.

12. (Original) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects.
13. (Original) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects.
14. (Original) The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network.

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15. (Original) The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device.
16. (Original) The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals.
17. (Previously Amended) An electronic object configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

a signal-processing means comprising a computer processing unit and a non-transitory computer-readable medium comprising first signal processing instructions of an Object-Oriented Design (OOD) software component of a radio transceiver program configured for performing one of a plurality of steps for converting a received radio signal into a digital baseband signal; and

an OOD software interface means for enabling at least one other OOD software component of the radio transceiver program residing in non-transitory memory on the at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps.

18. (Original) The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object.
19. (Original) The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.
20. (Previously Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;

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a central processing unit; and

a memory for storing at least one of software and data;

providing each of the plurality of electronic objects with a set of signal processing instructions for performing a different one of a plurality of steps of a radio transceiver program configured for converting a received radio signal to a digital baseband signal;

conveying each electronic object's identity to at least one other electronic object in the transceiver; and

providing for an Object-Oriented Design (OOD) software interface for enabling a first OOD software component of the radio transceiver program residing on a first electronic object to invoke at least one operation in a second OOD software component of the radio transceiver program residing on a second electronic object.

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Remarks – Claims

Claims 1-20 are pending.

Claims 1 and 11 are currently amended to provide minor editorial changes.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on July 31, 2015 and offers the following remarks.

1. Response to Arguments

The Patent Office stated that Applicant's arguments filed on 07/06/2015 were not persuasive because of the following reasons:

1) The Patent Office contends that Harris operates with Object Oriented Programming

Applicant respectfully disagrees. Harris does not mention Object Oriented Programming. Harris makes a passing mention of "programs may be written in C or Python, or Java, Brew or any other programming language," Par. [0049]. Not only is there no mention of Object-Oriented programming, C is not an Object-Oriented programming language. Thus, Harris fails to teach "an Object-Oriented Design (OOD) software component of a radio transceiver program," which is a key feature of the independent claims, 1, 11, 17, and 20.

2) The Patent Office contends that a purely software interface is impossible. There must be a physical medium.

Applicant respectfully disagrees. In the art of Object-Oriented Programming, software interfaces between software components are well known. An interface comprises a type definition; anywhere an object can be exchanged (for example, in a function or method call), the *type* of the object to be exchanged can be defined in terms of its interface rather than specifying a particular class. This means that any class that implements that interface can be used. Please see: (https://en.wikipedia.org/wiki/Interface_(computing)#Software_interfaces)

Theoretically a *class* emphasizes the idea of encapsulation, while an *interface* emphasizes the idea of abstraction (by suppressing the details of the implementation).

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In Claim 1, for example, the function of a *class* is implemented by the hardware component, whereas the function of a *software interface* is implemented by the Object-Oriented Design software component. This enables a software-defined radio for a single radio transceiver to comprise multiple software modules that reside on multiple distributed devices. Harris does not mention software-defined radio, and thus fails to mention the "radio transceiver program," such as recited in the independent Claims 1, 11, 17, and 20.

Since Harris fails to teach each and every feature of the independent Claims 1, 11, 17, and 20, reconsideration of the rejection of Claims 1, 11, 17, and 20 (and the corresponding dependent claims) under 35 U.S.C. 102(e) is respectfully requested.

2. 35 U.S.C. 102 Rejections

The rejection of Claims 1-9, 11-20 under 35 U.S.C. 102(e) in view of US 2009/0156252 (Harris) was restated.

This rejection is respectfully traversed, and reconsideration is requested in view of the fact that, as described above, Harris does not teach "an Object-Oriented Design (OOD) software component" or "a radio transceiver program," such as recited in each of the independent Claims 1, 11, 17, and 20.

Instead, Harris mentions USB, which employs a device driver to enable operating systems and computer programs to access hardware functions. A device driver acts as a translator between a hardware device and the application or operating system that uses it. In software-defined radio, significant portions of signal processing are implemented by a general-purpose processor instead of being performed by specific-purpose hardware, which is why a person of ordinary skill in the art would find no teaching or motivation in Harris to employ USB to link OOD software components of a software-defined radio.

Since the cited reference, Harris, fails to show all the elements of the independent Claims 1, 11, 17, and 20, reconsideration of the rejection of the independent Claims 1, 11, 17, and 20 under 35 U.S.C. 102(e) is respectfully requested.

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Dependent Claims 2-9, 12-16, 18, and 19

The dependent claims 2-9, 12-16, 18, and 19 currently under consideration in the application are dependent upon the independent Claims 1, 11, 17, and 20 discussed above, and, therefore, are believed to be allowable over the applied combination of references for at least the same reasons.

35 U.S.C. 103 Rejection

Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of what the Patent Office infers as common knowledge to one of ordinary skill in the art.

This rejection is respectfully traversed, and reconsideration is requested in view of the following reason.

Since Claim 10 is dependent upon the independent Claim 1, and because Harris fails to show all the elements of the amended independent Claim 1, Claim 10 is patentable over the combination of Harris and the common knowledge of one of ordinary skill in the art. Therefore, reconsideration of the rejection of Claim 10 under 35 U.S.C. 103(a) is respectfully requested.

Accordingly, all of the pending claims currently under consideration, Claims 1-20, are believed to be patentable over the cited references.

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Conclusion

The Applicant has endeavored to address all of the examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claims are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. Although the present communication includes alterations to the claims and characterizations of claim scope and the referenced art, no acquiescence, disclaimer, or estoppel is intended or should be inferred thereby. Applicant is not conceding in this application that the previously pending claims are not patentable over the cited references. Rather, any amendments are only being made to expedite prosecution of the application and are without prejudice to the presentation or assertion in the future of claims relating to the same or similar subject matter. Applicant reserves the right to later submit additional or alternative arguments of patentability that may have not been presented at this time.

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

/ Steven J. Shattil/

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Boulder, CO 80308-0355
(720) 234-4351

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IPR2025-00780

Electronic Acknowledgement Receipt	
EFS ID:	23959479
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	02-NOV-2015
Filing Date:	26-MAY-2011
Time Stamp:	14:38:47
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	Amendment/Req. Reconsideration-After Non-Final Reject	D13_002_Response_OA_6.pdf	174481 72cadf85e6904cc0cc1484ccbe636512a17690b5	no	10

Warnings:	
Information:	
Total Files Size (in bytes):	174481

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **11/02/2015**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	**0**

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/VANESSA BARBER/

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

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 07/31/2015

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	

ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
07/31/2015	PAPER

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.

Office Action Summary	Application No. 13/116,984	Applicant(s) SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	AIA (First Inventor to File) Status No

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☒ Responsive to communication(s) filed on *07/06/2015*.

☐ 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) *1-20* 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) *1-20* 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: _____.

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

Response to Arguments

Applicant's arguments filed 07/06/2015 have been fully considered but they are not persuasive.

OOD does not provide a distinction as Harris operates with object oriented programming.

Useful is not claimed, and is therefore moot.

Further the communications module in Harris is used to make “useful" communication in combination with the main module.

USB absolutely allows software control, and does so in the reference as cited. A purely software interface is impossible; there must be a physically medium whether wired or wireless.

Claim Rejections - 35 USC § 102

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

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

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

Claims 1-9 and 11-20 are rejected under pre-AIA 35 U.S.C. 102(e) as being anticipated by Harris (US 2009/0156252).

Regarding claim 1, Harris discloses a first electronic object comprising:

a hardware component, comprising a hardware interface for communicatively coupling to a second electronic object configured to function as a different component of the transceiver; a central processing unit; and a memory for storing software and data; [0027-0029] and

a first object oriented design software component of a radio transceiver program, comprising:

a set of signal processing instruction for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal; [0027 the package may be functional as a CDMA transceiver, thus converting received radio to digital baseband ;0048; it may be running windows based or Macintosh based both of which are Object Oriented]

a discovery component configured for conveying the electronic objects identity to the at least one other electronic object; [0028] and

and OOD software interface for enabling a second OOD software component of the radio transceiver program residing on a second electronic object to invoke at least one operation in the first OOD software component, wherein the second OOD software component comprises instruction for performing a different one of the plurality of steps. [0027-0030; 0033; 0037; the device may be composed of the basic phone module, as well as the communication module which controls operation of the first module as here claimed to allow communications]

2. The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities. [0028]

3. The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects. [0032, 0040]

4. The electronic object recited in Claim 1, further configured for self-organizing with the second electronic object to create a communication network. [0028]

5. The electronic object recited in Claim 1, further configured for interfacing with a controller device. [0032-0033]

6. The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink. [0027 memory may be a source or sink for data]

7. The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs. [0028 plug and play]

8. The electronic object recited in Claim 1, comprising a plurality of electronic objects. [0028-0040]

9. The electronic object recited in Claim 1, further configured to write software. [0036, 0049 the device is programmable and expressly described as updatable upon connection to a network, and parameters may be input and written to the device.]

11. A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

a hardware component, comprising a hardware interface tbr communicatively coupling to at least one other

electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

an Object-Oriented Design (OOD) software component of a radio transceiver program, comprising:

a set of signal processing instructions for performing one of a plurality of steps for converting a received radio signal to a digital baseband signal

a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

an OOD software interface for enabling at least one other OOD software component of the radio transceiver program residing on the at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instruction for performing a different one of the plurality of steps. [0027-0040; See the rejection of claim 1 above]

12. The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects. [0032, 0040]

13. The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects. [0032, 0040]

14. The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self-organizing to create a communication network. [0028, plug and play, connected devices are networked automatically]

15. The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device. [0032-0033]

16. The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals. [0028-0040]

17. An electronic object configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

a signal-processing means comprising a computer processing unit and a non-transitory computer-readable medium comprising first signal processing instructions of an Object-Oriented Design (OOD) software component of a radio transceiver program configured for performing one of a plurality of steps for converting a received radio signal into a digital baseband signal and

an OOD software interface means for enabling at least one other OOD software component of the radio transceiver program residing in non-transitory memory on the at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps. [0027-0040, see rejection of claim 1 above]

18. (Original) The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object. [functionality is extended, 0027-0040]

19. (Original) The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter. [0027, plug and play, see also figures, modules are adaptable to different connections and functions]

20. a method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;

a central processing unit; and

a memory for storing at least one of software and data;

providing each of the plurality of electronic objects with a set of signal processing instructions for performing a different one of a plurality of steps of a radio transceiver program configured for converting a received radio signal to a digital baseband signal

conveying each electronic object's identity to at least one other electronic object in the transceiver; and

providing for an Object-Oriented Design (OOD) software interface for enabling a first OOD software component of the radio transceiver program residing on a first electronic object to invoke at least one operation in a second OOD software component of the radio transceiver program residing on a second electronic object. [0027-0040, see the rejection of claim 1]

Claim Rejections - 35 USC § 103

The following is a quotation of pre-AIA 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 negatived by the manner in which the invention was made.

Claim 10 is rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Harris.

10. Harris discloses the electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions. [0036, the device is programmable and the identity may be updated in order to allow log-ins]

but is silent as to updating said identity. Examiner takes official notice that it was notorious to one of ordinary skill in the art at the time of the invention to update the identity of a device when reprogramming to allow other users. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to update its identity upon updates to its set of signal processing instructions in order to allow the device and/or modules to be used by a new user if the device is sold or given away, due to the original user upgrading or changing devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEWIS WEST whose telephone number is (571)272-7859. The examiner can normally be reached on Monday-Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wesley Kim can be reached on 571-272-7867. 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.

/LEWIS WEST/
Primary Examiner, Art Unit 2648

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

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

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

CLAIM		DATE								
Final	Original	10/30/2012	11/12/2013	03/21/2014	09/26/2014	07/28/2015				
	1	✓	✓	✓	✓	✓				
	2	✓	✓	✓	✓	✓				
	3	✓	✓	✓	✓	✓				
	4	✓	✓	✓	✓	✓				
	5	✓	✓	✓	✓	✓				
	6	✓	✓	✓	✓	✓				
	7	✓	✓	✓	✓	✓				
	8	✓	✓	✓	✓	✓				
	9	✓	✓	✓	✓	✓				
	10	✓	✓	✓	✓	✓				
	11	✓	✓	✓	✓	✓				
	12	✓	✓	✓	✓	✓				
	13	✓	✓	✓	✓	✓				
	14	✓	✓	✓	✓	✓				
	15	✓	✓	✓	✓	✓				
	16	✓	✓	✓	✓	✓				
	17	✓	✓	✓	✓	✓				
	18	✓	✓	✓	✓	✓				
	19	✓	✓	✓	✓	✓				
	20	✓	✓	✓	✓	✓				

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

CPC- SEARCHED		
Symbol	Date	Examiner
H04B 1/0003	07/28/2015	LW

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	550.1, 556.1, 66.1, 575.1, 73, 418	10/30/2012	LW

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	10/30/2012	LW
updated search	11/12/2013	LW
updated search	09/26/2014	LW
updated search	07/28/2015	LW

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT

July 6, 2015

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Communication mailed on June 4, 2015. An amendment to the Claims was made to correct the issues noted in the Notice of Non-Compliant Amendment. This letter is also responsive to the Office Action mailed on October 1, 2014.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper. Remarks/Arguments begin on page 7 of this paper.

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Claims - Amendments

1. (Currently Amended) [[An]] A first electronic object ~~configured to function as one of a plurality of components in a transceiver, the electronic object~~ comprising:

a hardware component, comprising

~~one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, wherein each of the plurality of hardware components performs an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal, the one of the plurality of hardware components comprising~~:

a hardware interface for communicatively coupling to a second ~~at least one other~~ electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing ~~at least one of~~ software and data; and

a first Object-Oriented Design (OOD) software component of a radio transceiver program, comprising:

a set of signal processing instructions for performing ~~signal processing corresponding to~~ one of ~~the~~ a plurality of steps for converting a received radio signal to a digital baseband signal ~~components in the transceiver~~;

a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and

[[a]] an OOD software interface for enabling a second OOD software component of the radio transceiver program residing on a second electronic object to invoke at least one operation in the first OOD software component, wherein the second OOD software component comprises instructions for performing a different one of the plurality of steps ~~allowing the at least one other electronic object to access the electronic object's resources~~.

2. (Original) The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities.

3. (Original) The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects.

4. (Currently Amended) The electronic object recited in Claim 1, further configured for self organizing with the second ~~at least one other~~ electronic object to create a communication network.
5. (Original) The electronic object recited in Claim 1, further configured for interfacing with a controller device.
6. (Original) The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Original) The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Original) The electronic object recited in Claim 1, comprising a plurality of electronic objects.
9. (Original) The electronic object recited in Claim 1, further configured to write software.
10. (Original) The electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. (Currently Amended) A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

a hardware component, comprising

~~one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, the one of the plurality of hardware components performing an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal, the one of the plurality of hardware components comprising~~:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

[[a]] an Object-Oriented Design (OOD) software component of a radio transceiver program, comprising:

a set of signal processing instructions for performing ~~signal processing corresponding to~~ one of a plurality of steps for converting a received radio signal to a digital baseband signal ~~components in the transceiver~~;

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a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

[[a]] an OOD software interface for enabling at least one other OOD software component of the radio transceiver program residing on at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps ~~allowing the at least one other electronic object to access the electronic object's resources~~.

12. (Original) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects.
13. (Original) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects.
14. (Original) The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network.
15. (Original) The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device.
16. (Original) The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals.
17. (Currently Amended) An electronic object configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

a signal-processing means comprising a computer processing unit and a non-transitory computer-readable medium comprising first signal processing instructions of an Object-Oriented Design (OOD) software component of a radio transceiver program configured for performing one of a plurality of steps for converting a received radio signal into a digital baseband signal

~~one of a plurality of signal processing means configured to function together for converting a modulated radio signal into a digital electronic information signal, the one of~~

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~~the plurality of signal processing means performing an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal~~; and

an OOD software interface means for enabling at least one other OOD software component of the radio transceiver program residing in non-transitory memory on the at least one other electronic object to invoke at least one operation in the OOD software component, wherein the at least one other OOD software component comprises instructions for performing a different one of the plurality of steps ~~access the electronic object's resources through physical and logical entry points~~.

18. (Original) The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object.

19. (Original) The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;

a central processing unit; and

a memory for storing at least one of software and data;

providing each of the plurality of electronic objects with a set of signal processing instructions for performing a different one of a plurality of steps of a radio transceiver program configured for converting a received radio signal to a digital baseband signal ~~such that the plurality of electronic objects functions together to convert a digital electronic information signal into a modulated radio signal, wherein each of the plurality of electronic objects performs an insufficient number of steps for converting a digital electronic information signal into a modulated radio signal~~;

conveying each electronic object's identity to at least one other electronic object in the transceiver; and

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providing for an Object-Oriented Design (OOD) software interface for enabling a first OOD software component of the radio transceiver program residing on a first electronic object to invoke at least one operation in a second OOD software component of the radio transceiver program residing on a second electronic object

~~configuring each electronic object to access the at least one other electronic object's resources~~.

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Remarks – Claims

Claims 1-20 are pending.

Independent Claims 1, 11, 17, and 20 were amended to clarify the claimed invention. All of the amendments are supported by the disclosure. For example:

"Object-Oriented Design (OOD) software component" is disclosed throughout the specification, such as Par. [0035], which discloses that principles of Object-Oriented Design are utilized in aspects of the invention.

"Steps for converting a received radio signal to a digital baseband signal" is described throughout the specification and illustrated in the Figures, such as the electronic objects 120-123 in FIGs. 1 and 2 and corresponding paragraphs in the specification disclose how a plurality of electronic objects convert a received radio signal to a digital baseband signal. For example, the steps of frequency down conversion 135, analog-to-digital conversion 136, pulse shape filtering 121, equalization 122, and demultiplexing 123 convert a received radio signal to a digital baseband signal.

"Enabling a second OOD software component… to invoke at least one operation in the first OOD software component" is disclosed throughout the specification, such as Par. [0070], which discloses that a software interface can refer to a set of named operations that can be invoked.

Other support for the amendments can be found throughout the disclosure.

Dependent Claim 4 was amended to correct the antecedent basis, as necessitated by the amendment to the corresponding independent claim 1.

Remarks – Application Data Sheet

A copy of the amended Application Data Sheet that was submitted with the Petition filed on February 13, 2015 is included herewith. It comprises a corrected claim of priority under 35 U.S.C. 120. The amendment contains no new matter.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on October 1, 2014 and offers the following remarks.

1. Response to Arguments

The Patent Office stated that Applicant's arguments filed on 03/14/2014 were not persuasive because Harris shows an encryption/decryption component that may perform encryption for other modules (Par. [0023]), and that the encrypted signal may not be completely transformed to a useful information signal without decryption.

However, there is no teaching in the art concerning the Physical Layer process of "converting a received radio signal to a digital baseband signal" (such as recited in Claim 1) that requires the digital baseband signal to be "useful." Rather, the determination of whether a digital baseband signal is useful is made at a higher layer, particularly, the Presentation Layer or the Application Layer.

Specifically, a person of ordinary skill in the art would be guided by the definition of "transceiver" as it pertains to radio communications (such as http://en.wikipedia.org/wiki/Transceiver), which uses RF modules for high speed data transmission, and wherein "data transmission" is the physical transfer of data (a digital bit stream or a digitized analog signal) over a point-to-point or point-to-multipoint communication channel. The "physical transfer of data" pertains to the Physical Layer, which "defines the means of transmitting raw bits rather than logical data packets over a physical link connecting network nodes" (e.g., http://en.wikipedia.org/wiki/Physical_layer). The steps of frequency down conversion 135, analog-to-digital conversion 136, pulse shape filtering 121, equalization 122, and demultiplexing 123 disclosed in the Specification are listed major functions performed by the Physical Layer to convert a received radio signal to a digital baseband signal.

2. 35 U.S.C. 102 Rejections

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The rejection of Claims 1-9, 11-20 under 35 U.S.C. 102(e) in view of US 2009/0156252 (Harris) was restated.

In view of the current amendment to the independent claims, this rejection is respectfully traversed, and reconsideration is requested in view of the following reasons.

With respect to the rejection of Claim 1, the Patent Office cited the encryption/decryption component taught in Harris as showing a step of converting a modulated radio signal into a digital electronic information signal. However, decryption (and encryption) is not a step in the Physical Layer process of "converting a received radio signal to a digital baseband signal," but rather is a Presentation Layer process which is performed after the received radio signal is converted to a digital baseband signal, and after reliable transmission of data frames is ensured (Data Link Layer), and after addressing and routing is handled (Network Layer), and after reliable transmission of data segments is ensured (Transport Layer), and after managing communication sessions (Session Layer), and after character decoding and decompression in the Presentation Layer.

Par. [0023] of Harris discloses an encryption device that can decrypt information in the other unit. Encryption is part of the presentation layer (Layer 6 of the OSI model), which establishes context between application-layer entities. Data encryption is unrelated to the Physical Layer (Layer 1), which governs the process of converting a received radio signal to a digital baseband signal (e.g., "the means of transmitting raw bits rather than logical data packets over a physical link connecting network nodes" (http://en.wikipedia.org/wiki/Physical_layer)).

Thus, Harris fails to disclose "a first electronic object… comprising a set of signal processing instructions for performing one of a plurality of steps of converting a received radio signal to a digital baseband signal… and an OOD software interface for enabling a second OOD software component residing on a second electronic object to access the first OOD software component's resources, wherein the second OOD software component comprises instructions for performing a different one of the plurality of radio transceiver steps," such as recited in Claim 1.

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In Harris, the transceiver (i.e., the cellular telephone) does not comprise modular components. Instead, it connects to peripheral devices (e.g., a display (Par. 27), an earpiece, a microphone, and a voice recognition module (Par. 30)), which do not perform "converting a received radio signal to a digital baseband signal."

Harris fails to disclose a software interface that allows one software object to interact with another software object via accessing its methods. Instead, Harris discloses a translator that enables an application to control a hardware device (i.e., USB).

With respect to the rejection of Claim 1 in the Examination Report, the Patent Office states that a USB can interface software. Applicant disagrees. A device driver used in USB provides a **software interface to hardware devices**, enabling operating systems and computer programs to access **hardware functions**. USB does not provide a software interface to enable one software component to "invoke at least one operation" in another software component (such as recited in Claim 1).

USB is a standard that defines the physical connection and communication for a bus between computers and electronic devices, not between software modules. The functionality of each USB device is defined by the device's class code, which is sent to the USB host, which loads appropriate driver modules. A device driver acts as a translator between a hardware device and the application or operating system that uses it.

The software interface recited in Claim 1 enables a second software component of the radio transceiver residing on a second electronic object to invoke at least one operation in the first software component.

Since the cited reference, Harris, fails to show all the elements of the amended Claim 1, reconsideration of the rejection of Claim 1 under 35 U.S.C. 102(e) is respectfully requested.

Independent Claims 11, 17, and 20

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Since the independent Claims 11, 17, and 20 recite similar novel features as recited in Claim 1, the independent Claims 11, 17, and 20 are believed to be patentable over Harris for at least the same reasons recited above.

Dependent Claims 2-9, 12-16, 18, and 19

The dependent claims 2-9, 12-16, 18, and 19 currently under consideration in the application are dependent upon the independent Claims 1, 11, 17, and 20 discussed above, and, therefore, are believed to be allowable over the applied combination of references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, individual consideration of each on its own merits is respectfully requested.

35 U.S.C. 103 Rejection

Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of what the Patent Office infers as common knowledge to one of ordinary skill in the art.

This rejection is respectfully traversed, and reconsideration is requested in view of the following reason.

Since Claim 10 is dependent upon the independent Claim 1, and because Harris fails to show all the elements of the amended independent Claim 1, Claim 10 is patentable over the combination of Harris and the common knowledge of one of ordinary skill in the art. Therefore, reconsideration of the rejection of Claim 10 under 35 U.S.C. 103(a) is respectfully requested.

Accordingly, all of the pending claims currently under consideration, Claims 1-20, are believed to be patentable over the cited references.

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Conclusion

The Applicant has endeavored to address all of the examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claims are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. Although the present communication includes alterations to the claims and characterizations of claim scope and the referenced art, no acquiescence, disclaimer, or estoppel is intended or should be inferred thereby. Applicant is not conceding in this application that the previously pending claims are not patentable over the cited references. Rather, any amendments are only being made to expedite prosecution of the application and are without prejudice to the presentation or assertion in the future of claims relating to the same or similar subject matter. Applicant reserves the right to later submit additional or alternative arguments of patentability that may have not been presented at this time.

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

/ Steven J. Shattil/

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P.O. Box 17355
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PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

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

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
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Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

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PTO/SB/14 (11-08)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

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All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. [redacted]

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☒ **An Address is being provided for the correspondence Information of this application.**

Name 1	Steven Shattil	**Name 2**	
Address 1	PO Box 17355		
Address 2			
City	Boulder	**State/Province**	CO
Country	US	**Postal Code**	80308
Phone Number	7202344351	**Fax Number**	
Email Address	genghiscomm@gmail.com	[redacted]	[redacted]

Application Information:

Title of the Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers		
Attorney Docket Number	D13-002	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		**Sub Class (if any)**	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		**Suggested Figure for Publication (if any)**	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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

Representative Information:

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	○ Customer Number	◉ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix	[redacted]
	Steven		Shattil		

Registration Number	40170

Additional Representative Information blocks may be generated within this form by selecting the **Add** button.

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Expired		[redacted]
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13116984	non provisional of	61349097	2010-05-27

Prior Application Status	Patented			[redacted]	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13116984	Continuation in part of	12328917	2008-12-05	7965761	2011-06-21

Prior Application Status	Patented			[redacted]	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12328917	Division of	11621014	2008-01-08	7593449	2009-09-22

Prior Application Status	Patented			[redacted]	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11621014	Division of	10131163	2002-04-24	7430257	2008-09-30

Prior Application Status	Expired		[redacted]
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
10131163	non provisional of	60286850	2001-04-26

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

PTO/SB/14 (11-08)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Application Number	Country[i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			◉ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country[i]		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Steven J Shattil/			Date (YYYY-MM-DD)	2015-02-13
First Name	Steven	Last Name	Shattil	Registration Number	40170

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet 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.**

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	20

Application Number	13/116,984
Filing Date	05/26/2011
First Named Inventor	Sen
Art Unit	2648
Examiner Name	West, Lewis G
Attorney Docket Number	D13-002

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  Amended Application Data Sheet

Remarks

This letter is responsive to the Notice of Non-Compliant Amendment mailed on June 4, 2015 and the Office Action mailed on October 1, 2014.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name			
Signature	/Steven J Shattil/		
Printed name	Steven J Shattil		
Date	07/06/2015	Reg. No.	40170

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	/Steven J Shattil/		
Typed or printed name	Steven J Shattil	Date	07/06/2015

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours 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:	22829728
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	06-JUL-2015
Filing Date:	26-MAY-2011
Time Stamp:	14:46:35
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	Amendment Submitted/Entered with Filing of CPA/RCE	D13_002_Response_OA_5.pdf	168253 c7c259655faece80c735e4998779c7b7d81fcc63	no	13
Warnings:					
Information:					
2	Amendment Submitted/Entered with Filing of CPA/RCE	sb0014_copy_print.pdf	43398 56f15dca96b8b1b82239accb271c072d6b724e69	no	5
Warnings:					
Information:					
3	Transmittal Letter	sb0021.pdf	294789 0dff5c1921f92ba1ba964e27047ba9f867d07474	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	506440		

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.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **07/06/2015**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	**0**

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/ANTHONY WILLIAMS/

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 06/04/2015

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
ART UNIT	PAPER NUMBER

DATE MAILED: 06/04/2015

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

PTO-90C (Rev. 10/03)

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No. 13/116,984	Applicant(s) SEN ET AL.
	Examiner LEWIS WEST	Art Unit 2648

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

The amendment document filed on *13 February 2015* is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other _____.
- ☐ 2. Abstract:
  - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other _____.
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other _____.
- ☒ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: *See Continuation Sheet*.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):

_____

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **two months** from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

   Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

   Failure to timely respond to this notice will result in:
   Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or
   Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

/LEWIS WEST/ Primary Examiner, Art Unit 2648	

Continuation of 4(e) Other: Applicant's claims are now so far removed from the original claims as to constitute an Election by Original presentation, especially given that there is new matter not supported by the original specification.The amendment filed on 02/13/2015 canceling all the existing text of the claims drawn to the elected invention and presenting only claims drawn to a non-elected invention is non-responsive (MPEP § 821.03). The remaining claims are not readable on the elected invention because what is now present constitutes not only a different invention but new matter. No wireless netork is defined between modules; nor is there any support in the original specification for what defines a complete set of transceiver function. .
Since the above-mentioned amendment appears to be a bona fide attempt to reply, applicant is given a TIME PERIOD of 2 MONTHS from the mailing date of this notice within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD UNDER 37 CFR 1.136(a) ARE AVAILABLE. .

Notice of Non-Compliant Amendment (37 CFR 1.121)	Application No. 13/116,984	Applicant(s) SEN ET AL.
	Examiner LEWIS WEST	Art Unit 2648

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

The amendment document filed on *13 February 2015* is considered non-compliant because it has failed to meet the requirements of 37 CFR 1.121 or 1.4. In order for the amendment document to be compliant, correction of the following item(s) is required.

THE FOLLOWING MARKED (X) ITEM(S) CAUSE THE AMENDMENT DOCUMENT TO BE NON-COMPLIANT:

- ☐ 1. Amendments to the specification:
  - ☐ A. Amended paragraph(s) do not include markings.
  - ☐ B. New paragraph(s) should not be underlined.
  - ☐ C. Other _____.
- ☐ 2. Abstract:
  - ☐ A. Not presented on a separate sheet. 37 CFR 1.72.
  - ☐ B. Other _____.
- ☐ 3. Amendments to the drawings:
  - ☐ A. The drawings are not properly identified in the top margin as "Replacement Sheet," "New Sheet," or "Annotated Sheet" as required by 37 CFR 1.121(d).
  - ☐ B. The practice of submitting proposed drawing correction has been eliminated. Replacement drawings showing amended figures, without markings, in compliance with 37 CFR 1.84 are required.
  - ☐ C. Other _____.
- ☒ 4. Amendments to the claims:
  - ☐ A. A complete listing of all of the claims is not present.
  - ☐ B. The listing of claims does not include the text of all pending claims (including withdrawn claims)
  - ☐ C. Each claim has not been provided with the proper status identifier, and as such, the individual status of each claim cannot be identified. Note: the status of every claim must be indicated after its claim number by using one of the following status identifiers: (Original), (Currently amended), (Canceled), (Previously presented), (New), (Not entered), (Withdrawn) and (Withdrawn-currently amended).
  - ☐ D. The claims of this amendment paper have not been presented in ascending numerical order.
  - ☒ E. Other: *See Continuation Sheet*.
- ☐ 5. Other (e.g., the amendment is unsigned or not signed in accordance with 37 CFR 1.4):

_____

For further explanation of the amendment format required by 37 CFR 1.121, see MPEP § 714.

TIME PERIODS FOR FILING A REPLY TO THIS NOTICE:

1. Applicant is given **no new time period** if the non-compliant amendment is an after-final amendment or an amendment filed after allowance. If applicant wishes to resubmit the non-compliant after-final amendment with corrections, the **entire corrected amendment** must be resubmitted.
2. Applicant is given **two months** from the mail date of this notice to supply the correction, if the non-compliant amendment is one of the following: a preliminary amendment, a non-final amendment (including a submission for a request for continued examination (RCE) under 37 CFR 1.114), a supplemental amendment filed within a suspension period under 37 CFR 1.103(a) or (c), and an amendment filed in response to a *Quayle* action. If any of above boxes 1. to 4. are checked, the correction required is only the **corrected section** of the non-compliant amendment in compliance with 37 CFR 1.121.

   Extensions of time are available under 37 CFR 1.136(a) only if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action.

   Failure to timely respond to this notice will result in:
   Abandonment of the application if the non-compliant amendment is a non-final amendment or an amendment filed in response to a *Quayle* action; or
   Non-entry of the amendment if the non-compliant amendment is a preliminary amendment or supplemental amendment.

/LEWIS WEST/ Primary Examiner, Art Unit 2648	

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IPR2025-00780

Continuation of 4(e) Other: Applicant's claims are now so far removed from the original claims as to constitute an Election by Original presentation, especially given that there is new matter not supported by the original specification.The amendment filed on 02/13/2015 canceling all the existing text of the claims drawn to the elected invention and presenting only claims drawn to a non-elected invention is non-responsive (MPEP § 821.03). The remaining claims are not readable on the elected invention because what is now present constitutes not only a different invention but new matter. No wireless netork is defined between modules; nor is there any support in the original specification for what defines a complete set of transceiver function. .
Since the above-mentioned amendment appears to be a bona fide attempt to reply, applicant is given a TIME PERIOD of 2 MONTHS from the mailing date of this notice within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD UNDER 37 CFR 1.136(a) ARE AVAILABLE. .

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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

Application Number	13116984	Filing Date	2011-05-26	Docket Number (if applicable)	D13-002	Art Unit	2648
First Named Inventor	Sen			Examiner Name	West, Lewis G		

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

SUBMISSION REQUIRED UNDER 37 CFR 1.114

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

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

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

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

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

☐ Other _____

FEES

☐ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No _____

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

Signature of Registered U.S. Patent Practitioner			
Signature	/Steven J Shattil/	Date (YYYY-MM-DD)	2015-02-13
Name	Steven J Shattil	Registration Number	40170

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

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	13116984
Filing Date:	26-May-2011
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven J Shattil
Attorney Docket Number:	D13-002

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Pet. Delay Sub or Restore Priority-Claim	2454	1	850	850
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Extension - 2 months with $0 paid	2252	1	300	300
Miscellaneous:				
RCE- 2nd and Subsequent Request	2820	1	850	850
		Total in USD ($)		**2000**

Electronic Acknowledgement Receipt	
EFS ID:	21496033
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	13-FEB-2015
Filing Date:	26-MAY-2011
Time Stamp:	13:39:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$2000

RAM confirmation Number	10834
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	Amendment Submitted/Entered with Filing of CPA/RCE	D13_002_Response_OA_4.pdf	182713 ef112ea73c0345c0ea77c5ac477b8c11096b05a9	no	16
Warnings:					
Information:					
2	Application Data Sheet	sb0014_copy_print.pdf	43398 56f15dca96b8b1b82239accb271c072d6b724e69	no	5
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Transmittal Letter	sb0021.pdf	294862 70acb71946102e9c5ebcf517fcd5428fbd7bced4	no	2
Warnings:					
Information:					
4	Extension of Time	sb0022.pdf	206664 f5d63224f9ab8157ee7d244604b461fa9589b680	no	2
Warnings:					
Information:					
5	Request for Continued Examination (RCE)	sb0030e_fill.pdf	697238 2fe89179311d935a8c9f15c1f13bc4d9a96f5e1b	no	3
Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	33832 2d6d1fb5e2d87c0bbfdc6351abffa50ecc88b2c9	no	2
Warnings:					
Information:					

Total Files Size (in bytes):	1458707

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT AND PETITION FOR UNINTENTIONALLY DELAYED PRIORITY CLAIM AND REQUEST FOR CORRECTED FILING RECEIPT

February 13, 2015 Boulder, CO 80308

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on October 1, 2014. A Request for Continued Examination accompanies this letter. A petition for extension of time of Two months and the required fees are submitted herewith.

A petition to accept an Unintentionally Delayed Domestic Benefit Claim under 37 CFR 1.78(a)(2)(i) and (iii) is included herewith.

1) The reference required by 35 U.S.C. 120 and 37 CFR 1.78(a)(2)(i) and (iii) to the prior-filed application is included in an amended Application Data Sheet submitted herewith showing the correct priority claim. This amendment contains no new matter.
2) The surcharge set forth in 37 CFR 1.17(t) is included herewith.

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3) Applicant states that the entire delay between the date the benefit claim was due and the date the benefit claim was filed was unintentional.

Applicant request a corrected filing receipt that lists all three inventors indicated in the filing papers. Specifically, properly signed declarations for all three inventors were submitted on 05-26-2011, but only two inventors are listed on the filing receipt mailed on 6-13-2011. Applicant requests that the corrected filing receipt also includes the corrected priority claim.

Amendments to the Claims are reflected in the listing of claims, which begins on page 3 of this paper. Remarks/Arguments begin on page 8 of this paper.

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IPR2025-00780

Claims - Amendments

1. (Currently Amended) A modular component of a mobile wireless telecommunication transceiver, ~~An electronic object configured to function as one of a plurality of components in a transceiver, the electronic object~~ comprising:

~~one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, wherein each of the plurality of hardware components performs an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal, the one of the plurality of hardware components comprising:~~

~~a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;~~

~~a central processing unit; and~~

~~a memory for storing at least one of software and data; and~~

~~a software component, comprising:~~

~~a set of signal processing instructions for performing signal processing corresponding to one of the plurality of components in the transceiver;~~

~~a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and~~

~~a software interface for allowing the at least one other electronic object to access the electronic object's resources~~

a computer processor;

a first non-transitory computer-readable medium with instructions stored thereon, that when executed by the computer processor, perform a first subset of a complete set of transceiver functions that are necessary for a transceiver to operate in a mobile wireless telecommunication system, and provide an object-oriented programming interface to instructions stored on an at least second non-transitory computer-readable medium of an at least second modular component, the at least second modular component configured to perform an at least second subset of the complete set of transceiver functions; and

a wireless network interface to a wireless network configured to communicatively couple the modular component to the at least second modular component.

2. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, wherein the computer processor ~~discovery component~~ is configured for identifying other modular components ~~electronic objects~~ and their capabilities.
3. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, further configured for routing signals between a plurality of modular components ~~electronic objects~~.
4. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, further configured for self organizing with the at least second modular component ~~one other electronic object~~ to create a communication network.
5. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, further configured for interfacing with a controller device.
6. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, comprising a plurality of modular components ~~electronic objects~~.
9. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, further configured to write software.
10. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 1, further configured to update its identity upon updates to its set of ~~signal processing~~ instructions.
11. (Currently Amended) A wireless transceiver configured to perform a complete set of transceiver features that are necessary for the wireless transceiver to operate in a mobile wireless telecommunication system, wherein the complete set comprises a first subset and an at least second subset, the wireless transceiver ~~comprising a plurality of electronic objects, each electronic object~~ comprising:

~~one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, the one of the plurality of hardware components performing an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal, the one of the plurality of hardware components comprising:~~

~~a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;~~

~~a central processing unit; and~~

~~a memory for storing at least one of software and data; and~~

~~a software component comprising:~~

~~a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components in the transceiver;~~

~~a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and~~

~~a software interface for allowing the at least one other electronic object to access the electronic object's resources~~

a first modular component configured to perform the first subset, the first modular component comprising a first computer processor, a first non-transitory computer-readable medium, and a first wireless network interface;

an at least second modular component configured to perform the at least second subset, the second modular component comprising a second computer processor, a second non-transitory computer-readable medium, and a second wireless network interface; and

a wireless network configured to communicatively couple the first modular component to the at least second modular component.

12. (Currently Amended) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the first modular component and the at least second modular component ~~plurality of electronic objects~~.
13. (Currently Amended) The wireless transceiver recited in Claim 11, wherein at least one of the first modular component and the at least second modular component ~~plurality of electronic objects~~ is configured for routing signals between the first modular component and the at least second modular component ~~plurality of electronic objects~~.
14. (Currently Amended) The wireless transceiver recited in Claim 11, wherein the first modular component and the at least second modular component ~~plurality of electronic objects~~ is configured for self organizing to create a wireless communication network.

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15. (Currently Amended) The wireless transceiver recited in Claim 11, wherein each of the first modular component and the at least second modular component ~~electronic object~~ is configured for interfacing with a controller device.

16. (Currently Amended) The wireless transceiver recited in Claim 11, wherein a plurality of the first modular component and the at least second modular component is ~~comprising a second plurality of electronic objects~~ configured for performing ~~the same~~ similar signal processing on different signals.

17. (Currently Amended) A modular component configured to perform a first subset of a complete set of transceiver functions required for a transceiver to operate in a mobile wireless telecommunications network ~~An electronic object configured for rapid prototyping of a wireless transceiver~~, comprising:

an identification means configured for automatically conveying the modular component's ~~electronic object's~~ identity to at least one other modular component ~~electronic object~~ configured to perform at least a second subset of the complete set ~~function as a different component in the transceiver~~;

a signal processing means ~~one of a plurality of signal processing means~~ configured to function together with an at least one other signal processing means residing on the at least one other modular component to perform the complete set of transceiver functions ~~for converting a modulated radio signal into a digital electronic information signal, the one of the plurality of signal processing means performing an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal~~; and

[an] a wireless network interface means configured to communicatively couple the modular component to the at least one other modular component ~~for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points~~.

18. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another modular component ~~electronic object~~.

19. (Currently Amended) The modular component ~~electronic object~~ recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A non-transitory computer-readable medium with instructions stored thereon, that when executed by a processor, perform the steps ~~method for assembling a wireless transceiver, the method~~ comprising:

~~communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:~~

~~a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;~~

~~a central processing unit; and~~

~~a memory for storing at least one of software and data;~~

~~providing each of the plurality of electronic objects with a set of signal processing instructions such that the plurality of electronic objects functions together to convert a digital electronic information signal into a modulated radio signal, wherein each of the plurality of electronic objects performs an insufficient number of steps for converting a digital electronic information signal into a modulated radio signal;~~

~~conveying each electronic object's identity to at least one other electronic object in the transceiver; and~~

~~configuring each electronic object to access the at least one other electronic object's resources~~

automatically identifying a first plurality of available modular components, each of the first plurality configured to perform a subset of a complete set of transceiver functions necessary for operation in a mobile wireless telecommunication system;

from the first plurality, selecting a second plurality of the available modular components such that the second plurality is capable of performing the complete set of transceiver functions; and

employing a wireless network to communicatively couple together the second plurality; and coordinate the second plurality to perform the complete set of transceiver functions.

Remarks – Claims

Claims 1-20 are pending.

Independent Claims 1, 11, 17, and 20 were amended to clarify the claimed invention. All of the amendments are supported by the disclosure.

Each of the Dependent Claims 2-10, 12-16, and 18-19 was amended to provide correction to the antecedent basis, which was necessitated by amendments to the corresponding independent claims.

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Remarks – Application Data Sheet

The amendment to the Application Data Sheet comprises a corrected claim of priority under 35 U.S.C. 120. The amendment contains no new matter. Applicant asserts that the entire delay between the date the benefit claim was due and the date the benefit claim was filed was unintentional. The surcharge set forth in § 1.17(t) is included herewith.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on October 1, 2014 and offers the following remarks.

1. Response to Arguments

The Patent Office stated that Applicant's arguments filed on 03/14/2014 were not persuasive because Harris shows an encryption/decryption component that may perform encryption for other modules (Par. [0023]), and that the encrypted signal may not be completely transformed to a useful information signal without decryption.

Applicant respectfully disagrees because there is no teaching in the art of transceivers that requires an information signal to be "useful." Specifically, a person of ordinary skill in the art would be guided by the definition of "transceiver" as it pertains to radio communications (such as http://en.wikipedia.org/wiki/ Transceiver), which uses RF modules for high speed data transmission, and wherein "data transmission" is the physical transfer of data (a digital bit stream or a digitized analog signal) over a point-to-point or point-to-multipoint communication channel (e.g., http://en.wikipedia.org/wiki/Data_transmission). Whether a data signal is encrypted or not is inconsequential to the operation of a radio transceiver because an encrypted data signal is still a digital bit stream. Therefore, a person of ordinary skill in the art would not infer that the encryption/decryption component in Harris is an essential component of a radio transceiver.

2. 35 U.S.C. 102 Rejections

The rejection of Claims 1-9, 11-20 under 35 U.S.C. 102(e) in view of US 2009/0156252 (Harris) was restated.

In view of the current amendment to the independent claims, this rejection is respectfully traversed, and reconsideration is requested in view of the following reasons.

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As described above, based on the usual and customary definition of a radio transceiver, a person of ordinary skill in the art would not identify encryption/decryption as a transceiver function that is "necessary for a transceiver to operate in a mobile wireless telecommunication system," such as recited in Claim 1. Thus, Harris fails to disclose "a modular component" that performs "a first subset of a complete set of transceiver functions," and "at least a second modular component configured to perform an at least second subset of the complete set of transceiver functions," such as recited in Claim 1.

With respect to the rejection of Claim 1 in the Examination Report, the Patent Office states that a USB can interface software.

However, the functionality of USB devices is defined by class codes, which are communicated to the USB host to load suitable software driver modules for each connected device. A device driver provides a **software interface to hardware devices**, enabling operating systems and other computer programs to access **hardware functions** without needing to know precise details of the hardware being used. Such software interfaces to hardware provide access to computer resources (such as memory, CPU, storage, etc.) of the underlying computer system.

To the contrary, interfaces between software components provide constants, data types, types of procedures, exception specifications and method signatures. In object-oriented languages, the term ***interface*** is sometimes used to define an abstract type that contains no data or code, but defines behaviors as method signatures.

Thus, while a transceiver component with a USB connector can be hardware-compatible with another hardware device with a USB socket, the device driver by itself does not ensure proper functionality of the component as a transceiver element (e.g., as a modulator, a filter, etc.), because proper functionality is necessitated by a proper software interface to software residing on the transceiver component.

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Thus, Harris fails to "provide an object-oriented programming interface to instructions stored on an at least second non-transitory computer-readable medium of an at least second modular component," such as recited in Claim 1.

Furthermore, Harris fails to disclose any type of wireless network that communicatively couples transceiver components together. Instead, Harris discloses USB (e.g., Pars [0018]-[0021]). Thus, Harris fails to disclose "a wireless network interface to a wireless network configured to communicatively couple the modular component to the at least second modular component," such as recited in Claim 1.

Since the cited reference, Harris, fails to show all the elements of the amended Claim 1, reconsideration of the rejection of Claim 1 under 35 U.S.C. 102(e) is respectfully requested.

Independent Claims 11, 17, and 20

Since the independent Claims 11, 17, and 20 recite similar novel features as recited in Claim 1, the independent Claims 11, 17, and 20 are believed to be patentable over Harris for at least the same reasons recited above.

Independent Claim 11 recites, "a first modular component configured to perform (a) first subset (of a complete set of transceiver features that are necessary for the wireless transceiver to operate in a mobile wireless telecommunication system)" and "an at least second modular component configured to perform (an) at least second subset (of the complete set of transceiver features that are necessary for the wireless transceiver to operate in a mobile wireless telecommunication system)."

Since Harris fails to disclose modular components that each perform a subset of transceiver features that are necessary for the transceiver to operate in a mobile wireless telecommunication system, Claim 11 is patentable over Harris for at least the same reasons cited above with respect to Claim 1.

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Furthermore, Claim 11 recites, "the first modular component comprising… a first wireless network interface," "an at least second modular component comprising… a second wireless network interface," and "a wireless network configured to communicatively couple the first modular component to the at least second modular component."

Since Harris fails to disclose wireless connections between components which, together, are necessary to provide transceiver operation in a mobile wireless telecommunication system, Claim 11 is patentable over Harris for at least the same reasons described above with respect to Claim 1.

Independent Claim 17 recites, "a modular component configured to perform a first subset of a complete set of transceiver functions required for a transceiver to operate in a mobile wireless telecommunications network, comprising… a signal processing means configured to function together with an at least one other signal processing means residing on (an) at least one other modular component to perform the complete set of transceiver functions."

Since Harris fails to disclose modular components that each perform a subset of transceiver features that are necessary for the transceiver to operate in a mobile wireless telecommunication system, Claim 17 is patentable over Harris for at least the same reasons cited above with respect to Claim 1.

Independent Claim 17 also recites, "a wireless network interface means configured to communicatively couple the modular component to the at least one other modular component." Since Harris fails to disclose wireless connections between components which, together, are necessary to provide a complete set of transceiver functions necessary for operation in a mobile wireless telecommunication network, Claim 17 is patentable over Harris for at least the same reasons described above with respect to Claim 1.

Independent Claim 20 recites, "each of (a) first plurality (of available modular components) configured to perform a subset of a complete set of transceiver functions necessary for operation in a mobile wireless telecommunication system," and "from the first plurality, selecting a second

plurality of the available modular components such that the second plurality is capable of performing the complete set of transceiver functions."

Since Harris fails to disclose modular components that each perform a subset of transceiver features that are necessary for the transceiver to operate in a mobile wireless telecommunication system, Claim 20 is patentable over Harris for at least the same reasons cited above with respect to Claim 1.

Furthermore, Claim 20 recites, "employing a wireless network to communicatively couple together the second plurality; and coordinate the second plurality to perform the complete set of transceiver functions." As described above, since Harris fails to disclose a wireless network between components which, together, are necessary to provide a complete set of transceiver functions necessary for operation in a mobile wireless telecommunication system, Claim 20 is patentable over Harris for at least the same reasons described with respect to Claim 1.

Dependent Claims 2-9, 12-16, 18, and 19

The dependent claims 2-9, 12-16, 18, and 19 currently under consideration in the application are dependent upon the independent Claims 1, 11, 17, and 20 discussed above, and, therefore, are believed to be allowable over the applied combination of references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, individual consideration of each on its own merits is respectfully requested.

35 U.S.C. 103 Rejection

Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of what the Patent Office infers as common knowledge to one of ordinary skill in the art.

This rejection is respectfully traversed, and reconsideration is requested in view of the following reason.

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Since Claim 10 is dependent upon the independent Claim 1, and because Harris fails to show all the elements of the amended independent Claim 1, Claim 10 is patentable over the combination of Harris and the common knowledge of one of ordinary skill in the art. Therefore, reconsideration of the rejection of Claim 10 under 35 U.S.C. 103(a) is respectfully requested.

Accordingly, all of the pending claims currently under consideration, Claims 1-20, are believed to be patentable over the cited references.

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Conclusion

The Applicant has endeavored to address all of the examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claims are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. Although the present communication includes alterations to the claims and characterizations of claim scope and the referenced art, no acquiescence, disclaimer, or estoppel is intended or should be inferred thereby. Applicant is not conceding in this application that the previously pending claims are not patentable over the cited references. Rather, any amendments are only being made to expedite prosecution of the application and are without prejudice to the presentation or assertion in the future of claims relating to the same or similar subject matter. Applicant reserves the right to later submit additional or alternative arguments of patentability that may have not been presented at this time.

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

/ Steven J. Shattil/

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

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

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Robi		Sen	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	McClean	State/Province	VA	Country of Residence	US
Citizenship under 37 CFR 1.41(b)	US				

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Applicant 2

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

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Citizenship under 37 CFR 1.41(b)	US				

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Postal Code	22066	Country	US

Applicant 3

Applicant Authority	◉ Inventor	○ Legal Representative under 35 U.S.C. 117	○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Steve		Shattil	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Cheyenne	State/Province	WY	Country of Residence	US

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Citizenship under 37 CFR 1.41(b)	US		
Mailing Address of Applicant:			
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Address 2			
City	Boulder	**State/Province**	CO
Postal Code	80308	**Country**	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. [redacted]

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☒ **An Address is being provided for the correspondence Information of this application.**

Name 1	Steven Shattil	**Name 2**	
Address 1	PO Box 17355		
Address 2			
City	Boulder	**State/Province**	CO
Country	US	**Postal Code**	80308
Phone Number	7202344351	**Fax Number**	
Email Address	genghiscomm@gmail.com	[redacted]	[redacted]

Application Information:

Title of the Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers		
Attorney Docket Number	D13-002	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		**Sub Class (if any)**	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)		**Suggested Figure for Publication (if any)**	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

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

Representative Information:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	○ Customer Number	◉ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix	[redacted]
	Steven		Shattil		

Registration Number	40170

Additional Representative Information blocks may be generated within this form by selecting the **Add** button.

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Expired		[redacted]
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13116984	non provisional of	61349097	2010-05-27

Prior Application Status	Patented			[redacted]	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13116984	Continuation in part of	12328917	2008-12-05	7965761	2011-06-21

Prior Application Status	Patented			[redacted]	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
12328917	Division of	11621014	2008-01-08	7593449	2009-09-22

Prior Application Status	Patented			[redacted]	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11621014	Division of	10131163	2002-04-24	7430257	2008-09-30

Prior Application Status	Expired		[redacted]
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
10131163	non provisional of	60286850	2001-04-26

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	D13-002
	Application Number	
Title of Invention	Method and Apparatus for Fast Prototyping of Wireless Transceivers	

Application Number	Country[i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			◉ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information:

Address 1			
Address 2			
City		**State/Province**	
Country[i]		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/Steven J Shattil/			Date (YYYY-MM-DD)	2015-02-13
First Name	Steven	Last Name	Shattil	Registration Number	40170

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

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2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	28

Application Number	13/116,984
Filing Date	05/26/2011
First Named Inventor	Sen
Art Unit	2648
Examiner Name	West, Lewis G
Attorney Docket Number	D13-002

ENCLOSURES *(Check all that apply)*

- ☑ Fee Transmittal Form
  - ☑ Fee Attached
- ☑ Amendment/Reply
  - ☑ After Final
  - ☐ Affidavits/declaration(s)
- ☑ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☑ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  Request for Cont. Examination (PTO/SB/30)

Remarks

This letter is responsive to the Office Action mailed on October 1, 2014.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name			
Signature	/Steven J Shattil/		
Printed name	Steven J Shattil		
Date	02/13/2015	Reg. No.	40170

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	/Steven J Shattil/		
Typed or printed name	Steven J Shattil	Date	02/13/2015

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.

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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): D13-002

Application Number	Filed
13/116,984	05/26/2011

For: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Art Unit	Examiner
2648	West, Lewis G

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

		Fee	Small Entity Fee	Micro Entity Fee	
☐	One month (37 CFR 1.17(a)(1))	$200	$100	$50	$
☑	Two months (37 CFR 1.17(a)(2))	$600	$300	$150	$ 300
☐	Three months (37 CFR 1.17(a)(3))	$1,400	$700	$350	$
☐	Four months (37 CFR 1.17(a)(4))	$2,200	$1,100	$550	$
☐	Five months (37 CFR 1.17(a)(5))	$3,000	$1,500	$750	$

☑ Applicant asserts small entity status. See 37 CFR 1.27.

☐ Applicant certifies micro entity status. See 37 CFR 1.29.
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 has already been authorized to charge fees in this application to a Deposit Account.

☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number _____.

☑ Payment made via EFS-Web.

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/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. 37 CFR 3.73(b) statement is enclosed (Form PTO/SB/96).

☑ attorney or agent of record. Registration number 40170.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Steven J Shattil/	02/13/2015
Signature	Date
Steven J Shattil	7202344351
Typed or printed name	Telephone Number

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 1 forms are submitted.

This collection of information is required by 37 CFR 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 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.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 02/13/2015	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/KAREN VESTAL/

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 10/01/2014

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	
ART UNIT	PAPER NUMBER
2648	
MAIL DATE	DELIVERY MODE
10/01/2014	PAPER

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.

Office Action Summary	Application No. 13/116,984	Applicant(s) SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	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 *09/24/14*.

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

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

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

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

Disposition of Claims*

5)☒ Claim(s) *1-20* 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) *1-20* 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: _____.

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

Response to Arguments

Applicant's arguments filed 03/14/2014 have been fully considered but they are not persuasive.

Harris shows component modules in the same vein as applicant's specified and claimed invention [modules in a transceiver which may be connected and communicate their identities and functions in-between], and Harris' components may include a connected encryption/decryption component which would perform separately the step of encryption or decryption, as indicated in paragraph 0023, wherein it specifically states that it may perform encryption for other modules. An encrypted signal may not be completely transformed to a useful information signal without decryption.

Claim Rejections - 35 USC § 102

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

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

Claims 1-9 and 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Harris (US 2009/0156252).

1. Harris discloses an electronic object configured to function as one of a plurality of components in a transceiver, the electronic object comprising:

one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, wherein each of the plurality of hardware components performs an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal, [0023; 0033, 0039-0040] the one of the plurality of hardware components comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver; [USB] a central processing unit; [processor 302] and a memory for storing at least one of software and data; [memory 303] and a software component, comprising: a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; [0027] a discovery component configured for conveying the electronic object's identity to the at least one other electronic object;[0028] and a software interface for allowing the at least one other electronic object to access the electronic object's resources. [USB can interface software]

2. The electronic object recited in claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities. [0028]

3. The electronic object recited in claim 1, further configured for routing signals between a plurality of electronic objects. [0032, 0040]

4. The electronic object recited in claim 1, further configured for self organizing with the at least one other electronic object to create a communication network. [0028]

5. The electronic object recited in claim 1, further configured for interfacing with a controller device. [0032-0033]

6. The electronic object recited in claim 1, further comprising at least one of a data source and a data sink. [0027 memory may be source or sink for data]

7. The electronic object recited in claim 1, further configured for adapting its signal processing for different signal inputs. [0028 plug and play]

8. The electronic object recited in claim 1, comprising a plurality of electronic objects. [0028-0040]

9. The electronic object recited in claim 1, further configured to write software. [0036, 0049, the device is programmable, parameters may be input and written to the device.]

11. A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, wherein each of the plurality of hardware components performs an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal, [0023; 0033, 0039-0040] the one of the plurality of hardware components comprising:

a hardware interface for communicatively coupling to at least one other electronic object; a central processing unit; and a memory for storing at least one of software and data; and a software component comprising: a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; a discovery component configured for conveying the electronic object's identity and capabilities to the at

least one other electronic object; and a software interface for allowing the at least one other electronic object to access the electronic object's resources. [0027-0040]

12. The wireless transceiver recited in claim 11, further comprising a router configured for routing signals between the plurality of electronic objects. [0032, 0040]

13. The wireless transceiver recited in claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects. [0032, 0040]

14. The wireless transceiver recited in claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network. [0028, plug and play, connected devices are networked automatically]

15. The wireless transceiver recited in claim 11, wherein each electronic object is configured for interfacing with a controller device. [0032-0033]

16. The wireless transceiver recited in claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals. [0028-0040]

17. An electronic object configured for rapid prototyping of a wireless communication transceiver, comprising: an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

one of a plurality of signal processing means configured to function together for converting a modulated radio signal into a digital electronic information signal, the one of the plurality of signal processing means performing an insufficient number of steps for

converting the modulated radio signal into the digital electronic information signal; and [0023, 0033, 0039-0040]

and an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points. [0027-0040]

18. The electronic object recited in claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object. [0027-0040, functionality is extended, language is alternative]

19. The electronic object recited in claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter. [plug and play, different inputs change with different devices, 0027, further there is a keyboard, which means input parameters may cause any number of function changes]

20. A method for assembling a wireless transceiver, the method comprising: communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising: a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver; a central processing unit; and a memory for storing at least one of software and data; [0033, 0039-0040]

and providing each of the plurality of electronic objects with a set of signal processing instructions such that the plurality of electronic objects functions together to convert a digital electronic information signal into a modulated radio signal; wherein each of the plurality of

electronic objects perform an insufficient number of steps for converting a digital electronic information signal into a modulated radio signal [0023; 0033, 0039-0040]

conveying each electronic object's identity to at least one other electronic object; and configuring each electronic object to access at least one other electronic object's resources. [0027-0040]

Claim Rejections - 35 USC § 103

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 negatived by the manner in which the invention was made.

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.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris.

Regarding claim 10, Harris discloses the electronic object recited in claim 1, and includes the feature of an identity which is programmable. [0036], but is silent as to updating said identity. Examiner takes official notice that it was notorious to one of ordinary skill in the art at the time of the invention to update the identity of a device when reprogramming to allow other

users. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to update its identity upon updates to its set of signal processing instructions in order to allow the device and/or modules to be used by a new user if the device is sold or given away, due to the original user upgrading or changing devices.

Conclusion

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 LEWIS WEST whose telephone number is (571)272-7859. The examiner can normally be reached on Monday-Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Temesghen Ghebretinsae can be reached on 571-272-4177. 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.

/LEWIS WEST/
Primary Examiner, Art Unit 2648

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	550.1, 556.1, 66.1, 575.1, 73, 418	10/30/2012	LW

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	10/30/2012	LW
updated search	11/12/2013	LW
updated search	09/26/2014	LW

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

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

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

CLAIM		DATE								
Final	Original	10/30/2012	11/12/2013	03/21/2014	09/26/2014					
	1	✓	✓	✓	✓					
	2	✓	✓	✓	✓					
	3	✓	✓	✓	✓					
	4	✓	✓	✓	✓					
	5	✓	✓	✓	✓					
	6	✓	✓	✓	✓					
	7	✓	✓	✓	✓					
	8	✓	✓	✓	✓					
	9	✓	✓	✓	✓					
	10	✓	✓	✓	✓					
	11	✓	✓	✓	✓					
	12	✓	✓	✓	✓					
	13	✓	✓	✓	✓					
	14	✓	✓	✓	✓					
	15	✓	✓	✓	✓					
	16	✓	✓	✓	✓					
	17	✓	✓	✓	✓					
	18	✓	✓	✓	✓					
	19	✓	✓	✓	✓					
	20	✓	✓	✓	✓					

Samsung Exhibit 1092, Page 333 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT

Boulder, CO 80308

September 24, 2014

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on March 25, 2014.

A petition for extension of time of Three months and the required fee are submitted herewith.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper. Remarks/Arguments begin on page 6 of this paper.

Samsung Exhibit 1092, Page 334 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Claims - Amendments

1. (Currently Amended) An electronic object configured to function as one of a plurality of components in a transceiver, the electronic object comprising:

~~a hardware component configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal, the hardware component comprising~~

one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, wherein each of the plurality of hardware components performs an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal, the one of the plurality of hardware components comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component, comprising:

a set of signal processing instructions for performing signal processing corresponding to one of the plurality of components in the transceiver;

a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and

a software interface for allowing the at least one other electronic object to access the electronic object's resources.

2. (Original) The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities.
3. (Original) The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects.
4. (Original) The electronic object recited in Claim 1, further configured for self organizing with the at least one other electronic object to create a communication network.

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5. (Original) The electronic object recited in Claim 1, further configured for interfacing with a controller device.
6. (Original) The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Original) The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Original) The electronic object recited in Claim 1, comprising a plurality of electronic objects.
9. (Original) The electronic object recited in Claim 1, further configured to write software.
10. (Original) The electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. (Currently Amended) A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

~~a hardware component configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal, the hardware component comprising~~

one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, the one of the plurality of hardware components performing an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal, the one of the plurality of hardware components comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component comprising:

a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components in the transceiver;

a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

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a software interface for allowing the at least one other electronic object to access the electronic object's resources.

12. (Original) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects.
13. (Original) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects.
14. (Original) The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network.
15. (Original) The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device.
16. (Original) The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals.
17. (Currently Amended) An electronic object configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

~~a signal processing means configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal~~

one of a plurality of signal processing means configured to function together for converting a modulated radio signal into a digital electronic information signal, the one of the plurality of signal processing means performing an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal; and

an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points.

18. (Original) The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object.

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19. (Original) The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;

a central processing unit; and

a memory for storing at least one of software and data;

providing each of the plurality of electronic objects with a set of signal processing instructions ~~to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting~~ such that the plurality of electronic objects functions together to convert a digital electronic information signal into a modulated radio signal, wherein each of the plurality of electronic objects performs an insufficient number of steps for converting a digital electronic information signal into a modulated radio signal;

conveying each electronic object's identity to at least one other electronic object in the transceiver; and

configuring each electronic object to access the at least one other electronic object's resources.

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Remarks – Claims

Claims 1-20 are pending.

Claims 1, 11, 17, and 20 were amended.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on March 25, 2014 and offers the following remarks.

1. Response to Arguments

The Patent Office stated that Applicant's arguments filed on 03/14/2014 were not persuasive because arguing that a component performs all of a set of steps does not preclude the component from performing a subset. The Patent Office noted that performing merely or only a subset of steps was not claimed.

Applicant amended the independent claims to indicate that a plurality of hardware components function together for converting a modulated radio signal into a digital electronic information signal, but each hardware component performs an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal.

2. 35 U.S.C. 102 Rejections

The rejection of Claims 1-9, 11-20 under 35 U.S.C. 102(e) in view of US 2009/0156252 (Harris) was restated.

In view of the current amendment to the independent claims, this rejection is respectfully traversed, and reconsideration is requested in view of the following reasons.

While Harris mentions that a peripheral component may comprise a WiFi, WiMax, or hotspot adapter (Par. 33), such components are complete wireless transceivers that perform **all** of the essential steps, not just a **subset** of the essential steps, of converting a modulated radio signal into a digital electronic information signal or converting a digital electronic information signal into a modulated radio signal.

Thus, Harris fails to disclose a plurality of modular components, which together perform all the essential steps of converting a modulated radio signal into a digital electronic information signal

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or converting a digital electronic information signal into a modulated radio signal, but, individually, perform an insufficient number of the essential steps.

For these reasons, Harris fails to teach:

"one of a plurality of hardware components configured to function together for converting a modulated radio signal into a digital electronic information signal, wherein each of the plurality of hardware components performs an insufficient number of steps for converting the modulated radio signal into the digital electronic information signal,"

such as recited in the amended Claim 1;

Since the cited reference, Harris, fails to show all the elements of the amended Claim 1, reconsideration of the rejection of Claim 1 under 35 U.S.C. 102(e) is respectfully requested.

Independent Claims 11, 17, and 20

Since the independent Claims 11, 17, and 20 recite similar novel features as recited in Claim 1, the independent Claims 11, 17, and 20 are believed to be patentable over Harris for at least the same reasons recited above.

Dependent Claims 2-9, 12-16, 18, and 19

The dependent claims 2-9, 12-16, 18, and 19 currently under consideration in the application are dependent upon the independent Claims 1, 11, 17, and 20 discussed above, and, therefore, are believed to be allowable over the applied combination of references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, individual consideration of each on its own merits is respectfully requested.

35 U.S.C. 103 Rejection

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Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of what the Patent Office infers as common knowledge to one of ordinary skill in the art.

This rejection is respectfully traversed, and reconsideration is requested in view of the following reason.

Since Claim 10 is dependent upon the independent Claim 1, and because Harris fails to show all the elements of the amended independent Claim 1, Claim 10 is patentable over the combination of Harris and the common knowledge of one of ordinary skill in the art. Therefore, reconsideration of the rejection of Claim 10 under 35 U.S.C. 103(a) is respectfully requested.

Accordingly, all of the pending claims currently under consideration, Claims 1-20, are believed to be patentable over the cited references.

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Conclusion

The Applicant has endeavored to address all of the examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claims are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. Although the present communication includes alterations to the claims and characterizations of claim scope and the referenced art, no acquiescence, disclaimer, or estoppel is intended or should be inferred thereby. Applicant is not conceding in this application that the previously pending claims are not patentable over the cited references. Rather, any amendments are only being made to expedite prosecution of the application and are without prejudice to the presentation or assertion in the future of claims relating to the same or similar subject matter. Applicant reserves the right to later submit additional or alternative arguments of patentability that may have not been presented at this time.

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

/ Steven J. Shattil/

Steven J. Shattil, Reg. No. 40,170
P.O. Box 17355
Boulder, CO 80308-0355
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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	14

Application Number	13/116,984
Filing Date	05/26/2011
First Named Inventor	Sen
Art Unit	2648
Examiner Name	West, Lewis G
Attorney Docket Number	D13-002

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☑ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):

Remarks

This letter is responsive to the Final Office Action mailed on March 25, 2014.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name			
Signature	/Steven J Shattil/		
Printed name	Steven J Shattil		
Date	09/24/2014	Reg. No.	40,170

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	/Steven J Shattil/		
Typed or printed name	Steven J Shattil	Date	09/24/2014

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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.

PTO/SB/22 (03-13)
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): D13-002

Application Number	Filed
13/116,984	05/26/2011

For: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Art Unit	Examiner
2648	West, Lewis G

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

		Fee	Small Entity Fee	Micro Entity Fee	
☐	One month (37 CFR 1.17(a)(1))	$200	$100	$50	$
☐	Two months (37 CFR 1.17(a)(2))	$600	$300	$150	$
☑	Three months (37 CFR 1.17(a)(3))	$1,400	$700	$350	$ 350
☐	Four months (37 CFR 1.17(a)(4))	$2,200	$1,100	$550	$
☐	Five months (37 CFR 1.17(a)(5))	$3,000	$1,500	$750	$

☐ Applicant asserts small entity status. See 37 CFR 1.27.

☑ Applicant certifies micro entity status. See 37 CFR 1.29.
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 has already been authorized to charge fees in this application to a Deposit Account.

☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number _____.

☑ Payment made via EFS-Web.

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/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. 37 CFR 3.73(b) statement is enclosed (Form PTO/SB/96).

☑ attorney or agent of record. Registration number 40170.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Steven J Shattil/	09/24/2014
Signature	Date
Steven J Shattil	7202344351
Typed or printed name	Telephone Number

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.

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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).
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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.
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Electronic Patent Application Fee Transmittal

Application Number:	13116984
Filing Date:	26-May-2011
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven J Shattil
Attorney Docket Number:	D13-002

Filed as Micro Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with $0 paid	3253	1	350	350

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
		Total in USD ($)		**350**

Electronic Acknowledgement Receipt	
EFS ID:	20231072
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	24-SEP-2014
Filing Date:	26-MAY-2011
Time Stamp:	14:34:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$350

RAM confirmation Number	820
Deposit Account	
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	D13_002_OA3_Response_final.pdf	138026 3f823af46a3204122e34e46c7271a53af58dbced	no	10
Warnings:					
Information:					
2	Transmittal Letter	sb0021.pdf	295021 c79fd08dd12383808d0d44a00fb5d146929b7f94	no	2
Warnings:					
Information:					
3	Extension of Time	sb0022.pdf	206646 8257f4116877f0e0c3fa1d84fe7bf68fa5947d59	no	2
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	30168 8e6bbd94df2fdb8f56c3046fa87276df88ce7f11	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	669861		

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

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

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

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT **09/24/2014**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $0 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $0 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/NICOLLE L. SCRIVNER/

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 03/25/2014

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	
ART UNIT	PAPER NUMBER
2648	
MAIL DATE	DELIVERY MODE
03/25/2014	PAPER

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.

Office Action Summary	Application No. 13/116,984	Applicant(s) SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	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 *3/14/2014*.

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

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

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

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

Disposition of Claims*

5)☒ Claim(s) *1-20* 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) *1-20* 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: _____.

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

Response to Arguments

Applicant's arguments filed 03/14/2014 have been fully considered but they are not persuasive.

Arguing that a component performs all elements does not preclude said element from performing the subset; performing merely or only the subset of steps is not claimed, per se. Harris shows component modules in the same vein as applicant's specified and claimed invention, and Harris' components may include a connected Bluetooth component which would perform the modulation sub-steps as specified when functioning as a module which is part of the whole prototyped transceiver.

Claim Rejections - 35 USC § 102

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

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

Claims 1-9 and 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Harris (US 2009/0156252).

1. Harris discloses an electronic object configured to function as one of a plurality of components in a transceiver, the electronic object comprising:

a hardware component, configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal, the hardware component comprising: [0033, 0039-0040]

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver; [USB] a central processing unit; [processor 302] and a memory for storing at least one of software and data; [memory 303] and a software component, comprising: a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; [0027] a discovery component configured for conveying the electronic object's identity to the at least one other electronic object;[0028] and a software interface for allowing the at least one other electronic object to access the electronic object's resources. [USB can interface software]

2. The electronic object recited in claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities. [0028]

3. The electronic object recited in claim 1, further configured for routing signals between a plurality of electronic objects. [0032, 0040]

4. The electronic object recited in claim 1, further configured for self organizing with the at least one other electronic object to create a communication network. [0028]

5. The electronic object recited in claim 1, further configured for interfacing with a controller device. [0032-0033]

6. The electronic object recited in claim 1, further comprising at least one of a data source and a data sink. [0027 memory may be source or sink for data]

7. The electronic object recited in claim 1, further configured for adapting its signal processing for different signal inputs. [0028 plug and play]

8. The electronic object recited in claim 1, comprising a plurality of electronic objects. [0028-0040]

9. The electronic object recited in claim 1, further configured to write software. [0036, 0049, the device is programmable, parameters may be input and written to the device.]

11. A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

a hardware component, configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal, [0033, 0039-0040] the hardware component comprising:

a hardware interface for communicatively coupling to at least one other electronic object; a central processing unit; and a memory for storing at least one of software and data; and a software component comprising: a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and a software interface for allowing the at least one other electronic object to access the electronic object's resources. [0027-0040]

12. The wireless transceiver recited in claim 11, further comprising a router configured for routing signals between the plurality of electronic objects. [0032, 0040]

13. The wireless transceiver recited in claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects. [0032, 0040]

14. The wireless transceiver recited in claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network. [0028, plug and play, connected devices are networked automatically]

15. The wireless transceiver recited in claim 11, wherein each electronic object is configured for interfacing with a controller device. [0032-0033]

16. The wireless transceiver recited in claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals. [0028-0040]

17. An electronic object configured for rapid prototyping of a wireless communication transceiver, comprising: an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

a signal processing means configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal; [0033, 0039-0040]

and an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points. [0027-0040]

18. The electronic object recited in claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object. [0027-0040, functionality is extended, language is alternative]

19. The electronic object recited in claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter. [plug and play, different inputs change with different devices, 0027, further there is a keyboard, which means input parameters may cause any number of function changes]

20. A method for assembling a wireless transceiver, the method comprising: communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising: a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver; a central processing unit; and a memory for storing at least one of software and data; and providing each of the plurality of electronic objects with a set of signal processing instructions to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal; [0033, 0039-0040]

conveying each electronic object's identity to at least one other electronic object; and configuring each electronic object to access at least one other electronic object's resources. [0027-0040]

Claim Rejections - 35 USC § 103

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 negatived by the manner in which the invention was made.

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.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris.

Regarding claim 10, Harris discloses the electronic object recited in claim 1, and includes the feature of an identity which is programmable. [0036], but is silent as to updating said identity. Examiner takes official notice that it was notorious to one of ordinary skill in the art at the time of the invention to update the identity of a device when reprogramming to allow other users. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to update its identity upon updates to its set of signal processing instructions in order to allow the device and/or modules to be used by a new user if the device is sold or given away, due to the original user upgrading or changing devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEWIS WEST whose telephone number is (571)272-7859. The examiner can normally be reached on Monday-Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Temesghen Ghebretinsae can be reached on 571-272-4177. 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.

/LEWIS WEST/
Primary Examiner, Art Unit 2648

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

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

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

CLAIM		DATE								
Final	Original	10/30/2012	11/12/2013	03/21/2014						
	1	✓	✓	✓						
	2	✓	✓	✓						
	3	✓	✓	✓						
	4	✓	✓	✓						
	5	✓	✓	✓						
	6	✓	✓	✓						
	7	✓	✓	✓						
	8	✓	✓	✓						
	9	✓	✓	✓						
	10	✓	✓	✓						
	11	✓	✓	✓						
	12	✓	✓	✓						
	13	✓	✓	✓						
	14	✓	✓	✓						
	15	✓	✓	✓						
	16	✓	✓	✓						
	17	✓	✓	✓						
	18	✓	✓	✓						
	19	✓	✓	✓						
	20	✓	✓	✓						

Samsung Exhibit 1092, Page 362 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	13116984	Filing Date	2011-05-26	Docket Number (if applicable)	D13-002	Art Unit	2648
First Named Inventor	Sen			Examiner Name	West, Lewis G		

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

SUBMISSION REQUIRED UNDER 37 CFR 1.114

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

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

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

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

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

☐ Other _____

FEES

☐ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No _____

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

☐ Applicant Signature

PTO/SB/30EFS (07-09)
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Signature of Registered U.S. Patent Practitioner			
Signature	/Steven J Shattil/	Date (YYYY-MM-DD)	2014-03-14
Name	Steven J Shattil	Registration Number	40170

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

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Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/22 (03-13)
Approved for use through 3/31/2013. OMB 0651-0031
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PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): D13-002

Application Number	Filed
13/116,984	05/26/2011

For: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Art Unit	Examiner
2648	West, Lewis G

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

		Fee	Small Entity Fee	Micro Entity Fee	
☑	One month (37 CFR 1.17(a)(1))	$200	$100	$50	$ 50
☐	Two months (37 CFR 1.17(a)(2))	$600	$300	$150	$
☐	Three months (37 CFR 1.17(a)(3))	$1,400	$700	$350	$
☐	Four months (37 CFR 1.17(a)(4))	$2,200	$1,100	$550	$
☐	Five months (37 CFR 1.17(a)(5))	$3,000	$1,500	$750	$

☑ Applicant asserts small entity status. See 37 CFR 1.27.

☑ Applicant certifies micro entity status. See 37 CFR 1.29.
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 has already been authorized to charge fees in this application to a Deposit Account.

☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number _____.

☐ Payment made via EFS-Web.

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/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. 37 CFR 3.73(b) statement is enclosed (Form PTO/SB/96).

☑ attorney or agent of record. Registration number 40170.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Steven J Shattil/	03/14/2014
Signature	Date
Steven J Shattil	7202344351
Typed or printed name	Telephone Number

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 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 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.
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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT

Boulder, CO 80308

March 14. 2014

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on November 14, 2013.

A petition for extension of time of One month and the required fee are submitted herewith.

A Request for Continued Examination is included herewith.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper. Remarks/Arguments begin on page 6 of this paper.

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Claims - Amendments

1. (Currently Amended) An electronic object configured to function as one of a plurality of components in a transceiver, the electronic object comprising:

a hardware component configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal, the hardware component comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component, comprising:

a set of signal processing instructions for performing signal processing corresponding to one of the plurality of components in the transceiver;

a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and

a software interface for allowing the at least one other electronic object to access the electronic object's resources.

2. (Original) The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities.
3. (Original) The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects.
4. (Original) The electronic object recited in Claim 1, further configured for self organizing with the at least one other electronic object to create a communication network.
5. (Original) The electronic object recited in Claim 1, further configured for interfacing with a controller device.
6. (Original) The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Original) The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs.

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8. (Original) The electronic object recited in Claim 1, comprising a plurality of electronic objects.
9. (Original) The electronic object recited in Claim 1, further configured to write software.
10. (Original) The electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. (Currently Amended) A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

a hardware component configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal, the hardware component comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component comprising:

a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components in the transceiver;

a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

a software interface for allowing the at least one other electronic object to access the electronic object's resources.

12. (Original) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects.
13. (Original) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects.
14. (Original) The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network.
15. (Original) The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device.

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16. (Original) The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals.
17. (Currently Amended) An electronic object configured for rapid prototyping of a wireless transceiver, comprising:

an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

a signal processing means configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal ~~for performing signal processing functionality of one of a plurality of transceiver components in the transceiver~~; and

an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points.

18. (Original) The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object.
19. (Original) The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.
20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; ~~and~~

providing each of the plurality of electronic objects with a set of signal processing instructions ~~for performing signal processing corresponding to one of a plurality of components of the transceiver~~ to perform a subset of a set of essential steps in at least one of

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a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal;

conveying each electronic object's identity to at least one other electronic object in the transceiver; and

configuring each electronic object to access the at least one other electronic object's resources.

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Remarks – Claims

Claims 1-20 are pending.

Claims 1, 11, 17, and 20 were amended.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on November 14, 2013 and offers the following remarks.

Claims 1-20 are pending in this case.

1. 35 U.S.C. 102 Rejections

Claims 1-9, 11-20 were rejected under 35 U.S.C. 102(e) as being unpatentable over US 2009/0156252 (Harris).

This rejection is respectfully traversed, and reconsideration is requested in view of the following reasons.

Harris describes peripheral devices that may be attached to a cellular telephone, such as a display (Par. 27), an earpiece, a microphone, and a voice recognition module (Par. 30). These peripheral devices do not perform any of the steps of converting a modulated radio signal into a digital electronic information signal or converting a digital electronic information signal into a modulated radio signal, such as recited in the amended Claim 1. Rather, the display and earpiece each receive a digital electronic information signal after conversion from a modulated radio signal. Similarly, the microphone produces an electronic information signal, but does not perform any of the steps of converting a digital electronic information signal into a modulated radio signal. The voice recognition module converts an audio input into commands (e.g., voice-enabled dialing) used to operate the device. But since these audio inputs and commands are not transmitted over the cellular network, they are not converted into a modulated radio signal.

While Harris mentions that a peripheral component may comprise a WiFi, WiMax, or hotspot adapter (Par. 34), such components are complete wireless transceivers that perform **all** of the essential steps, not just a **subset** of the essential steps, of converting a modulated radio signal into a digital electronic information signal or converting a digital electronic information signal into a modulated radio signal. Harris fails to disclose any wireless device comprising a plurality

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of modular components, which together perform the essential steps of converting a modulated radio signal into a digital electronic information signal or converting a digital electronic information signal into a modulated radio signal.

For these reasons, Harris fails to teach:

"a hardware component configured to perform a subset of a set of essential steps in at least one of a set of processes, the set of processes comprising converting a modulated radio signal into a digital electronic information signal and converting a digital electronic information signal into a modulated radio signal," such as recited in the amended Claim 1;

Since the cited reference, Harris, fails to show all the elements of the amended Claim 1, reconsideration of the rejection of Claim 1 under 35 U.S.C. 102(e) is respectfully requested.

Independent Claims 11, 17, and 20

Since the independent Claims 11, 17, and 20 recite similar novel features as recited in Claim 1, the independent Claims 11, 17, and 20 are believed to be patentable over Harris for at least the same reasons recited above.

Dependent Claims 2-9, 12-16, 18, and 19

The dependent claims 2-9, 12-16, 18, and 19 currently under consideration in the application are dependent upon the independent Claims 1, 11, 17, and 20 discussed above, and, therefore, are believed to be allowable over the applied combination of references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, individual consideration of each on its own merits is respectfully requested.

35 U.S.C. 103 Rejection

Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of what the Patent Office infers as common knowledge to one of ordinary skill in the art.

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IPR2025-00780

This rejection is respectfully traversed, and reconsideration is requested in view of the following reason.

Since Claim 10 is dependent upon the independent Claim 1, and because Harris fails to show all the elements of the amended independent Claim 1, Claim 10 is patentable over the combination of Harris and the common knowledge of one of ordinary skill in the art. Therefore, reconsideration of the rejection of Claim 10 under 35 U.S.C. 103(a) is respectfully requested.

Accordingly, all of the pending claims currently under consideration, Claims 1-20, are believed to be patentable over the cited references.

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Conclusion

The Applicant has endeavored to address all of the examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claims are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. Although the present communication includes alterations to the claims and characterizations of claim scope and the referenced art, no acquiescence, disclaimer, or estoppel is intended or should be inferred thereby. Applicant is not conceding in this application that the previously pending claims are not patentable over the cited references. Rather, any amendments are only being made to expedite prosecution of the application and are without prejudice to the presentation or assertion in the future of claims relating to the same or similar subject matter. Applicant reserves the right to later submit additional or alternative arguments of patentability that may have not been presented at this time.

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,

Steve J. Shattil, Reg. No. 40,170
P.O. Box 17355
Boulder, CO 80308-0355
(720) 234-4351

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Electronic Patent Application Fee Transmittal

Application Number:	13116984
Filing Date:	26-May-2011
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven J Shattil
Attorney Docket Number:	D13-002

Filed as Micro Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	3251	1	50	50

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
RCE - 1st Request	3801	1	300	300
		Total in USD ($)		**350**

Electronic Acknowledgement Receipt	
EFS ID:	18477416
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven J Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	14-MAR-2014
Filing Date:	26-MAY-2011
Time Stamp:	15:00:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$350

RAM confirmation Number	1826
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	sb0021.pdf	295048 7a5a69fcd09a4cd51d9d5431db61c80725032492	no	2
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	sb0030e_fill.pdf	697242 29c70ef069163047e55d5126945198379ac57336	no	3
Warnings:					
Information:					
3	Extension of Time	sb0022.pdf	206642 35b95e0392bfb76e00ba6259af9c5a4ab62e8692	no	2
Warnings:					
Information:					
4	Applicant Arguments/Remarks Made in an Amendment	D13_002_Response_to_OA2.pdf	140068 4e98597f92355bff6d0fa84642ea63f72f8bb8af	no	10
Warnings:					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	31918 e1ae66aeac0161707f0bf744d935e9c2bb44e91f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1370918		

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	17

Application Number	13/116,984
Filing Date	05/26/2011
First Named Inventor	Sen
Art Unit	2648
Examiner Name	West, Lewis G
Attorney Docket Number	D13-002

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☑ After Final
  - ☐ Affidavits/declaration(s)
- ☑ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  PTO/SB/30EFS

Remarks

This letter is responsive to the Final Office Action mailed on November 14, 2014.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name			
Signature	/Steven J Shattil/		
Printed name	Steven J Shattil		
Date	03/14/2014	Reg. No.	40,170

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	/Steven J Shattil/		
Typed or printed name	Steven J Shattil	Date	03/14/2014

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	03/14/2014	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
	Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $210 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/KAREN VESTAL/

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

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

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UNITED STATES DEPARTMENT OF COMMERCE
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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 11/14/2013

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	
ART UNIT	PAPER NUMBER
2648	
MAIL DATE	DELIVERY MODE
11/14/2013	PAPER

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.

Office Action Summary	Application No. 13/116,984	Applicant(s) SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	AIA (First Inventor to File) Status No

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

Period for Reply

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

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

Status

1)☒ Responsive to communication(s) filed on *8/12/2013*.

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

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

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

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

Disposition of Claims

5)☒ Claim(s) *1-20* 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) *1-20* is/are rejected.

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

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

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

Application Papers

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

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some * c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

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

Response to Arguments

Applicant's arguments filed 08/12/2013 have been fully considered but they are not persuasive.

The USB connection as cited shows connections to hardware that functions as additional parts of the transceiver, including power and input and output for the modular transceiver. Therefore applicant's arguments with respect to the added limitation of "configured to function as a different component of the transceiver" are not persuasive, as these peripheral connections are configured for just this purpose. Applicant cannot persuasively argue that an attached component providing functions to the transceiver (peripherals, display, and voice recognition, for example) is not part of the transceiver, and then also argue that attachments providing function in accordance with the claim somehow are part of the transceiver.

Claim Rejections - 35 USC § 102

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

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

Claims 1-9 and 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Harris (US 2009/0156252).

1. Harris discloses an electronic object configured to function as one of a plurality of components in a transceiver, the electronic object comprising: a hardware component, comprising: a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver; [USB] a central processing unit; [processor 302] and a memory for storing at least one of software and data; [memory 303] and a software component, comprising: a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; [0027] a discovery component configured for conveying the electronic object's identity to the at least one other electronic object;[0028] and a software interface for allowing the at least one other electronic object to access the electronic object's resources. [USB can interface software]

2. The electronic object recited in claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities. [0028]

3. The electronic object recited in claim 1, further configured for routing signals between a plurality of electronic objects. [0032, 0040]

4. The electronic object recited in claim 1, further configured for self organizing with the at least one other electronic object to create a communication network. [0028]

5. The electronic object recited in claim 1, further configured for interfacing with a controller device. [0032-0033]

6. The electronic object recited in claim 1, further comprising at least one of a data source and a data sink. [0027 memory may be source or sink for data]

7. The electronic object recited in claim 1, further configured for adapting its signal processing for different signal inputs. [0028 plug and play]

8. The electronic object recited in claim 1, comprising a plurality of electronic objects. [0028-0040]

9. The electronic object recited in claim 1, further configured to write software. [0036, 0049, the device is programmable, parameters may be input and written to the device.]

11. A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising: a hardware component, comprising: a hardware interface for communicatively coupling to at least one other electronic object; a central processing unit; and a memory for storing at least one of software and data; and a software component comprising: a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and a software interface for allowing the at least one other electronic object to access the electronic object's resources. [0027-0040]

12. The wireless transceiver recited in claim 11, further comprising a router configured for routing signals between the plurality of electronic objects. [0032, 0040]

13. The wireless transceiver recited in claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects. [0032, 0040]

14. The wireless transceiver recited in claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network. [0028, plug and play, connected devices are networked automatically]

15. The wireless transceiver recited in claim 11, wherein each electronic object is configured for interfacing with a controller device. [0032-0033]

16. The wireless transceiver recited in claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals. [0028-0040]

17. An electronic object configured for rapid prototyping of a wireless communication transceiver, comprising: an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver; a signal processing means configured for performing signal processing functionality of one of a plurality of transceiver components in the transceiver; and an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points. [0027-0040]

18. The electronic object recited in claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object. [0027-0040, functionality is extended, language is alternative]

19. The electronic object recited in claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter. [plug and play, different inputs change with different devices, 0027, further there is a keyboard, which means input parameters may cause any number of function changes]

20. A method for assembling a wireless transceiver, the method comprising: communicatively coupling together a plurality of electronic objects, each of the plurality of

electronic objects comprising: a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;; a central processing unit; and a memory for storing at least one of software and data; and providing each of the plurality of electronic objects with a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; conveying each electronic object's identity to at least one other electronic object; and configuring each electronic object to access at least one other electronic object's resources. [0027-0040]

Claim Rejections - 35 USC § 103

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 negatived by the manner in which the invention was made.

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.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris.

Regarding claim 10, Harris discloses the electronic object recited in claim 1, and includes the feature of an identity which is programmable. [0036], but is silent as to updating said

identity. Examiner takes official notice that it was notorious to one of ordinary skill in the art at the time of the invention to update the identity of a device when reprogramming to allow other users. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to update its identity upon updates to its set of signal processing instructions in order to allow the device and/or modules to be used by a new user if the device is sold or given away, due to the original user upgrading or changing devices.

Conclusion

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 LEWIS WEST whose telephone number is (571)272-7859. The examiner can normally be reached on Monday-Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Temesghen Ghebretinsae can be reached on 571-272-4177. 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.

/Lewis G. West/
Primary Examiner, Art Unit 2648

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
455	550.1, 556.1, 66.1, 575.1, 73, 418	10/30/2012	LW

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	10/30/2012	Lw
updated search	11/12/2013	LW

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

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

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

CLAIM		DATE								
Final	Original	10/30/2012	11/12/2013							
	1	✓	✓							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
	11	✓	✓							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							
	16	✓	✓							
	17	✓	✓							
	18	✓	✓							
	19	✓	✓							
	20	✓	✓							

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 11/11/2013

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	
ART UNIT	PAPER NUMBER
2648	

MAIL DATE	DELIVERY MODE
11/11/2013	PAPERPAPER

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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.

EXAMINER
Kimberly D. Williams

ART UNIT	PAPER
2600	

DATE MAILED:

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

Commissioner for Patents

The abandonment has been withdrawn for this application.

/Kimberly D. Williams/
Supervisory Legal Instruments Examiner
TC 2600 Team 3

PTO-90C (Rev.04-03)

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MAILED
AUG 28 2013
OFFICE OF PETITIONS

Steven J Shattil
PO Box 17355
Boulder CO 80308

In re Application of

Shattil, et al. :

Application No. 13/116,984

: DECISION ON PETITION

Filed: May 26, 2011

:

Attorney Docket No. **D13-002**

This is a decision on the petition under 37 CFR 1.1.137(b) filed on August 12, 2013, to revive the above-cited application.

The petition is **GRANTED**.

The above-cited application became abandoned for failure to reply in a timely manner to the non-final Office action mailed November 2, 2012, which set a shortened statutory period for reply of three (3) months from its mailing date. No extension of time pursuant to 37 CFR 1.136(a) was obtained within the allowable period. Accordingly, the application became abandoned on February 3, 2013. A Notice of Abandonment was mailed May 9, 2013.

The amendment filed August 12, 2013, is noted.

The application is being forwarded to Technology Center GAU 2648 for further processing.

Telephone inquiries concerning this decision should be directed to the undersigned at (571) 272-3222.

/Kenya A. McLaughlin/

Kenya A. McLaughlin
Petitions Attorney
Office of Petitions

IFW
DAC

Doc Code: PET.OP
Document Description: Petition for Review by the Office of Petitions

OPAP
AUG 12 2013
PATENT & TRADEMARK OFFICE

PTO/SB/64 (03-13)
Approved for use through 03/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)

Docket Number (Optional): D13-002

First named inventor: Sen

Application No.: 13/116,984 Art Unit: 2648

Filed: 5/26/2011 Examiner: West, Lewis G

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Attention: Office of Petitions
Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
FAX (571) 273-8300

NOTE: If information or assistance is needed in completing this form, please contact the Office of Petitions at (571) 272-3282.

The above-identified application became abandoned for failure to file a timely and proper reply to a notice or action by the United States Patent and Trademark Office. The date of abandonment is the day after the expiration date of the period set for reply in the Office notice or action plus any extensions of time actually obtained.

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION.

NOTE: A grantable petition requires the following items:

(1) Petition fee;
(2) Reply and/or issue fee;
(3) Terminal disclaimer with disclaimer fee – required for all utility and plant applications filed before June 8, 1995, and for all design applications; and
(4) Statement that the entire delay was unintentional.

1. **Petition fee**

☐ Small entity fee $ _____ (37 CFR 1.17(m)). Applicant asserts small entity status. See 37 CFR 1.27.

☑ Micro entity fee $ 475 (37 CFR 1.17(m)). Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.

☐ Undiscounted fee $ _____ (37 CFR 1.17(m)).

2. **Reply and/or fee**

A The reply and/or fee to the above-noted Office notice or action in the form of

Amendment response to non-final office action (identify the type of reply):

☐ has been filed previously on _____.

☑ is enclosed herewith.

B The issue fee and publication fee (if applicable) of $ _____

☐ has been paid previously on _____.

☐ is enclosed herewith.

This collection of information is required by 37 CFR 1.137(b). 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 1 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop Petition, 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.

08/13/2013 CCHAU1 00000003 13116984

475.00 OP

01 FC:3453

Doc Code: PET.OP
Document Description: Petition for Review by the Office of Petitions

PTO/SB/64 (03-13)
Approved for use through 03/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)

3. **Terminal disclaimer with disclaimer fee**

☑ Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.

☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of $ _____) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

4. **STATEMENT:** The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional. [NOTE: The United States Patent and Trademark Office may require additional information if there is a question as to whether either the abandonment or the delay in filing a petition under 37 CFR 1.137(b) was unintentional (MPEP 711.03(c), subsections (III)(C) and (D)).]

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

/Steven J Shattil/	08/09/2013
Signature	Date
Steven J Shattil	40170
Typed or Printed Name	Registration Number, if applicable
PO Box 17355	7202344351
Address	Telephone Number
Boulder, CO 80308	
Address	

Enclosures:

☑ Fee Payment

☑ Reply

☐ Terminal Disclaimer Form

☐ Additional sheet(s) containing statements establishing unintentional delay

☐ Other: _____

CERTIFICATE OF MAILING OR TRANSMISSION [37 CFR 1.8(a)]

I hereby certify that this correspondence is being:

☑ Deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Petition, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

☐ Transmitted by facsimile on the date shown below to the United States Patent and Trademark Office at (571) 273-8300.

08/09/2013	/Steven J Shattil/
Date	Signature
	Steven J Shattil
	Typed or printed name of person signing certificate

Doc Code: MES.GIB
Document Description: Certification of Micro Entity Status (Gross Income Basis)



PTO/SB/15A (03-13)

CERTIFICATION OF MICRO ENTITY STATUS
(GROSS INCOME BASIS)

Application Number or Control Number (if applicable):	Patent Number (if applicable):
13/116,984	
First Named Inventor:	**Title of Invention:**
Sen	Method and Apparatus for Fast Prototyping of Wireless Transceivers

The applicant hereby certifies the following—

(1) **SMALL ENTITY REQUIREMENT -** The applicant qualifies as a small entity as defined in 37 CFR 1.27.

(2) **APPLICATION FILING LIMIT -** Neither the applicant nor the inventor nor a joint inventor has been named as the inventor or a joint inventor on more than four previously filed U.S. patent applications, excluding provisional applications and international applications under the Patent Cooperation Treaty (PCT) for which the basic national fee under 37 CFR 1.492(a) was not paid, and also excluding patent applications for which the applicant has assigned all ownership rights or is obligated to assign all ownership rights as a result of the applicant's previous employment.

(3) **GROSS INCOME LIMIT ON APPLICANTS AND INVENTORS -** Neither the applicant nor the inventor nor a joint inventor, in the calendar year preceding the calendar year in which the applicable fee is being paid, had a gross income, as defined in section 61(a) of the Internal Revenue Code of 1986 (26 U.S.C. 61(a)), exceeding the "Maximum Qualifying Gross Income" reported on the USPTO website at http://www.uspto.gov/patents/law/micro_entity.jsp which is equal to three times the median household income for that preceding calendar year, as most recently reported by the Bureau of the Census.

(4) **GROSS INCOME LIMIT ON PARTIES WITH AN "OWNERSHIP INTEREST" -** Neither the applicant nor the inventor nor a joint inventor has assigned, granted, or conveyed, nor is under an obligation by contract or law to assign, grant, or convey, a license or other ownership interest in the application concerned to an entity that, in the calendar year preceding the calendar year in which the applicable fee is being paid, had a gross income, as defined in section 61(a) of the Internal Revenue Code of 1986, exceeding the "Maximum Qualifying Gross Income" reported on the USPTO website at http://www.uspto.gov/patents/law/micro_entity.jsp which is equal to three times the median household income for that preceding calendar year, as most recently reported by the Bureau of the Census.

SIGNATURE by a party set forth in 37 CFR 1.33(b)

Signature	/Steven J Shattil/				
Name	Steven J Shattil				
Date	08/09/2013	Telephone	7202344351	Registration No.	40170

☐ There is more than one inventor and I am one of the inventors who are jointly identified as the applicant. Additional certification form(s) signed by the other joint inventor(s) are included with this form.

Doc Code: TRAN.LET

Document Description: Transmittal Letter

OPAP AUG 12 2013 PATENT & TRADEMARK OFFICE

PTO/SB/21 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	15

Application Number	13/116,984
Filing Date	05/26/2011
First Named Inventor	Sen
Art Unit	2648
Examiner Name	West, Lewis G
Attorney Docket Number	D13-002

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  Form 2038
  Form PTO/SB/15A
  Form PTO/SB/64

Remarks

This letter is responsive to the Office Action mailed on November 2, 2012.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name			
Signature	/Steven J Shattil/		
Printed name	Steven J Shattil		
Date	08/09/2013	Reg. No.	40,170

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	/Steven J Shattil/		
Typed or printed name	Steven J Shattil	Date	08/09/2013

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours 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.

JPAP AKIMA-13
AUG 12 2013
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

First named Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT

Boulder, CO 80308

August 9, 2013

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on November 2, 2012.

A petition for revival of an application for patent abandoned unintentionally under 37 CFR 1.137(b) is submitted herewith. The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper. Remarks/Arguments begin on page 5 of this paper.

Samsung Exhibit 1092, Page 404 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Claims - Amendments

1. (Currently Amended) An electronic object configured to function as one of a plurality of components in ~~component of~~ a transceiver, the electronic object comprising:

a hardware component, comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component, comprising:

a set of signal processing instructions for performing signal processing corresponding to one of [[a]] the plurality of components ~~of a~~ in the transceiver;

a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and

a software interface for allowing the at least one other electronic object to access the electronic object's resources.

2. (Original) The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities.
3. (Original) The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects.
4. (Original) The electronic object recited in Claim 1, further configured for self organizing with the at least one other electronic object to create a communication network.
5. (Original) The electronic object recited in Claim 1, further configured for interfacing with a controller device.
6. (Original) The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Original) The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Original) The electronic object recited in Claim 1, comprising a plurality of electronic objects.
9. (Original) The electronic object recited in Claim 1, further configured to write software.

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IPR2025-00780

10. (Original) The electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.

11. (Currently Amended) A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

a hardware component, comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component comprising:

a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components ~~of a~~ in the transceiver;

a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

a software interface for allowing the at least one other electronic object to access the electronic object's resources.

12. (Original) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects.

13. (Original) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects.

14. (Original) The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network.

15. (Original) The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device.

16. (Original) The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals.

17. (Currently Amended) An electronic object configured for rapid prototyping of a wireless ~~communication~~ transceiver, comprising:

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Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
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an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

a signal processing means configured for performing signal processing functionality of one of a plurality of transceiver components in [[a]] the transceiver; and

an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points.

18. (Original) The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object.

19. (Original) The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

providing each of the plurality of electronic objects with a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of [[a]] the transceiver;

conveying each electronic object's identity to at least one other electronic object in the transceiver; and

configuring each electronic object to access the at least one other electronic object's resources.

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Remarks – Claims

Claims 1-20 are pending.

Claims 1, 11, 17, and 20 were amended for minor editorial corrections.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on November 2, 2012 and offers the following remarks.

Claims 1-20 are pending in this case.

1. 35 U.S.C. 102 Rejections

Claims 1-9, 11-20 were rejected under 35 U.S.C. 102(e) as being unpatentable over US 2009/0156252 (Harris).

This rejection is respectfully traversed, and reconsideration is requested in view of the following reasons.

Harris fails to teach a transceiver comprised of modular components. Instead, Harris teaches that a transceiver connected to external peripheral devices.

Harris does not show modular components ***in*** a transceiver that perform transceiver functions. Rather, Harris teaches that a cellular telephone connects to peripheral devices outside of the phone. These peripheral devices are not pertinent to the transceiver's operation.

In Harris, the transceiver (i.e., the cellular telephone) itself does not comprise modular components.

For example, Harris describes peripheral devices that may be attached to the cellular telephone, such as a display (Par. 27), an earpiece, a microphone, and a voice recognition module (Par. 30). These peripheral devices are not in the cellular phone and do not perform any of the phone's transceiver functions.

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Harris does not describe an "electronic object," which is "configured to function as a signal-processing component ***in*** a wireless device," such as described in Applicant's published patent application in Par. 15:

> "In accordance with aspects of the invention, an electronic object is configured to function as a signal-processing component in a wireless device. It is a sub-system of a stand-alone device, but not a stand-alone device in itself. While an electronic object's hardware interface may include a wireless interface, the electronic object is one of a plurality of components of a stand-alone system."

For these reasons, Harris fails to teach:

"an electronic object configured to function as one of a plurality of components in a transceiver," such as recited in Claim 1;

"the electronic object... comprising a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver," such as recited in Claim 1; and

"the electronic object... comprising a set of signal processing instructions for performing signal processing corresponding to one of the plurality of components in the transceiver," such as recited in Claim 1.

Since the Patent Office has not shown where all the elements of the independent Claim 1 are shown in the cited reference, Harris, reconsideration of the rejection of Claim 1 under 35 U.S.C. 102(e) is respectfully requested.

Independent Claims 11, 17, and 20

Since the independent Claims 11, 17, and 20 recite similar novel features as recited in Claim 1, the independent Claims 11, 17, and 20 are believed to be patentable over Harris for at least the same reasons recited above.

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For example, Claim 11 recites "a wireless transceiver comprising a plurality of electronic objects," "each electronic object comprising a hardware component, comprising a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver," and a software component comprising a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components in the transceiver."

Claim 17 recites "an electronic object configured for rapid prototyping of a wireless transceiver," "an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver," and "a signal processing means configured for performing signal processing functionality of one of a plurality of transceiver components in the transceiver."

Claim 20 recites "communicatively coupling together a plurality of electronic objects," "each of the plurality of electronic objects comprising a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver," and providing each of the plurality of electronic objects with a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of the transceiver."

Dependent Claims 2-9, 12-16, 18, and 19

The dependent claims 2-9, 12-16, 18, and 19 currently under consideration in the application are dependent upon the independent Claims 1, 11, 17, and 20 discussed above and therefore are believed to be allowable over the applied combination of references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, individual consideration of each on its own merits is respectfully requested.

35 U.S.C. 103 Rejection

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Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of what the Patent Office infers as common knowledge to one of ordinary skill in the art.

This rejection is respectfully traversed, and reconsideration is requested in view of the following reason.

Since Claim 10 is dependent upon the independent Claim 1, and because the Patent Office has not shown where all the elements of the independent Claim 1 are shown in Harris, the Patent Office has not shown where all the elements recited in the combination of Harris and the common knowledge of one of ordinary skill in the art. Therefore, reconsideration of the rejection of Claim 10 under 35 U.S.C. 103(a) is respectfully requested.

Accordingly, all of the pending claims currently under consideration, Claims 1-20, are believed to be patentable over the cited reference.

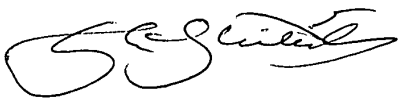
Samsung Exhibit 1092, Page 412 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Conclusion

The Applicant has endeavored to address all of the examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claims are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. Although the present communication includes alterations to the claims and characterizations of claim scope and the referenced art, no acquiescence, disclaimer, or estoppel is intended or should be inferred thereby. Applicant is not conceding in this application that the previously pending claims are not patentable over the cited references. Rather, any amendments are only being made to expedite prosecution of the application and are without prejudice to the presentation or assertion in the future of claims relating to the same or similar subject matter. Applicant reserves the right to later submit additional or alternative arguments of patentability that may have not been presented at this time.

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,



Steve J. Shattil, Reg. No. 40,170
P.O. Box 17355
Boulder, CO 80308-0355
(720) 234-4351

Samsung Exhibit 1092, Page 413 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
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PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/116,984	Filing Date 05/26/2011	☐ To be Mailed

ENTITY: ☐ LARGE ☒ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT 08/12/2013	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0	X $40 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $210 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

SLIE
/KIMBERLY D. WILLIAMS/

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

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 05/09/2013

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	
ART UNIT	PAPER NUMBER
2648	
MAIL DATE	DELIVERY MODE
05/09/2013	PAPER

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 Abandonment	Application No.	Applicant(s)
	13/116,984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

-- 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 *02 November 2012*.
   (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 (a) 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) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
   (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 37 CFR 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, the assignee of the entire interest, or all of the applicants.

5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) 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:

/Lewis G. West/
Primary Examiner, Art Unit 2648

Petitions to revive under 37 CFR 1.137(a) or (b), 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.

OPAP
MAY 06 2013
PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appn. Number: 13/116,984

Filing Date: 5/26/2011

Inventor: Sen

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Examiner: West, Lewis G

G.A.U.: 2648

Atty. Docket No. D13-002

AMENDMENT

Boulder, CO 80308

May 2, 2013

Commissioner of Patents

PO Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

This letter is responsive to the Office Action mailed on November 2, 2012.

Amendments to the Claims are reflected in the listing of claims, which begins on page 2 of this paper. Remarks/Arguments begin on page 5 of this paper.

Samsung Exhibit 1092, Page 417 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Claims

1. (Currently Amended) An electronic object configured to function as one of a plurality of components in ~~component of~~ a transceiver, the electronic object comprising:

a hardware component, comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component, comprising:

a set of signal processing instructions for performing signal processing corresponding to one of [[a]] the plurality of components ~~of a~~ in the transceiver;

a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and

a software interface for allowing the at least one other electronic object to access the electronic object's resources.

2. (Original) The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities.
3. (Original) The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects.
4. (Original) The electronic object recited in Claim 1, further configured for self organizing with the at least one other electronic object to create a communication network.
5. (Original) The electronic object recited in Claim 1, further configured for interfacing with a controller device.
6. (Original) The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink.
7. (Original) The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. (Original) The electronic object recited in Claim 1, comprising a plurality of electronic objects.
9. (Original) The electronic object recited in Claim 1, further configured to write software.

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10. (Original) The electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.

11. (Currently Amended) A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

a hardware component, comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component comprising:

a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components ~~of a~~ in the transceiver;

a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

a software interface for allowing the at least one other electronic object to access the electronic object's resources.

12. (Original) The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects.

13. (Original) The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects.

14. (Original) The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network.

15. (Original) The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device.

16. (Original) The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals.

17. (Currently Amended) An electronic object configured for rapid prototyping of a wireless ~~communication~~ transceiver, comprising:

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an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver;

a signal processing means configured for performing signal processing functionality of one of a plurality of transceiver components in [[a]] the transceiver; and

an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points.

18. (Original) The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object.

19. (Original) The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. (Currently Amended) A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver;

a central processing unit; and

a memory for storing at least one of software and data; and

providing each of the plurality of electronic objects with a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of [[a]] the transceiver;

conveying each electronic object's identity to at least one other electronic object in the transceiver; and

configuring each electronic object to access the at least one other electronic object's resources.

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Remarks – Claims

Claims 1-20 are pending.

Claims 1, 11, 17, and 20 were amended for minor editorial corrections.

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Remarks – Examination Report

Applicant has carefully reviewed the office action mailed on June 25, 2012 and offers the following remarks.

Claims 1-20 are pending in this case.

1. 35 U.S.C. 102 Rejections

Claims 1-9, 11-20 were rejected under 35 U.S.C. 102(e) as being unpatentable over US 2009/0156252 (Harris).

This rejection is respectfully traversed, and reconsideration is requested in view of the following reasons.

Harris fails to teach a transceiver comprised of modular components. Instead, Harris teaches that a transceiver connected to external peripheral devices.

Harris does not show components ***in*** a transceiver that perform transceiver functions. Rather, Harris teaches that a cellular telephone connects to peripheral devices outside of the phone. These peripheral devices are not pertinent to the transceiver's operation.

In Harris, the transceiver (i.e., the cellular telephone) itself does not comprise modular components.

For example, Harris describes peripheral devices that may be attached to the cellular telephone, such as a display (Par. 27), an earpiece, a microphone, and a voice recognition module (Par. 30). These peripheral devices are not in the cellular phone and do not perform any of the phone's transceiver functions.

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Harris does not describe an "electronic object," which is "configured to function as a signal-processing component ***in*** a wireless device," such as described in Applicant's published patent application in Par. 15:

> "In accordance with aspects of the invention, an electronic object is configured to function as a signal-processing component in a wireless device. It is a sub-system of a stand-alone device, but not a stand-alone device in itself. While an electronic object's hardware interface may include a wireless interface, the electronic object is one of a plurality of components of a stand-alone system."

For these reasons, Harris fails to teach:

"an electronic object configured to function as one of a plurality of components in a transceiver," such as recited in Claim 1;

"the electronic object... comprising a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver," such as recited in Claim 1; and

"the electronic object... comprising a set of signal processing instructions for performing signal processing corresponding to one of the plurality of components in the transceiver," such as recited in Claim 1.

Since the Patent Office has not shown where all the elements of the independent Claim 1 are shown in the cited reference, Harris, reconsideration of the rejection of Claim 1 under 35 U.S.C. 102(e) is respectfully requested.

Independent Claims 11, 17, and 20

Since the independent Claims 11, 17, and 20 recite similar novel features as recited in Claim 1, the independent Claims 11, 17, and 20 are believed to be patentable over Harris for at least the same reasons recited above.

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For example, Claim 11 recites "a wireless transceiver comprising a plurality of electronic objects," "each electronic object comprising a hardware component, comprising a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component of the transceiver," and a software component comprising a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components in the transceiver."

Claim 17 recites "an electronic object configured for rapid prototyping of a wireless transceiver," "an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object configured to function as a different component in the transceiver," and "a signal processing means configured for performing signal processing functionality of one of a plurality of transceiver components in the transceiver."

Claim 20 recites "communicatively coupling together a plurality of electronic objects," "each of the plurality of electronic objects comprising a hardware interface for communicatively coupling to at least one other electronic object configured to function as a different component in the transceiver," and providing each of the plurality of electronic objects with a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of the transceiver."

Dependent Claims 2-9, 12-16, 18, and 19

The dependent claims 2-9, 12-16, 18, and 19 currently under consideration in the application are dependent upon the independent Claims 1, 11, 17, and 20 discussed above and therefore are believed to be allowable over the applied combination of references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, individual consideration of each on its own merits is respectfully requested.

35 U.S.C. 103 Rejection

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Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Harris in view of what the Patent Office infers as common knowledge to one of ordinary skill in the art.

This rejection is respectfully traversed, and reconsideration is requested in view of the following reason.

Since Claim 10 is dependent upon the independent Claim 1, and because the Patent Office has not shown where all the elements of the independent Claim 1 are shown in Harris, the Patent Office has not shown where all the elements recited in the combination of Harris and the common knowledge of one of ordinary skill in the art. Therefore, reconsideration of the rejection of Claim 10 under 35 U.S.C. 103(a) is respectfully requested.

Accordingly, all of the pending claims currently under consideration, Claims 1-20, are believed to be patentable over the cited reference.

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Conclusion

The Applicant has endeavored to address all of the examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claims are presented above. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. Although the present communication includes alterations to the claims and characterizations of claim scope and the referenced art, no acquiescence, disclaimer, or estoppel is intended or should be inferred thereby. Applicant is not conceding in this application that the previously pending claims are not patentable over the cited references. Rather, any amendments are only being made to expedite prosecution of the application and are without prejudice to the presentation or assertion in the future of claims relating to the same or similar subject matter. Applicant reserves the right to later submit additional or alternative arguments of patentability that may have not been presented at this time.

If the Examiner finds any remaining impediments to the prompt allowance of these claims that could be clarified with a telephone call, the Examiner is respectfully requested to initiate the same with the undersigned.

Respectfully submitted,



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Boulder, CO 80308-0355
(720) 234-4351

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OPAP
MAY 06 2013
PATENT & TRADEMARK OFFICE

PTO/SB/22 (03-13)
Approved for use through 3/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PETITION FOR EXTENSION OF TIME UNDER 37 CFR 1.136(a)

Docket Number (Optional): D13-002

Application Number	Filed
13/116,984	05/26/2011

For: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Art Unit	Examiner
2648	West, Lewis G

This is a request under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-identified application.

The requested extension and fee are as follows (check time period desired and enter the appropriate fee below):

		Fee	Small Entity Fee	Micro Entity Fee	
☐	One month (37 CFR 1.17(a)(1))	$200	$100	$50	$
☐	Two months (37 CFR 1.17(a)(2))	$600	$300	$150	$
☑	Three months (37 CFR 1.17(a)(3))	$1,400	$700	$350	$ 350
☐	Four months (37 CFR 1.17(a)(4))	$2,200	$1,100	$550	$
☐	Five months (37 CFR 1.17(a)(5))	$3,000	$1,500	$750	$

☑ Applicant asserts small entity status. See 37 CFR 1.27.

☑ Applicant certifies micro entity status. See 37 CFR 1.29.
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 has already been authorized to charge fees in this application to a Deposit Account.

☐ The Director is hereby authorized to charge any fees which may be required, or credit any overpayment, to Deposit Account Number _____.

☐ Payment made via EFS-Web.

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/inventor.

☐ assignee of record of the entire interest. See 37 CFR 3.71. 37 CFR 3.73(b) statement is enclosed (Form PTO/SB/96).

☑ attorney or agent of record. Registration number 40170.

☐ attorney or agent acting under 37 CFR 1.34. Registration number _____.

/Steven J Shattil/ — Signature

05/02/2013 — Date

Steven J Shattil — Typed or printed name

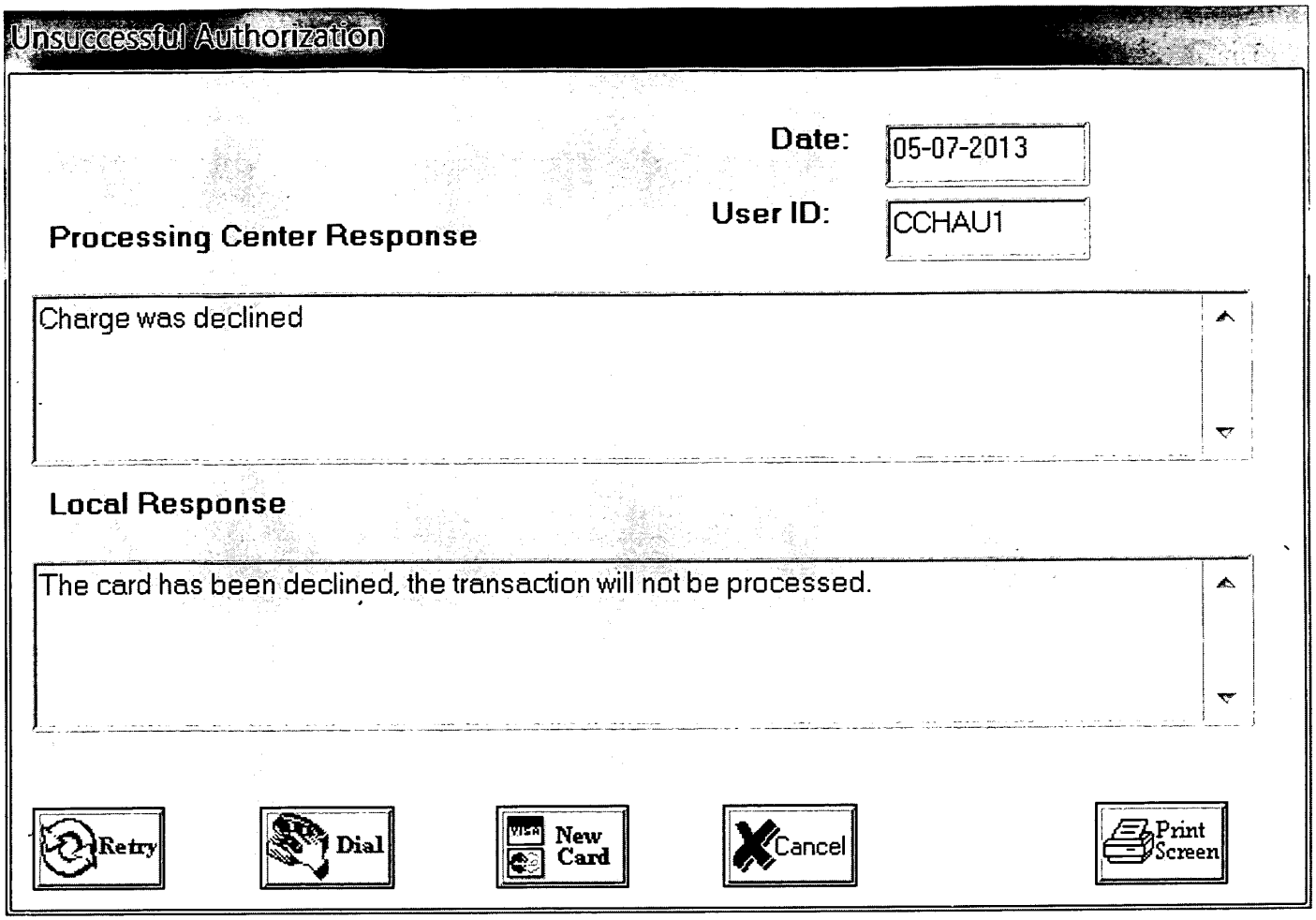
7202344351 — Telephone Number

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 1.136(a). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 6 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.



#13116984 at 8:13 AM 05-07-13

Document Code: IMIS

Notice of Fee Due

Application Number: 13116984 Date: 05/07/2013

Fees are due for the application or document dated **05/06/13**. The payment was not collectable for the reason indicated below.

Note: If the fee due is for any of the filing fees, the surcharge for late payment of the filing fees is now due as well.

- ☐ Insufficient payment by check or money order.
- ☐ No authorization to charge a deposit account.
- ☐ Invalid deposit account number.
- ☐ User name not listed in deposit account _____ at ____:____ (time).
- ☐ Insufficient funds in deposit account _____ at ____:____ (time).
- ☑ Insufficient payment by credit card.
- ☑ Declined credit card 8 : 13 AM (time).

Fee code(s) to be applied:	3253	$350.00
		$
		$
		$
		$
Amount in holding fee code:	1506	$
	1622/2622	$
	1206/2206	$
	1999	$

Total remaining due from applicant: $350.00

RAM Operator **CC**

Rev. 04/10/2013

Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)
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OPAP IAP20 MAY 06 2013 PATENT & TRADEMARK OFFICE

TRANSMITTAL FORM

(To be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 14

Application Number	13/116,984
Filing Date	05/26/2011
First Named Inventor	Sen
Art Unit	2648
Examiner Name	West, Lewis G
Attorney Docket Number	D13-002

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☑ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☑ Other Enclosure(s) (please Identify below):
  - Form 2038
  - Form PTO/SB/15A

Remarks

This letter is responsive to the Office Action mailed on November 2, 2012.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name			
Signature	/Steven J Shattil/		
Printed name	Steven J Shattil		
Date	05/02/2013	Reg. No.	40,170

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature	/Steven J Shattil/		
Typed or printed name	Steven J Shattil	Date	05/02/2013

This collection of information is required by 37 CFR 1.5. 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 and1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Doc Code: MES.GIB
Document Description: Certification of Micro Entity Status (Gross Income Basis)

PTO/SB/15A (03-13)

MAY 06 2013
U.S. PATENT & TRADEMARK OFFICE

CERTIFICATION OF MICRO ENTITY STATUS
(GROSS INCOME BASIS)

Application Number or Control Number (if applicable):	Patent Number (if applicable):
13/116,984	
First Named Inventor:	Title of Invention:
Sen	Method and Apparatus for Fast Prototyping of Wireless Transceivers

The applicant hereby certifies the following—

(1) **SMALL ENTITY REQUIREMENT -** The applicant qualifies as a small entity as defined in 37 CFR 1.27.

(2) **APPLICATION FILING LIMIT -** Neither the applicant nor the inventor nor a joint inventor has been named as the inventor or a joint inventor on more than four previously filed U.S. patent applications, excluding provisional applications and international applications under the Patent Cooperation Treaty (PCT) for which the basic national fee under 37 CFR 1.492(a) was not paid, and also excluding patent applications for which the applicant has assigned all ownership rights or is obligated to assign all ownership rights as a result of the applicant's previous employment.

(3) **GROSS INCOME LIMIT ON APPLICANTS AND INVENTORS -** Neither the applicant nor the inventor nor a joint inventor, in the calendar year preceding the calendar year in which the applicable fee is being paid, had a gross income, as defined in section 61(a) of the Internal Revenue Code of 1986 (26 U.S.C. 61(a)), exceeding the "Maximum Qualifying Gross Income" reported on the USPTO website at http://www.uspto.gov/patents/law/micro_entity.jsp which is equal to three times the median household income for that preceding calendar year, as most recently reported by the Bureau of the Census.

(4) **GROSS INCOME LIMIT ON PARTIES WITH AN "OWNERSHIP INTEREST" -** Neither the applicant nor the inventor nor a joint inventor has assigned, granted, or conveyed, nor is under an obligation by contract or law to assign, grant, or convey, a license or other ownership interest in the application concerned to an entity that, in the calendar year preceding the calendar year in which the applicable fee is being paid, had a gross income, as defined in section 61(a) of the Internal Revenue Code of 1986, exceeding the "Maximum Qualifying Gross Income" reported on the USPTO website at http://www.uspto.gov/patents/law/micro_entity.jsp which is equal to three times the median household income for that preceding calendar year, as most recently reported by the Bureau of the Census.

SIGNATURE by a party set forth in 37 CFR 1.33(b)

Signature	/Steven J Shattil/				
Name	Steven J Shattil				
Date	05/02/2013	Telephone	7202344351	Registration No.	40170

☐ There is more than one inventor and I am one of the inventors who are jointly identified as the applicant. Additional certification form(s) signed by the other joint inventor(s) are included with this form.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/116,984	05/26/2011	Robi Sen	D13-002	6645

7590 11/02/2012

Steven J Shattil
PO Box 17355
Boulder, CO 80308

EXAMINER	
WEST, LEWIS G	
ART UNIT	PAPER NUMBER
2648	
MAIL DATE	DELIVERY MODE
11/02/2012	PAPER

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.

Office Action Summary	Application No.	Applicant(s)	
	13/116,984	SEN ET AL.	
	Examiner	Art Unit	
	LEWIS WEST	2648	

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

Period for Reply

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

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

Status

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

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

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

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

Disposition of Claims

5)☒ Claim(s) *1-20* 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) *1-20* is/are rejected.

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

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

Application Papers

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

11)☒ The drawing(s) filed on *26 May 2011* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

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

Priority under 35 U.S.C. § 119

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

a)☐ All b)☐ Some * c)☐ None of:

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

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

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

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

Attachment(s)

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

Claim Rejections - 35 USC § 102

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

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

Claims 1-9 and 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Harris (US 2009/0156252).

1. Harris discloses an electronic object configured to function as a component of a transceiver, the electronic object comprising: a hardware component, comprising: a hardware interface for communicatively coupling to at least one other electronic object; [USB] a central processing unit; [processor 302] and a memory for storing at least one of software and data; [memory 303] and a software component, comprising: a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; [0027] a discovery component configured for conveying the electronic object's identity to the at least one other electronic object;[0028] and a software interface for allowing the at least one other electronic object to access the electronic object's resources. [USB can interface software]

2. The electronic object recited in claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities. [0028]

3. The electronic object recited in claim 1, further configured for routing signals between a plurality of electronic objects. [0032, 0040]

4. The electronic object recited in claim 1, further configured for self organizing with the at least one other electronic object to create a communication network. [0028]

5. The electronic object recited in claim 1, further configured for interfacing with a controller device. [0032-0033]

6. The electronic object recited in claim 1, further comprising at least one of a data source and a data sink. [0027 memory may be source or sink for data]

7. The electronic object recited in claim 1, further configured for adapting its signal processing for different signal inputs. [0028 plug and play]

8. The electronic object recited in claim 1, comprising a plurality of electronic objects. [0028-0040]

9. The electronic object recited in claim 1, further configured to write software. [0036, 0049, the device is programmable, parameters may be input and written to the device.]

11. A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising: a hardware component, comprising: a hardware interface for communicatively coupling to at least one other electronic object; a central processing unit; and a memory for storing at least one of software and data; and a software component comprising: a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and a software interface for allowing the at least one other electronic object to access the electronic object's resources. [0027-0040]

12. The wireless transceiver recited in claim 11, further comprising a router configured for routing signals between the plurality of electronic objects. [0032, 0040]

13. The wireless transceiver recited in claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects. [0032, 0040]

14. The wireless transceiver recited in claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network. [0028, plug and play, connected devices are networked automatically]

15. The wireless transceiver recited in claim 11, wherein each electronic object is configured for interfacing with a controller device. [0032-0033]

16. The wireless transceiver recited in claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals. [0028-0040]

17. An electronic object configured for rapid prototyping of a wireless communication transceiver, comprising: an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object in the transceiver; a signal processing means configured for performing signal processing functionality of one of a plurality of transceiver components in a transceiver; and an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points. [0027-0040]

18. The electronic object recited in claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object. [0027-0040, functionality is extended, language is alternative]

19. The electronic object recited in claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter. [plug and play, different inputs change with different devices, 0027, further there is a keyboard, which means input parameters may cause any number of function changes]

20. A method for assembling a wireless transceiver, the method comprising: communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising: a hardware interface for communicatively coupling to at least one other electronic object; a central processing unit; and a memory for storing at least one of software and data; and providing each of the plurality of electronic objects with a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver; conveying each electronic object's identity to at least one other electronic object; and configuring each electronic object to access at least one other electronic object's resources. [0027-0040]

Claim Rejections - 35 USC § 103

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 negatived by the manner in which the invention was made.

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.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harris.

Regarding claim 10, Harris discloses the electronic object recited in claim 1, and includes the feature of an identity which is programmable. [0036], but is silent as to updating said identity. Examiner takes official notice that it was notorious to one of ordinary skill in the art at the time of the invention to update the identity of a device when reprogramming to allow other users. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to update its identity upon updates to its set of signal processing instructions in order to allow the device and/or modules to be used by a new user if the device is sold or given away, due to the original user upgrading or changing devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEWIS WEST whose telephone number is (571)272-7859. The examiner can normally be reached on Monday-Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Temesghen Ghebretinsae can be reached on 571-272-4177. 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.

/Lewis G. West/
Primary Examiner, Art Unit 2648

Notice of References Cited	Application/Control No. 13/116,984	Applicant(s)/Patent Under Reexamination SEN ET AL.	
	Examiner LEWIS WEST	Art Unit 2648	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2009/0156252	06-2009	Harris, Scott C.	455/557
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Samsung Exhibit 1092, Page 440 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

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BIB DATA SHEET

CONFIRMATION NO. 6645

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/116,984	05/26/2011	455	2648	D13-002

APPLICANTS
Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;

**** CONTINUING DATA ***************************
This appln claims benefit of 61/349,097 05/27/2010

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **** ** SMALL ENTITY **
06/09/2011

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☐ No Verified and Acknowledged /LEWIS G WEST/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		VA	12	20	4

ADDRESS
Steven J Shattil
PO Box 17355
Boulder, CO 80308

TITLE
Method and Apparatus for Fast Prototyping of Wireless Transceivers

FILING FEE RECEIVED	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit
572		

BIB (Rev. 05/07).

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

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

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

CLAIM		DATE								
Final	Original	10/30/2012								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								

Samsung Exhibit 1092, Page 442 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13116984	SEN ET AL.
	Examiner	Art Unit
	LEWIS WEST	2648

SEARCHED			
Class	Subclass	Date	Examiner
455	550.1, 556.1, 66.1, 575.1, 73, 418	10/30/2012	LW

SEARCH NOTES		
Search Notes	Date	Examiner
PALM inventor search	10/30/2012	Lw

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/116,984	05/26/2011	Robi Sen	D13-002

CONFIRMATION NO. 6645

Steven J Shattil
PO Box 17355
Boulder, CO 80308

PUBLICATION NOTICE

OC000000051239446

Title: Method and Apparatus for Fast Prototyping of Wireless Transceivers

Publication No.US-2011-0292976-A1
Publication Date:12/01/2011

NOTICE OF PUBLICATION OF APPLICATION

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

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

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/116,984

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	82		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	270		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	110		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 26 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1	x 110 =	110			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $270 ($135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	572		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/116,984	05/26/2011	2825	572	D13-002	20	4

CONFIRMATION NO. 6645

Steven J Shattil
PO Box 17355
Boulder, CO 80308

UPDATED FILING RECEIPT

OC000000048620074

Date Mailed: 07/08/2011

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

Applicant(s)

Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/349,097 05/27/2010

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)

If Required, Foreign Filing License Granted: 06/09/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/116,984**

Projected Publication Date: 12/01/2011

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****

Title

Method and Apparatus for Fast Prototyping of Wireless Transceivers

Preliminary Class

716

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/116,984	05/26/2011	Robi Sen	D13-002

CONFIRMATION NO. 6645

Steven J Shattil
PO Box 17355
Boulder, CO 80308



FORMALITIES LETTER



Date Mailed: 06/13/2011

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing.

Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- Additional claim fees of **$110** as a small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

SUMMARY OF FEES DUE:

Total fee(s) required within **TWO MONTHS** from the date of this Notice is **$110** for a small entity
- Total additional claim fee(s) for this application is **$110**
  - **$110** for **1** independent claims over 3.

06/23/2011 SDENBOB3 00000034 13116984
01 FC:2201 110.00 OP

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/116,984

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	82		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	270		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	110		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 26 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1	x 110 =	110			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $270 ($135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	572		TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
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*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
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CONFIRMATION NO. 6645

Steven J Shattil
PO Box 17355
Boulder, CO 80308

FORMALITIES LETTER

OC000000048128612

Date Mailed: 06/13/2011

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing.

Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- Additional claim fees of $**110** as a small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

SUMMARY OF FEES DUE:

Total fee(s) required within **TWO MONTHS** from the date of this Notice is $**110** for a small entity
- Total additional claim fee(s) for this application is $**110**
  - $**110** for **1** independent claims over 3.

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/116,984	05/26/2011	2825	462	D13-002	20	4

CONFIRMATION NO. 6645

Steven J Shattil
PO Box 17355
Boulder, CO 80308

FILING RECEIPT

OC000000048128611

Date Mailed: 06/13/2011

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

Applicant(s)

Robi Sen, McClean, VA;
Ian Charles Starnes, Great Falls, VA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/349,097 05/27/2010

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)

If Required, Foreign Filing License Granted: 06/09/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/116,984**

Projected Publication Date: 12/01/2011

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****

Title

Method and Apparatus for Fast Prototyping of Wireless Transceivers

Preliminary Class

716

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

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Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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PTO/SB/05 (08-08)
Approved for use through 09/30/2010. OMB 0651-0032
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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	D13-002
First Inventor	Sen
Title	Fast Prototyping of Wireless Transc
Express Mail Label No.	

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☐ **Fee Transmittal Form** (e.g., PTO/SB/17)
2. ☑ **Applicant claims small entity status**. See 37 CFR 1.27.
3. ☑ **Specification** [*Total Pages* 24]
   Both the claims and abstract must start on a new page
   (For information on the preferred arrangement, see MPEP 608.01(a))
4. ☑ **Drawing(s)** (*35 U.S.C. 113*) [*Total Sheets* 12]
5. **Oath or Declaration** [*Total Sheets* 4]
   a. ☑ Newly executed (original or copy)
   b. ☐ A copy from a prior application (37 CFR 1.63(d))
   (for continuation/divisional with Box 18 completed)
   i. ☐ DELETION OF INVENTOR(S)
   Signed statement attached deleting inventor(s) name in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ **Application Data Sheet.** See 37 CFR 1.76
7. ☐ **CD-ROM or CD-R** in duplicate, large table or Computer Program *(Appendix)*
   ☐ Landscape Table on CD
8. **Nucleotide and/or Amino Acid Sequence Submission**
   (if applicable, items a. – c. are required)
   a. ☐ Computer Readable Form (CRF)
   b. Specification Sequence Listing on:
      i. ☐ CD-ROM or CD-R (2 copies); or
      ii. ☐ Paper
   c. ☐ Statements verifying identity of above copies

ADDRESS TO: **Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450**

ACCOMPANYING APPLICATION PARTS

9. ☐ **Assignment Papers** (cover sheet & document(s))
   Name of Assignee_____
10. ☐ **37 CFR 3.73(b) Statement** *(when there is an assignee)* ☐ **Power of Attorney**
11. ☐ **English Translation Document** *(if applicable)*
12. ☐ **Information Disclosure Statement** (PTO/SB/08 or PTO-1449)
    ☐ Copies of citations attached
13. ☐ **Preliminary Amendment**
14. ☐ **Return Receipt Postcard** (MPEP 503)
    (*Should be specifically itemized)*
15. ☐ **Certified Copy of Priority Document(s)**
    (if foreign priority is claimed)
16. ☐ **Nonpublication Request** under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.
17. ☐ Other:_____

18. If a CONTINUING APPLICATION, *check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:*

☐ Continuation ☐ Divisional ☑ Continuation-in-part (CIP) of prior application No.: 61/349,097

Prior application information: *Examiner* _____ *Art Unit:* _____

19. CORRESPONDENCE ADDRESS

☐ The address associated with Customer Number: ☐ ***OR*** ☑ Correspondence address below

Name	Steven J Shattil				
Address	PO Box 17355				
City	Boulder	State	CO	Zip Code	80308
Country	US	Telephone	720-234-4351	Email	genghiscomm@gmail.com

Signature	/Steven J Shattil/	Date	5/25/2011
Name (Print/Type)	Steven J Shattil	Registration No. (Attorney/Agent)	40,170

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
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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.
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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 Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Filer:	Steven Shattil
Attorney Docket Number:	D13-002

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	82	82
Utility Search Fee	2111	1	270	270
Utility Examination Fee	2311	1	110	110
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**462**

Electronic Acknowledgement Receipt	
EFS ID:	10179819
Application Number:	13116984
International Application Number:	
Confirmation Number:	6645
Title of Invention:	Method and Apparatus for Fast Prototyping of Wireless Transceivers
First Named Inventor/Applicant Name:	Robi Sen
Correspondence Address:	Steven J Shattil - PO Box 17355 - Boulder CO 80308 US 7202344351 genghiscomm@gmail.com
Filer:	Steven Shattil
Filer Authorized By:	
Attorney Docket Number:	D13-002
Receipt Date:	26-MAY-2011
Filing Date:	
Time Stamp:	18:45:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$462

RAM confirmation Number	6100
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Spec01.pdf	184677 108e35aa61cb72e0552bdb3397e33488aa5037c4	yes	24
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Specification		1	20	
	Claims		21	23	
	Abstract		24	24	
Warnings:					
Information:					
2	Drawings-only black and white line drawings	Sheet01.pdf	68380 ecab6156d347c3f35e94c714af0da62aca523c22	no	1
Warnings:					
Information:					
3	Drawings-only black and white line drawings	Sheet02.pdf	68300 2ceb028727cea7b14a0da1064b543cc75f53ccda	no	1
Warnings:					
Information:					
4	Drawings-only black and white line drawings	Sheet03.pdf	53432 29e7d74193b0f22c40d065d08f280804e1d1e43a	no	1
Warnings:					
Information:					
5	Drawings-only black and white line drawings	Sheet04.pdf	55060 85539893b52d74a653327f4aea83cab350da6fd0	no	1
Warnings:					
Information:					
6	Drawings-only black and white line drawings	Sheet05.pdf	54483 c6c55424e892dea4e3ea6d1a1d47ea4a80862800	no	1
Warnings:					

Information:					
7	Drawings-only black and white line drawings	Sheet06.pdf	54898 16192554ef293f7b8990cf39280eeb1a8e5f285b	no	1
Warnings:					
Information:					
8	Drawings-only black and white line drawings	Sheet07.pdf	52956 2428103d32d8cefe0a302612f3dd50663210276b	no	1
Warnings:					
Information:					
9	Drawings-only black and white line drawings	Sheet08.pdf	55367 8f44ecac5bf5d5ef84895b39792529372a6542cf	no	1
Warnings:					
Information:					
10	Drawings-only black and white line drawings	Sheet09.pdf	53051 6c40d03f793f147ea4158824ead661dbf8c40932	no	1
Warnings:					
Information:					
11	Drawings-only black and white line drawings	Sheet10.pdf	55865 6df14d5b1f3fe1200e95d399474eb437770728c2	no	1
Warnings:					
Information:					
12	Drawings-only black and white line drawings	Sheet11.pdf	57400 36881868daacba9d0198b3ef010abcb045addd9d	no	1
Warnings:					
Information:					
13	Drawings-only black and white line drawings	Sheet12.pdf	65246 94bf671c82310a6fbba6a1638e5da55035cd748b	no	1
Warnings:					
Information:					
14	Oath or Declaration filed	sb0001a1.pdf	618016 6d8922b960449c5c67e8d4ef8ab59da91f832d0b	no	4
Warnings:					
Information:					
15	Oath or Declaration filed	sb0002_fill.pdf	1365276 2c65778f2d714c4aa7b5c555be9cabf7215e1da1	no	3
Warnings:					

Information:					
16	Transmittal of New Application	sb0005_fill.pdf	302635 92ee84a93293e53c2b8340b0c17dc01030d7ef82	no	2
Warnings:					
Information:					
17	Fee Worksheet (PTO-875)	fee-info.pdf	32663 a583925ea29c152d3576ff427a866e7ff755d5ca	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	3197705	

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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>
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<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.

Patent Application of

Robi Sen, Steve Shattil, and Ian Starnes

for

Method and Apparatus for Fast Prototyping of Wireless Transceivers

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. 119(e) to U.S. Provisional Application Ser. No. 61/349,097, entitled "Method and Apparatus for Fast Prototyping of Wireless Transceivers," filed May 27, 2010.

Samsung Exhibit 1092, Page 465 of 507
Samsung Electronics Co., Ltd. et al. v. Genghiscomm Holdings LLC
IPR2025-00780

BACKGROUND OF THE INVENTION

I. Field of the Invention

The present invention relates to rapid prototyping of electronic systems, and in particular, to systems and methods for assembling and configuring wireless transceiver components.

II. Description of the Related Art

The performance of a wireless communication network is inseparably linked to the physical layer algorithms on which it is built, the hardware used to implement the wireless links, and the wireless environment in which it operates. One major difficulty with operating a wireless network is the need to replace or redesign hardware when operating requirements change. This well-recognized need in the art has driven the development of software-defined radios in which many of the components that were typically implemented in special-purpose hardware are instead implemented in software by a general-purpose processor. The rationale behind such a design is to enable a radio to transmit and receive a variety of different wireless protocols based solely on the software used.

Many transceiver functions cannot be implemented entirely in software. For example, analog-to-digital (A/D) converters lack the discrimination to pick up sub-microvolt, nanowatt radio signals. Therefore, a low-noise amplifier (LNA) must precede the A/D converter. Since spurious signals cause an LNA to introduce distortions in the amplified signal, band-pass filters are typically used between the antenna and the LNA. This reduces the radio's flexibility, thus eliminating many of the proposed benefits of software-defined radio.

An integrated hardware and software system is required to fulfill the need for a functional, versatile, and rapid prototyping platform. This often requires that both hardware and software be developed concurrently, or else substantial hardware redesign must be considered when software is developed that cannot be supported by the current hardware. While multiple approaches are used by hardware designers to solve this problem, including computer-aided design, hardware emulation in software, and using Field Programmable Gateway Arrays (FPGAs), all these solutions have numerous draw backs, most notably being they are generally used only for prototyping until a final design is locked down.

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IPR2025-00780

Furthermore, there is a need in the art to provide the end-user of a wireless communication network with the ability to easily adapt, rapidly modify, and deploy wireless devices in response to changing end-user needs and network operating requirements.

SUMMARY OF THE INVENTION

Aspects of the present invention can solve these and other problems by providing an integrated hardware and software component architecture based on principles of Object Oriented Programming to allow system developers and end users to rapidly design, build, and test hardware in an iterative fashion, allowing for faster product life-cycles, greater innovation, and facilitating end-user and third-party development. In some aspects of the invention, network users and operators can rapidly build novel solutions to extend the network's functionality to serve their specific needs by simply assembling objects. In further aspects of the invention, sophisticated users can extend an object's behavior by adding their own hardware and/or software to a base object.

In traditional software development, Object-Oriented Design is a process of planning a system of interacting objects for the purpose of solving a software problem. In aspects of the invention, Object-Oriented Design principles may be applied to systems of interacting objects that comprise both hardware and software for the purpose of solving both hardware and software problems. For example, some aspects of the invention facilitate the discovery of a hardware component in a system without the need for physical device configuration or user intervention in resolving resource conflicts. A system component contains encapsulated procedures (and optionally, data) grouped together to represent an object. The object interface (i.e., how the object can be interacted with) is also defined.

With respect to aspects of the invention, Object-Oriented Design can pertain to the objects that make up a wireless device. For example, in a wireless transceiver, an object may comprise a hardware component of the transceiver, such as an RF front-end, a filter, an A/D and D/A converter, a modem, a spreader, a despreader, a MUX/DEMUX, an antenna-array processor, an error correction coder/decoder, or any combination thereof.

In one aspect of the invention, a wireless transceiver comprises a plurality of electronic objects configured for cooperatively functioning together, wherein each object is configured

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for performing a different transceiver function. A sub-system router may be configured for routing signals between the objects. Each object comprises a hardware component and a software component. The hardware component comprises a hardware interface for communicatively coupling to at least one other object, a central processing unit, and a memory for storing at least one of software and data. The software component comprises a software interface for allowing external access to the object's resources, and a discovery component configured for conveying the object's identity and capabilities to other objects. The discovery component may be configured for identifying other objects and their capabilities.

In another aspect of the invention, a wireless transceiver comprises a plurality of electronic objects configured for performing a similar function. For example, in one aspect of the invention, each of the plurality of electronic objects may be configured for accepting a signal formatted in accordance with a common signal format. Each of the objects performs a similar function on the input signal. For example, an object may perform error correction, equalization, demodulation, or other types of signal processing on the input signal. However, the specific operations or algorithms employed by each object may differ. In one aspect of the invention, a signal output by each of the plurality of electronic objects is formatted in accordance with a common signal format. In accordance with another aspect of the invention, the signals output by the different objects may differ with respect to one or more signal parameters. For example, although the plurality of electronic objects are configured for performing a similar function, the signals output by each object may have different symbol constellations, data rates, bit-error rates, or other signal characteristics.

In another aspect of the invention, each of the plurality of electronic objects is configured for performing a similar function, but each of the objects accepts a different signal format. An object may perform error correction, equalization, demodulation, or other types of signal processing on the input signal. However, the manner in which each object performs its function may differ based on some predetermined criterion, such as the type of signal input, the operating mode of the transceiver, or the amount of latency that can be tolerated in the system. A sub-system router may be configured for routing signals between the objects based at least on the predetermined criterion. In one aspect of the invention, the signals output by each of the plurality of electronic objects is formatted in accordance with a common signal

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format. In accordance with another aspect of the invention, the signals output by the different objects may differ with respect to one or more signal parameters.

In yet another aspect of the invention, an object comprises one of a plurality of components of a wireless transceiver configured to operate in a wireless sensor network. The object may comprise a component of a wireless transceiver or a sensor device configured to operate in the sensor network. For example, the object may comprise a motion-detector sensor, a heat sensor, a microphone, a camera, a thermometer, a barometer, a humidity sensor, any wireless transceiver components, or any combination thereof.

In accordance with aspects of the invention, an electronic object is configured to function as a signal-processing component in a wireless device. It is a sub-system of a stand-alone device, but not a stand-alone device in itself. While an electronic object's hardware interface may include a wireless interface, the electronic object is one of a plurality of components of a stand-alone system.

According to another aspect of the invention, an electronic object configured for rapid prototyping of a wireless communication transceiver comprises an identification means configured for automatically identifying the object's capabilities to at least one other object in the transceiver, an interface means for allowing access to the object's resources through well-defined physical and logical entry points, and a function-adaptation means configurable to extend or override functionality of another object.

According to another aspect of the invention, an electronic object configured for rapid prototyping of a wireless communication transceiver comprises an identification means, an interface means, and a polymorphism means configurable for adapting the object to perform different functions based on at least one input parameter.

As used herein, the term, rapid prototyping, is defined as constructing a device from a plurality of components configured for easy assembly. The components may include interchangeable components. A rapid-prototyping system comprises a plurality of easily assembled components that form a composite system or device.

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Although particular aspects and embodiments are described herein, many variations and permutations of these embodiments fall within the scope of the invention. Although some benefits and advantages of aspects of the invention are mentioned, the scope of the invention is not intended to be limited to particular benefits, uses, or objectives. Rather, aspects of the invention are intended to be broadly applicable to different applications, system configurations, networks, and devices, some of which are illustrated by way of example in the figures and in the following description. The detailed description and drawings are merely illustrative of some aspects of the invention rather than limiting, the scope of the invention being defined by the appended claims and equivalents thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is illustrated in the figures of the accompanying drawings which are meant to be exemplary and not limiting, in which like references are intended to refer to like or corresponding parts, and wherein:

Figure 1 is a block diagram of a wireless transceiver in accordance with one aspect of the invention;

Figure 2 is a block diagram of a wireless transceiver in accordance with another aspect of the invention;

Figure 3 is a flow diagram that depicts a method according to an aspect of the invention;

Figure 4 is a flow diagram depicting a method for creating a network of objects in accordance with an aspect of the invention;

Figure 5 is a flow diagram that depicts a method according to another aspect of the invention;

Figure 6 is a functional diagram of a Rake equalizer object according to an aspect of the invention;

Figure 7 is a functional diagram of a frequency-domain equalizer object according to an aspect of the invention;

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Figure 8 is a functional diagram of an interference-canceller equalizer object according to an aspect of the invention;

Figure 9 is a block diagram of a compound object according to an aspect of the invention;

Figure 10 is a flow diagram that depicts a method according to an aspect of the invention;

Figure 11 is a block diagram of a wireless transceiver in accordance with aspects of the invention; and

Figure 12 is a block diagram of a set of electronic objects communicatively coupled to a router. The set of electronic objects comprise different types of equalizers.

DETAILED DESCRIPTION

In the following description, reference is made to the accompanying drawings that form a part hereof, and in which is shown by way of illustration specific aspects in which the invention may be practiced. It is to be understood that other aspects and embodiments may be utilized, and structural changes may be made without departing from the scope of the present invention.

Figure 1 is a block diagram of a wireless transceiver 101 in accordance with an aspect of the invention. The transceiver 101 comprises a plurality of rapid-prototyping transceiver components, or objects 120-124. Each object 120-124 comprises a combination of hardware and software configured for "plug-and-play" assembly. The principle of plug-and-play, as used herein, refers to methods and aspects of the invention that facilitate the discovery of a hardware component in a system without the need for physical device configuration or user intervention in resolving resource conflicts.

Transceiver components 120-124 are referred to as objects for the purpose of relating some functional aspects of the invention to principles of Object-Oriented Design in software development. Object-Oriented Design is known in the art as a process of planning a system of interacting objects for the purpose of solving a software problem. In some aspects of the

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invention, Object-Oriented Design relates to systems of interacting objects that comprise both hardware and software for the purpose of solving both hardware and software problems related to communications in a wireless network and/or functional aspects of a wireless transceiver.

Each object 120-124 comprises a CPU, a storage medium for storing software, and an interface. For example, object 121, which is a pulse-shaping filter, comprises CPU 131, memory 141, and interface 151. The objects 120-124 are configurable for being easily connected to each other, such as may be useful in a rapid-prototyping application. The hardware interfaces 150-154 facilitate assembly of the objects 120-124 to produce the transceiver 101. In one aspect of the invention, the interfaces 150-154 connect the objects directly to each other. In another aspect of the invention, the interfaces 150-154 may connect to an intermediary device, such as a controller board or a router, which communicatively couples the objects 120-124 together.

Objects 120-124 may comprise additional elements. For example, the RF Front-End object 120 further comprises a frequency converter 135 for up-converting signals to be transmitted and down-converting received signals, and an ADC/DAC module 136 performs analog-to-digital conversion of received signals and digital-to-analog conversion of signals to be transmitted. Additional elements (which are not shown) may also be included, such as a power amplifier, a preamplifier, filters, and other components employed for RF front-end processing. Additional elements (which are not shown) may be included in any of the other objects 121-124.

The transceiver 101 may further comprise controller components for enabling or facilitating the operation of the objects 120-124. For example, the transceiver 101 may comprise a power system 110, a CPU 111, a router 112, and an interface 113. Other components that are not shown may also be included in the transceiver 101. In one aspect of the invention, the power system 110 provides electrical power to objects 120-124. In another aspect of the invention, one or more of the objects may include their own power source (not shown). In one aspect, the CPU 111 may be configured for processing signals employed by one or more of the objects 120-124. The CPU 111 may assist objects 120-124 in interacting with each other. The CPU 111 may process signals transmitted between the objects 120-124. In another aspect, the CPU 111 may be absent and all computer processing performed in the transceiver 101 is

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performed by the object CPUs 130-134. Interface 113 is also an optional component. The interface 113 may comprise a data port (not shown) for data sources and/or data sinks (not shown) that may be communicatively coupled to the transceiver 101.

Some aspects of the invention include methods of signal routing between the objects 120-124. Various hardware configurations may be employed for routing signals in the transceiver 101. In one aspect, the router 112 provides for routing signals between the objects 120-124. In another aspect of the invention, such as shown in Figure 2, the transceiver 101 does not comprise a discrete router. Rather, routing functions are performed by the individual objects 120-124. In yet another aspect of the invention, one of the objects 120-124 may comprise a sub-system router (not shown) or otherwise be configurable for providing all sub-system routing.

A method according to one aspect of the invention is depicted by the flow diagram shown in Figure 3. Object discovery 301 may be performed automatically when an object is physically coupled to at least one other object or after a network of objects is assembled. Alternatively, an object discovery process 301 may be initiated by a user. Object discovery 301 comprises identifying the types of objects in the network. Object discovery 301 may further comprise collecting other information about each object. For example, object information may comprise an object's operating capabilities (e.g., memory size, processing speed, bit-error-rate performance), operating requirements (e.g., power consumption, latency), the types of signals the object is configured for processing, signal formats for signals output by the object, etc.

Logical channels between the objects are created 302 after the objects are identified in the object discovery step 301. Logical channels comprise associations between objects indicating which objects communicate with each other. These associations may further comprise the order of those communications. For example, the pulse-shaping filter 121 may communicate with the RF Front-end 120, the equalizer 122, and the Mux/Demux 123, but not with the Error-Correction Coder/Decoder 124.

Routing 303 of the signals between the objects employs the logical channels, and may optionally employ information about the signals. According to one aspect of the invention, the signal format of an output signal and/or the identification of the object transmitting the

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signal may be used to determine a destination object for the transmission. For example, the pulse-shaping filter 121 processes a received signal routed from the RF Front-end 120, and then the pulse-shaped received signal is routed to the equalizer 122. Since the equalizer 122 may only process received baseband signals, a signal to be transmitted is routed from the Mux/Demux 123 to the pulse-shaping filter 121, by-passing the equalizer 122. The resulting pulse-shaped signal is then routed to the RF Front-end 120.

Figure 4 is a flow diagram depicting a method for creating a network of objects in accordance with an aspect of the invention. For example, a system CPU 111 running network-initialization software performs object identification 401 for identifying each object. Alternatively, at least one object CPU 130-134 running network-initialization software performs object identification 401.

System determination 402 is a process whereby the CPU 111 software determines if a minimum set of objects is present to perform as a wireless transceiver 101. Alternatively, One or more object CPUs 130-134 running system determination 402 software determines if a minimum set of networked objects is present to function as a wireless transceiver 101. Object identification 401 and/or system determination 402 may be included in the Object discovery step 301 shown in Figure 3.

Path determination 403 is a process performed by the system CPU 111 or one or more of the object CPUs 130-134 for determining which objects communicate with each other. Path determination 403 may be performed in the step of creating logical channels 302 shown in Figure 3.

Routing determination 404 is a process whereby the system CPU 111 and/or one or more of the object CPUs 130-134 route messages between the objects 120-124. In one aspect of the invention, the system CPU 111 and/or one or more of the object CPUs 130-134 creates a routing table. Either the CPU 111 or an object 120-124 may determine at least one destination object 120-124 for an object's output signal using some predetermined criterion, such as the type of signal (e.g., signal format) and/or which object 120-124 is transmitting it. The routing step 303 shown in Figure 3 may comprise path determination 403 and/or routing determination 404.

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In some aspects of the invention, one or more object CPUs (such as CPUs 130-134) may perform the same functions as the system CPU 111 described with respect to Figure 4. For example, as shown in the flow diagram depicted by Figure 5, each object 120-124 announces its presence by transmitting a self-identification message 501. In one aspect of the invention, one or more of the objects 120-124 may transmit probing messages requesting other objects 120-124 to identify themselves.

Next, each object determines which other object(s) it connects to 502. In a packet-switched network, each object 120-124 records the address of other objects 120-124 it communicates with. Each object 120-124 may establish links with other objects 120-124 that are identified by a predetermined object type. For example, the pulse-shaping filter 121 seeks objects that are an RF Front-end type (e.g., object 120), an equalizer type (e.g., object 122), or a Mux/Demux type (e.g., object 123), and then records the addresses of those respective objects 120, 122, and 123.

In one aspect of the invention, one of the objects 120-124 functions as a network controller. The network controller may determine if a sufficient set of objects is present 503 to perform as a transceiver before proceeding to the next step. In another aspect of the invention, a plurality of the objects 120-124 may work cooperatively to perform network-control functions. According to one aspect, each object 120-124 may determine if it is able to connect to a predetermined set of objects 120-124. For example, the pulse-shaping filter 121 may search for any object that is an RF Front-End type (e.g., object 120), an equalizer type (e.g., object 122), or a Mux/Demux type (e.g., object 123). If the pulse-shaping filter 121 is unable to find another object that is an RF Front-End type (e.g., object 120), it may generate a message indicating that there is an insufficient set of objects to perform as a transceiver. If a sufficient set of objects is present, then each object 120-124 addresses its transmissions to the other objects 120-124 based on the type of signals it is transmitting. Routing determination 504 may be performed by a central network controller, or routing 504 and other network control may be performed using ad-hoc networking protocols.

In one aspect of the invention, a combined hardware and software platform is provided according to principles of Object Oriented Design whereby the hardware is componentized into objects defined by interfaces, services, and information (e.g., metadata) about each object. This enables users to rapidly build, modify, and customize wireless transceivers to

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their specific needs by simply assembling the objects. The object model employed in some aspects of the invention allows users to extend an object's capabilities by adding their own hardware and/or software to the object or otherwise adapting the object while preserving the object's interface.

Figure 6 is a functional diagram of a Rake equalizer object 600, which may be denoted as an equalizer object, such as the equalizer object 122 shown in Figure 1. The equalizer object 600 is configured to equalize a received CDMA signal. The equalizer object 600 comprises an interface 601, a path selector 602, a path delay 603, and a combiner 604. Additional components that are not shown may be included in the equalizer object 600. While the equalizer object 600 may be configured to process received CDMA signals, the equalizer object 600 may be used to process other types of signals as well. In some aspects of the invention, Rake equalization may precede frequency-domain equalization.

Figure 7 is a functional diagram of a frequency-domain equalizer object 700, which may be denoted as an equalizer object, such as equalizer object 122 shown in Figure 1. The equalizer object 700 may be configured to equalize a received OFDM signal. The equalizer 700 comprises an interface 701, an FFT 702, a complex-weighting process 703, and an IFFT 704. Additional signal-processing components that are not shown may be included in the equalizer object 700. While frequency-domain equalization may be performed on a received OFDM signal, the equalizer object 700 may be configured to process other types of signals as well, such as single-carrier signals having a cyclic prefix. Furthermore, the equalizer object 700 may be configured to function with other equalizer objects. For example, frequency-domain equalization follow Rake equalization.

Figure 8 is a functional diagram of an interference-canceller equalizer object 800, which may be denoted as an equalizer object, such as the equalizer object 122 shown in Figure 1. The equalizer object 800 is configured to cancel co-channel interference in a received signal. The equalizer object 800 comprises an interface 801, a channel-decomposition process 802, an interference selector 803, a synthesizer 804, a channel emulator 805, and a canceller 806. Additional components that are not shown may be included in the equalizer object 800. Interference cancellation may be performed on various types of received signals, such as CDMA signals, single-carrier signals having a cyclic prefix, and/or OFDM signals. The particular signals selected for processing by the equalizer 800 may be determined in a

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decision step performed by at least one object CPU (such as CPU 132) or a system CPU (such as CPU 111).

According to one aspect of the invention, interfaces 601, 701, and 801 are characterized by the same type of hardware interface and the same type of software interface. For example, the hardware interface may comprise a circuit board socket, terminal, connector, or any other connection means configured for communicatively coupling the objects 120-124 together or for communicatively coupling the objects 120-124 to a mother board, a multi-socket adaptor, or some other intermediary interface. The software interface may comprise a predetermined set of data structures, arrangement of arguments, and/or data types.

In one aspect of the invention, a data transmission addressed to an equalizer is received by a plurality of equalizer objects, such as equalizer objects 600, 700, and 800. The equalizer objects 600, 700, and 800 decide whether to process the data transmission based on an identifier value in the received transmission. The identifier value may be a preamble symbol prepended to a data packet. The identifier value may identify the type of data and/or an instruction for indicating the type of equalization to be performed. For example, the identifier value may indicate that the data is a received CDMA signal. The Rake equalizer object 600 is responsive to this identifier value for performing equalization on the data payload of the received data transmission. The frequency-domain equalizer object 700 reads the identifier value and then ignores the rest of the data transmission, since the frequency-domain equalizer object 700 is configured for processing only OFDM signals. Similarly, the interference-canceller equalizer object 800 may respond to the CDMA identifier by not processing the received signal. However, in another aspect of the invention, the interference-canceller equalizer object 800 may equalize the received CDMA signal. The transceiver 101 may further comprise signal-selection means (not shown) for selecting one of a plurality of equalized signals based on some criteria, such as a SNR or BER measurement. The transceiver 101 may further comprise signal-combining means (not shown) for combining a plurality of equalized signals.

According to one aspect of the invention, an object (such as at least one of the objects 120-124) is configurable for being responsive to a software interface parameter for adapting one or more internal functions it performs. For example, the interference-canceller equalizer object 800 may respond to a CDMA identifier value in the received data for adapting channel

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decomposition 802 and interference synthesis 804 functions for processing CDMA signals. Likewise, the interference-canceller equalizer object 800 may respond to an OFDM identifier value by adapting channel decomposition 802 and interference synthesis 804 functions to process OFDM signals.

According to another aspect of the invention, a signal is addressed to one or more of the objects 120-124, and the objects 120-124 perform routing. For example, an OFDM signal may be addressed to the frequency-domain equalizer object 700 and the interference-canceller equalizer object 800. When the Rake equalizer object 600 receives the OFDM signal, it may ignore the signal or retransmit the signal to the appropriate objects 700 and 800.

Figure 9 is a block diagram of a compound object 900 according to an aspect of the invention. An object may contain other objects. For example, the compound equalizer object 900 may contain a Rake equalizer object 911, an OFDM equalizer object 912, and an interference-cancellation equalizer object 913. The objects 911, 912, 913 may comprise well-defined hardware and software interfaces (not shown) such that objects 911, 912, 913 may be replaced with other objects (not shown) having the same type of interfaces, and/or additional objects may be connected to the equalizer object 913.

According to a functional aspect of the invention, the compound equalizer object 900 is responsive to a signal received by its interface 901. An internal router 902 processes the received signal for directing it to one or more of the objects 911, 912, 913. The equalizer object 900 may be configured for selecting an equalized signal from a plurality of equalized signals. Alternatively, the equalizer object 900 may be configured for combining a plurality of equalized signals. A resulting equalized signal produced by one or more of the objects 911, 912, 913 is coupled back to the interface 901 for transmission to at least one of the other objects 120-124 in the transceiver 101.

A functional aspect of a compound object is that as changes are made to its component objects, those changes may automatically be incorporated into the compound object's properties and/or interface. For example, if the OFDM equalizer object 912 is added to the compound equalizer object 900, the equalizer 900 may adapt its software interface to accept

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OFDM signals, and/or the equalizer 900 may automatically inform other objects in the transceiver of its updated properties.

In one aspect of the invention, such as illustrated in Figure 10, an object is added 1001 to a compound object (or some other change is made to the compound object's internal system). An identification procedure 1002 comprises an exchange of messages between at least one of the internal objects (e.g., the new object) and the compound object, which identifies the properties of the new object to the compound object. The compound object responds to the messages by updating its own properties. The compound object then transmits its updated properties to other objects 120-124 in the transceiver 101.

Although the flow diagram in Figure 10 describes an aspect of the invention in which the steps 1001-1004 are a sequential process, in other aspects, two or more of the steps 1001-1004 may be performed in parallel or concurrently. In addition, the order of the steps 1001-1004 may be re-arranged. The process shown in Figure 10 is terminated when its operations are completed. However, the process may comprise additional steps not shown in the figure. The process may correspond to a method, a function, a procedure, a subroutine, a subprogram, etc. When the process corresponds to a function, its termination corresponds to a return of the function to its calling function or main function.

Figure 11 is a block diagram of a wireless transceiver 1100 that comprises a plurality of objects configurable for rapid prototyping in accordance with an aspect of the invention. The wireless transceiver 1100 comprises an identification means 1101, an encapsulation means 1102, a function adaptation means 1103, an object interface means 1104, and a polymorphism means 1105.

The identification means 1101 is configured for automatically identifying the object's capabilities to at least one other object in the transceiver. Each object is defined by its properties, what it is, and what it can do (its capabilities). Its properties may comprise the type of hardware that it implements, or the properties of that hardware. For example, each object employs a CPU. Properties may include the processing speed and memory of the CPU. Signal properties may include the delay between the input and the output. What the object is can be defined by its function. For example, the object may be a modem, an error-correction coder, etc. What the object can do may be defined by either or both the nature of its inputs

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and its outputs. For example, an object may be defined by the rate it can process input data, or by the input signal levels it can accept. An object may be defined by characteristics of its outputs. For example, an error correction decoder may be defined by its constraint length or the bit-error rate it is capable of achieving.

According to one aspect of the invention, the identification means 1101 comprises a storage medium containing identification data corresponding to the object and software configured for transmitting the identification to other objects.

The encapsulation means 1102 is configured for hiding the object's internal structure. Each object has the capability of hiding at least some of its internal structure. For example, each object has a well-defined hardware interface and signal interface. That is, both the inputs and the outputs are well-defined. The hardware requires a signal to be delivered in a specific way (e.g., via USB, Bluetooth, Cat 5, 802.11g) and formatted in a specific way (e.g., an analog signal having a power level between a set of predetermined limits, or a digital signal having a specified data rate and/or data structure). However, the type of hardware or the path of the signals through the hardware (such as in the case where an object comprises multiple boards, or even a computer network) may be hidden if it is not pertinent to its object definition. Similarly, algorithms for processing signals inside the object may be hidden if those details are not pertinent to the object definition.

In one aspect of the invention, the encapsulation means 1102 comprises predetermined sets of input types and output types for the object's interface. This permits the internal structure of the object to be implemented in various ways without the details of the implementation being pertinent to the interfaces.

The function adaptation means 1103 is configurable to allow the object to extend or override functionality of another object. For example, in the case where two error-correction objects are employed in a system, one error-correction object may override the other error-correction object when an input signal level is above (or below) a predetermined threshold. For example, while both objects may be communicatively coupled to a network, the address of a signal configured for error correction may be dynamically selectable so the signal is routed to one or the other error-correction object based on some predetermined criterion. It is common to employ cascaded filters in digital signal processing. Therefore, an example of one object

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extending the function of another object can include a second filter object providing additional signal processing to the function of a first filter object. In one aspect, signals output from the first filter are routed to the second filter for subsequent processing. In another aspect, signals routed from the output of the second filter object are routed back to the first filter object, such as for performing an iterative or cascaded filtering function, until a predetermined criterion is met and the signal is re-addressed to a different destination object for further processing.

In one aspect of the invention, the function adaptation means 1103 comprises a router and software configured for routing signals to a first object when at least a first predetermined criterion is met, and routing signals to a second object of the same type as the first object when at least a second predetermined criterion is met. In another aspect of the invention, the function adaptation means 1103 comprises a router and software configured for routing signals output from a first object to a second object of the same type as the first object when a predetermined criterion is met.

The object's interface 1104 means allows access to the object's resources only through well-defined physical and logical entry points. In hardware, the object's interface is defined by its physical communication link. In order to communicatively couple two objects together, a physical-layer interface (e.g., a wired or wireless communication network) is necessary. Furthermore, a logical interface, such as an address space, may be necessary as well. In software, an interface can refer to a set of named operations that can be invoked. Interface generally refers to an abstraction that an entity provides of itself to the outside. This separates the methods of external communication from internal operations, and allows the entity to be internally modified without affecting the way outside entities interact with it. The interface may also pertain to signals, including data structures, arrangement of arguments, and data types.

The polymorphism means 1105 is configurable for adapting at least one of the objects to perform different functions based on at least one input parameter. In one aspect of the invention, an object may be configured to exhibit polymorphism. Specifically, polymorphism is the ability of one type of object or function to appear as, and be used like, another type of object or function. For example, according to one aspect of the invention, an equalizer object equalizes both CDMA and OFDM input signals. An input CDMA signal is processed by a

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Rake receiver, which combines different multipath components of the received signal and outputs an equalized signal. An input OFDM signal has its cyclic prefix removed and is separated into its component subcarrier values by an FFT, and then the values are weighted with respect to measured channel estimates and the resulting equalized signal is output.

In one aspect of the invention, a wireless transceiver comprises a plurality of electronic objects configured for performing a similar function. For example, Figure 12 is a block diagram of a set of electronic objects 1201-1203 communicatively coupled to a router 1200. The object 1201 is a Rake equalizer having a signal input $s_1(t)$ and a signal output $s'_1(t)$. Object 1202 is an OFDM equalizer having a signal input $s_2(t)$ and a signal output $s'_2(t)$. Object 1203 is an interference canceller (IC) equalizer having a signal input $s_3(t)$ and a signal output $s'_3(t)$. In some aspects of the invention, the signal outputs $s'_1(t)$, $s'_2(t)$, and $s'_3(t)$ may be coupled back to the router 1200 or to other electronic objects (not shown).

Each of a plurality of electronic objects may be configured for accepting a signal formatted in accordance with a common signal format. Each of the objects performs a similar function on its input signal. For example, an object may perform error correction, equalization, demodulation, or other types of signal processing on the input signal. However, the specific operations or algorithms employed by each object may differ.

In Figure 10, each object 1201-1203 is an equalizer object. Therefore, each object 1201-1203 performs equalization on its respective input signal. However, each object 1201-1203 performs a different type of equalization. In one aspect of the invention, the signal inputs $s_1(t)$, $s_2(t)$, and $s_3(t)$ comprise a common signal format. For example, a single-carrier signal with a cyclic prefix may be equalized by any of the equalizer objects 1201-1203. In some aspects, the signal inputs $s_1(t)$, $s_2(t)$, and $s_3(t)$ may comprise the same signal.

In one aspect of the invention, a signal output by each of a plurality of similar electronic objects is formatted in accordance with a common signal format. For example, the signal outputs $s'_1(t)$, $s'_2(t)$, and $s'_3(t)$ may comprise soft-decision symbol estimates quantized with respect to a predetermined symbol constellation.

In accordance with another aspect of the invention, signals output by the different objects may differ with respect to one or more signal parameters. Although a plurality of similar

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electronic objects are configured for performing a similar function, the signals output by each object may comprise different symbol constellations, data rates, bit-error rates, or other signal characteristics. For example, each of the signal outputs $s'_1(t)$, $s'_2(t)$, and $s'_3(t)$ may comprise symbol estimates quantized with respect to a different symbol constellation.

In another aspect of the invention, each of a plurality of electronic objects is configured for performing a similar function, but each object accepts a different signal format. An object may perform error correction, equalization, demodulation, or other types of signal processing on the input signal. However, the manner in which each object performs its function may differ based on some predetermined criterion, such as the type of signal input, the operating mode of the transceiver, or the amount of latency that can be tolerated in the system. For example, in Figure 12, the signal inputs $s_1(t)$, $s_2(t)$, and $s_3(t)$ may comprise different signal formats, each signal format being processed by a different set of equalizer objects 1201-1203. A sub-system router, such as router 1200, may be configured for routing signals between the objects 1201-1203 based at least on one predetermined criterion. In one aspect of the invention, the output signals $s'_1(t)$, $s'_2(t)$, and $s'_3(t)$ are formatted in accordance with a common signal format. In accordance with another aspect of the invention, the signal outputs $s'_1(t)$, $s'_2(t)$, and $s'_3(t)$ may differ with respect to one or more signal parameters.

It should be understood that various aspects of the invention may be implemented in hardware, firmware, software, or combinations thereof. In such aspects, any of the steps 301-303 can be implemented in hardware, firmware, and/or software to perform the functions of the present invention. For example, the same piece of hardware, firmware, or module of software may perform one or more of the steps 301-303. Alternatively, one or more of the steps 301-303 may be performed across multiple platforms, such as in a distributed computing environment.

When implemented in software, firmware, middleware or microcode, the program code or code segments to perform the necessary tasks may be stored in a machine-readable medium such as a storage medium, or memory. A processor(s) may perform the necessary tasks. A code segment may represent a procedure, a function, a subprogram, a program, a routine, a subroutine, a module, a software package, a class, or any combination of instructions, data structures, or program statements. A code segment may be coupled to another code segment or a hardware circuit by passing and/or receiving information, data, arguments, parameters, or

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IPR2025-00780

memory contents. Information, arguments, parameters, data, etc. may be passed, forwarded, or transmitted via any suitable means including memory sharing, message passing, token passing, network transmission, etc.

As disclosed herein, the term "computer-readable media" may represent one or more devices for storing data, including read only memory (ROM), random access memory (RAM), magnetic RAM, core memory, magnetic disk storage mediums, optical storage mediums, flash memory devices and/or other machine readable mediums for storing information. The term "computer-readable medium" includes, but is not limited to portable or fixed storage devices, optical storage devices, wireless channels and various other mediums capable of storing, containing or carrying instruction(s) and/or data.

The foregoing description of the specific embodiments so fully reveals the general nature of the invention that others can, by applying knowledge within the skill of the relevant art(s) (including the contents of the documents cited and incorporated by reference herein), readily modify and/or adapt for various applications such specific embodiments, without undue experimentation, without departing from the general concept of the present invention. Such adaptations and modifications are therefore intended to be within the meaning and range of equivalents of the disclosed embodiments, based on the teaching and guidance presented herein. It is to be understood that the phraseology or terminology herein is for the purpose of description and not of limitation, such that the terminology or phraseology of the present specification is to be interpreted by the skilled artisan in light of the teachings and guidance presented herein, in combination with the knowledge of one skilled in the relevant arts.

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Claims

1. An electronic object configured to function as a component of a transceiver, the electronic object comprising:
    a hardware component, comprising:
        a hardware interface for communicatively coupling to at least one other electronic object;
        a central processing unit; and
        a memory for storing at least one of software and data; and
    a software component, comprising:
        a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver;
        a discovery component configured for conveying the electronic object's identity to the at least one other electronic object; and
        a software interface for allowing the at least one other electronic object to access the electronic object's resources.
2. The electronic object recited in Claim 1, wherein the discovery component is configured for identifying other electronic objects and their capabilities.
3. The electronic object recited in Claim 1, further configured for routing signals between a plurality of electronic objects.
4. The electronic object recited in Claim 1, further configured for self organizing with the at least one other electronic object to create a communication network.
5. The electronic object recited in Claim 1, further configured for interfacing with a controller device.
6. The electronic object recited in Claim 1, further comprising at least one of a data source and a data sink.
7. The electronic object recited in Claim 1, further configured for adapting its signal processing for different signal inputs.
8. The electronic object recited in Claim 1, comprising a plurality of electronic objects.
9. The electronic object recited in Claim 1, further configured to write software.
10. The electronic object recited in Claim 1, further configured to update its identity upon updates to its set of signal processing instructions.
11. A wireless transceiver comprising a plurality of electronic objects, each electronic object comprising:

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a hardware component, comprising:

a hardware interface for communicatively coupling to at least one other electronic object;

a central processing unit; and

a memory for storing at least one of software and data; and

a software component comprising:

a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver;

a discovery component configured for conveying the electronic object's identity and capabilities to the at least one other electronic object; and

a software interface for allowing the at least one other electronic object to access the electronic object's resources.

12. The wireless transceiver recited in Claim 11, further comprising a router configured for routing signals between the plurality of electronic objects.

13. The wireless transceiver recited in Claim 11, wherein at least one of the plurality of electronic objects is configured for routing signals between the plurality of electronic objects.

14. The wireless transceiver recited in Claim 11, wherein the plurality of electronic objects is configured for self organizing to create a communication network.

15. The wireless transceiver recited in Claim 11, wherein each electronic object is configured for interfacing with a controller device.

16. The wireless transceiver recited in Claim 11, comprising a second plurality of electronic objects configured for performing the same signal processing on different signals.

17. An electronic object configured for rapid prototyping of a wireless communication transceiver, comprising:

an identification means configured for automatically conveying the electronic object's identity to at least one other electronic object in the transceiver;

a signal processing means configured for performing signal processing functionality of one of a plurality of transceiver components in a transceiver; and

an interface means for enabling the at least one other electronic object to access the electronic object's resources through physical and logical entry points.

18. The electronic object recited in Claim 17, further comprising a function adaptation means configurable to perform at least one of extending and overriding functionality of another electronic object.

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19. The electronic object recited in Claim 17, further comprising a polymorphism means configurable for adapting the signal processing means to perform different functions based on at least one input parameter.

20. A method for assembling a wireless transceiver, the method comprising:

communicatively coupling together a plurality of electronic objects, each of the plurality of electronic objects comprising:

a hardware interface for communicatively coupling to at least one other electronic object;

a central processing unit; and

a memory for storing at least one of software and data; and

providing each of the plurality of electronic objects with a set of signal processing instructions for performing signal processing corresponding to one of a plurality of components of a transceiver;

conveying each electronic object's identity to at least one other electronic object; and

configuring each electronic object to access at least one other electronic object's resources.

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Abstract

An electronic object is configured for rapid prototyping of a wireless communication transceiver. The electronic object comprises hardware and software components. An identification module is configured for automatically conveying the electronic object's identity to at least one other electronic object in the transceiver. A signal processor performs object-specific signal processing, which is one of a plurality of component transceiver functions performed by a transceiver. An interface provides access to the electronic object's resources by other electronic objects via physical and logical entry points.

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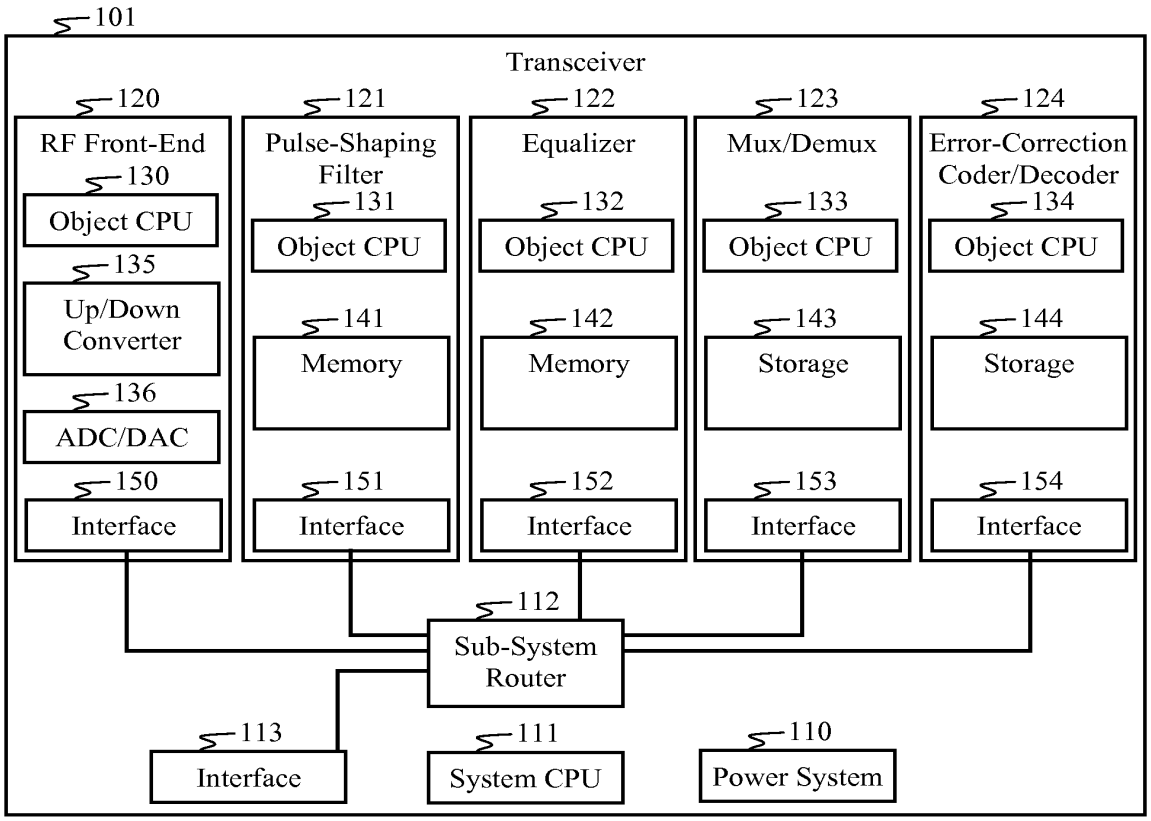

101
Transceiver
120
RF Front-End
130
Object CPU
135
Up/Down Converter
136
ADC/DAC
150
Interface
121
Pulse-Shaping Filter
131
Object CPU
141
Memory
151
Interface
122
Equalizer
132
Object CPU
142
Memory
152
Interface
123
Mux/Demux
133
Object CPU
143
Storage
153
Interface
124
Error-Correction Coder/Decoder
134
Object CPU
144
Storage
154
Interface
112
Sub-System Router
113
Interface
111
System CPU
110
Power System

Figure 1

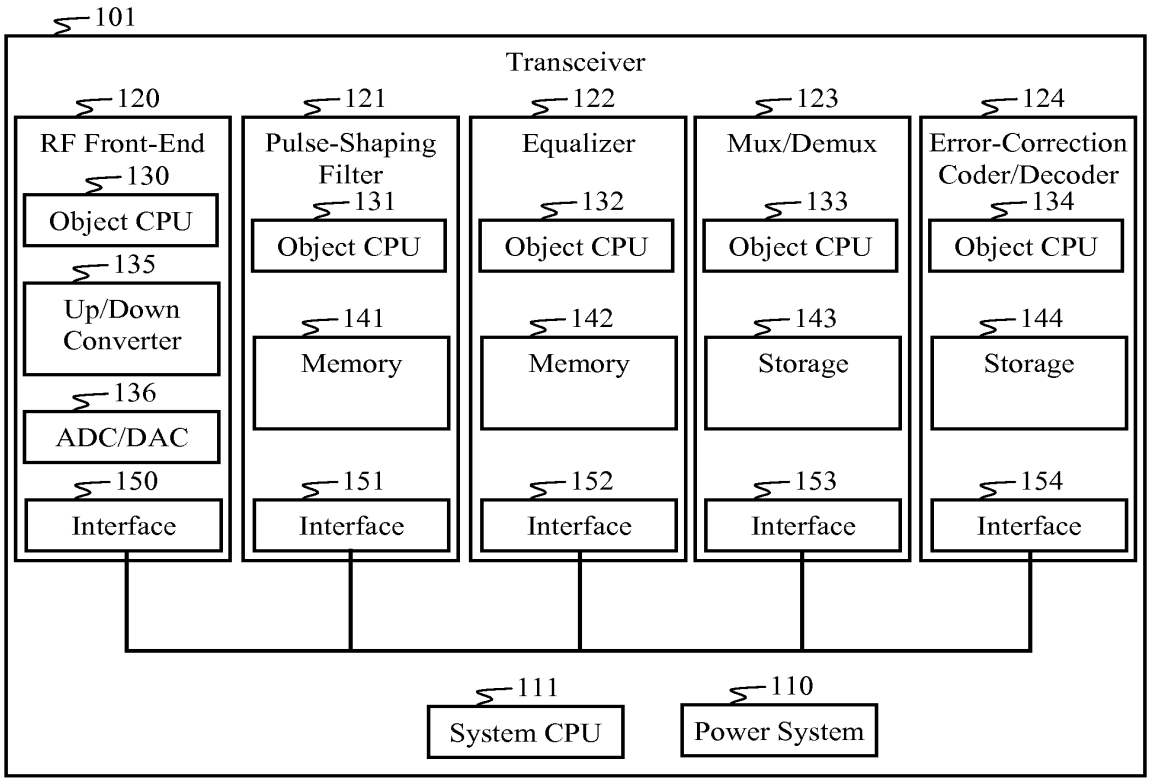

101
Transceiver
120
RF Front-End
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Object CPU
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136
ADC/DAC
150
Interface
121
Pulse-Shaping Filter
131
Object CPU
141
Memory
151
Interface
122
Equalizer
132
Object CPU
142
Memory
152
Interface
123
Mux/Demux
133
Object CPU
143
Storage
153
Interface
124
Error-Correction Coder/Decoder
134
Object CPU
144
Storage
154
Interface
111
System CPU
110
Power System

Figure 2

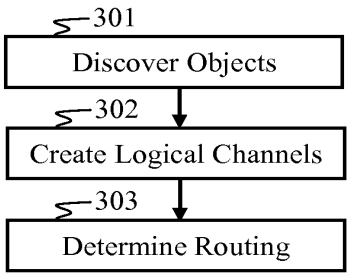

301
Discover Objects
302
Create Logical Channels
303
Determine Routing

Figure 3

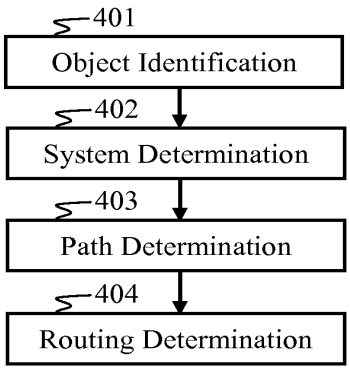

401
Object Identification
402
System Determination
403
Path Determination
404
Routing Determination

Figure 4

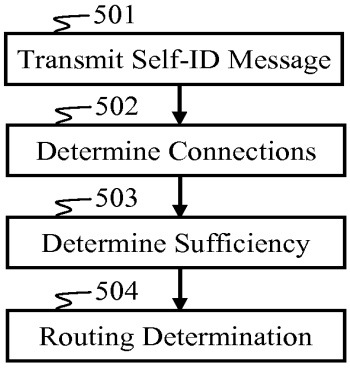

501
Transmit Self-ID Message
502
Determine Connections
503
Determine Sufficiency
504
Routing Determination

Figure 5

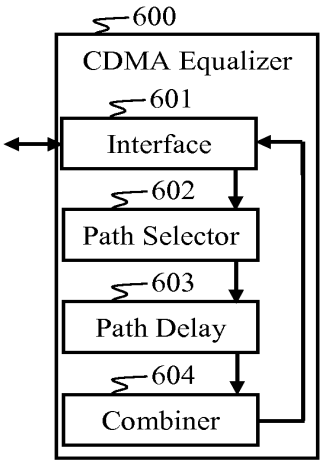

600
CDMA Equalizer
601
Interface
602
Path Selector
603
Path Delay
604
Combiner

Figure 6

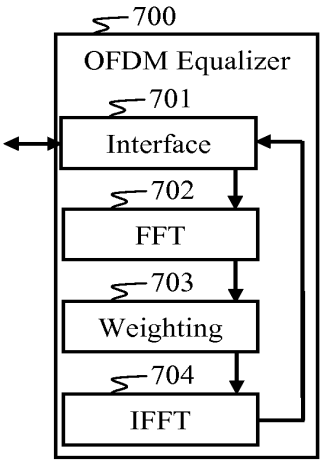

700
OFDM Equalizer
701
Interface
702
FFT
703
Weighting
704
IFFT

Figure 7

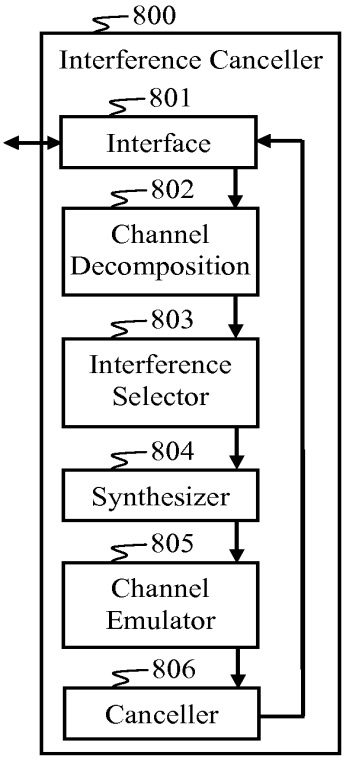

800
Interference Canceller
801
Interface
802
Channel Decomposition
803
Interference Selector
804
Synthesizer
805
Channel Emulator
806
Canceller

Figure 8

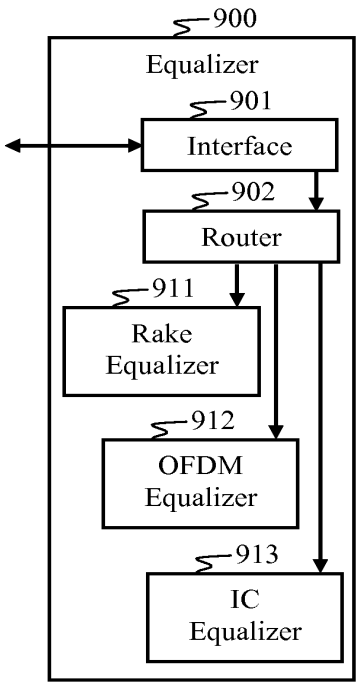

900
Equalizer
901
Interface
902
Router
911
Rake
Equalizer
912
OFDM
Equalizer
913
IC
Equalizer

Figure 9

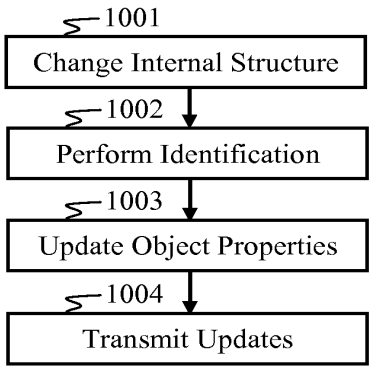

1001
Change Internal Structure
1002
Perform Identification
1003
Update Object Properties
1004
Transmit Updates

Figure 10

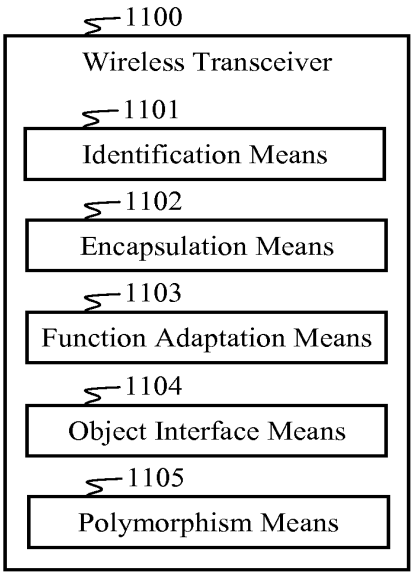

1100
Wireless Transceiver
1101
Identification Means
1102
Encapsulation Means
1103
Function Adaptation Means
1104
Object Interface Means
1105
Polymorphism Means

Figure 11

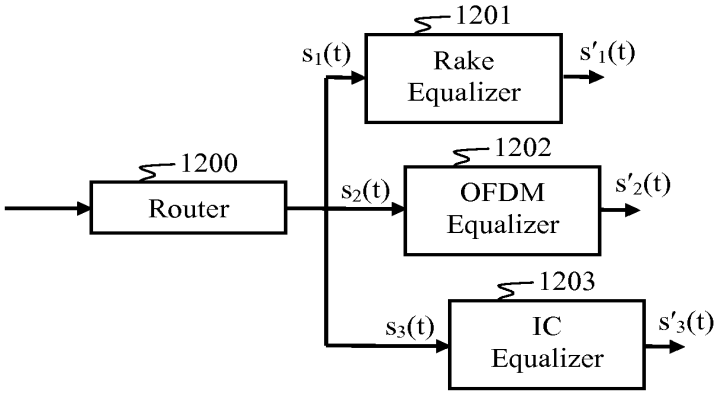

1201
Rake
Equalizer
s1(t)
s'1(t)
1200
Router
1202
OFDM
Equalizer
s2(t)
s'2(t)
1203
IC
Equalizer
s3(t)
s'3(t)

Figure 12

Doc Code: Oath
Document Description: Oath or declaration filed

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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

☑ Declaration Submitted With Initial Filing OR ☐ Declaration Submitted After Initial Filing (surcharge (37 CFR 1.16(f)) required)

Attorney Docket Number	D13-002
First Named Inventor	Sen
COMPLETE IF KNOWN	
Application Number	
Filing Date	Herewith
Art Unit	
Examiner Name	

I hereby declare that: (1) Each inventor's residence, mailing address, and citizenship are as stated below next to their name; and (2) I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention titled:

Method and Apparatus for Fast Prototyping of Wireless Transceivers

(Title of the Invention)

the application of which

☑ is attached hereto

OR

☐ was filed on (MM/DD/YYYY) _____ as United States Application Number or PCT International Application Number _____ and was amended on (MM/DD/YYYY) _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Authorization To Permit Access To Application by Participating Offices

☐ If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified patent application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified patent application is filed to have access to the above-identified patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the above-identified patent application with respect to: 1) the above-identified patent application-as-filed; 2) any foreign application to which the above-identified patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified patent application; and 3) any U.S. application-as-filed from which benefit is sought in the above-identified patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

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DECLARATION — Utility or Design Patent Application

Claim of Foreign Priority Benefits

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	NO
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

☐ Additional foreign application number(s) are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

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DECLARATION — Utility or Design Patent Application

Direct all correspondence to: ☐ The address associated with Customer Number: _____ OR ☑ Correspondence address below

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Country	Telephone	Email
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR:	☐ A petition has been filed for this unsigned inventor
Given Name (first and middle [if any])	Family Name or Surname
Robi	Sen
Inventor's Signature	Date
/Robi Sen/	5/25/2011

Residence: City	State	Country	Citizenship
McClean	VA	US	US
Mailing Address			
8000 Birnam Wood Dr.			
City	State	Zip	Country
McClean	VA	22102	US

☐ Additional inventors or a legal representative are being named on the _____ supplemental sheet(s) PTO/SB/02A or 02LR attached hereto

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.
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DECLARATION

ADDITIONAL INVENTOR(S)
Supplemental Sheet

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Ian Charles	Starnes		
Inventor's Signature /Ian Charles Starnes/			5/26/2011 Date
Great Falls Residence: City	VA State	US Country	US Citizenship
10143 Yorktown Dr. Mailing Address			
Great Falls City	VA State	22066 Zip	US Country

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Steve	Shattil		
Inventor's Signature /Steve Shattil/			5/24/2011 Date
Cheyenne Residence: City	Wy State	US Country	US Citizenship
PO Box 17355 Mailing Address			
Boulder City	CO State	80308 Zip	US Country

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Inventor's Signature			Date
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country

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DECLARATION – Supplemental Priority Data Sheet

Foreign applications:

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	NO
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The information provided by you in this form will be subject to the following routine uses:

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