

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date		2009-01-12	
	First Named Inventor	da Costa		
	Art Unit			
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	0357-02214		

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Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1	7408928	B2	2008-05-05	Bradd, et. al.	Col. 4, Lines 65-67	
	2	7443842	B2	2008-10-28	Miyamoto, et. al.	Col. 3, Lines 1-5	

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	1							<input type="checkbox"/>

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2009-01-12
First Named Inventor	da Costa	
Art Unit		
Examiner Name	Not Yet Assigned	
Attorney Docket Number	0357-02214	

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1	JOINT ANNONYMOUS AUTHORS, "Session Initiation Protocol," Wikipedia.org, January 12, 2009, 1-6, Wikimedia Foundation, Inc., San Francisco, California, United States.	<input type="checkbox"/>

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Examiner Signature		Date Considered	
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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2009-01-12
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Examiner Name	Not Yet Assigned	
Attorney Docket Number	0357-02214	

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

- See attached certification statement.
- Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- None

**SIGNATURE**

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

Signature		Date (YYYY-MM-DD)	
Name/Print		Registration Number	

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.

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.

<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	0357-02214
		Application Number	
Title of Invention	Self-forming VoIP Network		
<p>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.</p>			

**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:**

<b>Applicant 1</b>						<input type="button" value="Remove"/>	
<b>Applicant Authority</b>		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118	
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>		<b>Suffix</b>		
Mr.	Francis		daCosta				
<b>Residence Information (Select One)</b>							
		<input checked="" type="radio"/> US Residency		<input type="radio"/> Non US Residency		<input type="radio"/> Active US Military Service	
<b>City</b>	Santa Clara	<b>State/Province</b>	CA	<b>Country of Residence<sup>i</sup></b>	US		
<b>Citizenship under 37 CFR 1.41(b)<sup>i</sup></b>		US					
<b>Mailing Address of Applicant:</b>							
<b>Address 1</b>		2953 Bunker Hill					
<b>Address 2</b>		Suite 400					
<b>City</b>	Santa Clara	<b>State/Province</b>	CA				
<b>Postal Code</b>	95054	<b>Country<sup>i</sup></b>	US				
<b>Applicant 2</b>						<input type="button" value="Remove"/>	
<b>Applicant Authority</b>		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118	
<b>Prefix</b>	<b>Given Name</b>	<b>Middle Name</b>	<b>Family Name</b>		<b>Suffix</b>		
Mr.	Sriram		Dayanandan				
<b>Residence Information (Select One)</b>							
		<input checked="" type="radio"/> US Residency		<input type="radio"/> Non US Residency		<input type="radio"/> Active US Military Service	
<b>City</b>	Santa Clara	<b>State/Province</b>	CA	<b>Country of Residence<sup>i</sup></b>	US		
<b>Citizenship under 37 CFR 1.41(b)<sup>i</sup></b>		IN					
<b>Mailing Address of Applicant:</b>							
<b>Address 1</b>		2953 Bunker Hill					
<b>Address 2</b>		Suite 400					
<b>City</b>	Santa Clara	<b>State/Province</b>	CA				
<b>Postal Code</b>	95054	<b>Country<sup>i</sup></b>	US				
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the <b>Add</b> button.						<input type="button" value="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.

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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	0357-02214	
		Application Number		
Title of Invention	Self-forming VoIP Network			
Customer Number	27197			
Email Address	mail@cherskov.com	<input type="button" value="Add Email"/>		<input type="button" value="Remove Email"/>

**Application Information:**

Title of the Invention	Self-forming VoIP Network			
Attorney Docket Number	0357-02214	Small Entity Status Claimed	<input checked="" type="checkbox"/>	
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)	5	Suggested Figure for Publication (if any)	5	

**Publication Information:**

<input type="checkbox"/>	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/>	<b>Request Not to Publish.</b> 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 <b>has not and will not</b> 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:**

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:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	27197		

**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		<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button.			<input type="button" value="Add"/>

**Foreign Priority Information:**

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<b>Application Data Sheet 37 CFR 1.76</b>		Attorney Docket Number	0357-02214
		Application Number	
Title of Invention	Self-forming VoIP Network		

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).

				<input type="button" value="Remove"/>
Application Number	Country <sup>i</sup>	Parent Filing Date (YYYY-MM-DD)	Priority Claimed	
			<input checked="" type="radio"/> Yes <input type="radio"/> No	
Additional Foreign Priority Data may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

### 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.

<b>Assignee 1</b>				<input type="button" value="Remove"/>
If the Assignee is an Organization check here. <input checked="" type="checkbox"/>				
Organization Name	Mesh Dynamics, Inc.			
<b>Mailing Address Information:</b>				
Address 1	2953 Bunker Hill Lane			
Address 2	Suite 400			
City	Santa Clara	State/Province	CA	
Country <sup>i</sup>	US	Postal Code	95054	
Phone Number		Fax Number		
Email Address				
Additional Assignee Data may be generated within this form by selecting the Add button.				<input type="button" value="Add"/>

### 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	/Szymon M. Gurda/		Date (YYYY-MM-DD)	2009-01-12
First Name	Szymon	Last Name	Gurda	Registration Number
				58451

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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.
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## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>				
<b>Filing Date:</b>				
<b>Title of Invention:</b>	Self-forming VoIP Network			
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta			
<b>Filer:</b>	Szymon Maciej Gurda			
<b>Attorney Docket Number:</b>	0357-02214			
Filed as Small Entity				
<b>Utility under 35 USC 111(a) Filing Fees</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
Utility filing Fee (Electronic filing)	4011	1	82	82
Utility Search Fee	2111	1	270	270
Utility Examination Fee	2311	1	110	110
<b>Pages:</b>				
<b>Claims:</b>				
Claims in excess of 20	2202	2	26	52
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>514</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	4598748
<b>Application Number:</b>	12352457
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1841
<b>Title of Invention:</b>	Self-forming VoIP Network
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Customer Number:</b>	27197
<b>Filer:</b>	Szymon Maciej Gurda
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	0357-02214
<b>Receipt Date:</b>	12-JAN-2009
<b>Filing Date:</b>	
<b>Time Stamp:</b>	18:23:41
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$514
RAM confirmation Number	3634
Deposit Account	501709
Authorized User	GURDA,SZYMON

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**File Listing:**

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		01spec.pdf	157919 24b384dce74914ad107ae461b2322eaa19f0dc48	yes	26
<b>Multipart Description/PDF files in .zip description</b>					
	<b>Document Description</b>		<b>Start</b>		<b>End</b>
	Specification		1		21
	Claims		22		25
	Abstract		26		26
<b>Warnings:</b>					
<b>Information:</b>					
2	Oath or Declaration filed	02dec.pdf	1712375 4611d029508f7c3eeca894551ef9338423a86329	no	3
<b>Warnings:</b>					
<b>Information:</b>					
3	Drawings-only black and white line drawings	03figures.pdf	1028385 df369c29276a85868a194e3b1bc6a6538016cc98	no	5
<b>Warnings:</b>					
<b>Information:</b>					
4	Information Disclosure Statement (IDS) Filed (SB/08)	04IDS.pdf	608019 ff763895ffb2f2ed700d49335add886bffa7ed	no	4
<b>Warnings:</b>					
<b>Information:</b>					
5	NPL Documents	05sipart.pdf	128513 2aff104e81ff4f580baed012240769def19911372	no	6
<b>Warnings:</b>					
<b>Information:</b>					
6	Application Data Sheet	06ADS.pdf	1351078 ecb806ce52686fb723559fcc0523927910c31143	no	4
<b>Warnings:</b>					

<b>Information:</b>					
7	Fee Worksheet (PTO-06)	fee-info.pdf	36082	no	2
			9899796f88c1081a5effad8ca694e6597086cbe		

**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	5022371
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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.**

# Self-forming VoIP Network

Inventors:

Francis daCosta and Sriram Dayanandan

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## **FIELD OF THE INVENTION**

This invention relates to voice communications over data networks and wireless data networks, also known as VoIP (Voice over Internet Protocol) communications, and in particular architectures that promote continuity of voice communication links when network connections to a central server conventionally required for VoIP communications (a Session Initiation Protocol or "SIP" server) are unexpectedly terminated or not yet established. Although much of this disclosure relates more directly to wireless networks, and wireless mesh networks in particular, such as in mobile applications, the embodiments described herein are applicable to both wired and wireless networks supporting VoIP, as well as other wireless network architectures such as point-to-multipoint, and others.

## **BACKGROUND**

In a data network that supports VoIP communications, whether the network is wired or wireless or a combination of the two, the location of each VoIP client within the network topology is recorded in a central registry which acts like a "phone book" for the VoIP devices. This centralized registry is required by all state-of-the-art VoIP devices before VoIP communication between any of the devices may be established. This central registry is called the Session Initiation Protocol registry, or the "SIP" registry.

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Per a wikipedia.org article, “Session Initiation Protocol (SIP) is a signaling protocol, widely used for setting up and tearing down multimedia communication sessions such as voice and video calls over the Internet. Other feasible application examples include video conferencing, streaming multimedia distribution, instant messaging, presence information and online games. The protocol can be used for creating, modifying and terminating two-party (unicast) or multiparty (multicast) sessions consisting of one or several media streams. The modification can involve changing addresses or ports, inviting more participants, adding or deleting media streams, etc.”

Under the prior art, the SIP registry is located on a centralized server attached to the same network as any VoIP devices. If a client connected to a network node (the calling party) wishes to call another user (the receiving party) but the path between the calling party and the server containing the SIP server and SIP registry is broken, then the VoIP call is not possible with prior art network architectures. This is especially unfortunate if the network communications path between the calling party and the receiving party is still operational, but the sole lost connection is between the two parties and the SIP server. The loss of VoIP operation is especially vexing if the communication system is mission critical and lives or property are on the line. In these situations, a more versatile and reliable solution is needed.

The requirement of one or more centralized SIP servers are discussed in several prior art references. For example, a recently granted patent, U.S. Patent Reg. No. 7,408,928 to Bradd, et. al., describes a method of overcoming the difficulties created by communication with one or more centralized SIP servers when the central SIP servers serve networks with conflicting address domains. Bradd teaches that the “the call servers also need to be reachable from the media gateways within their respective associated networks.” Col. 4, Lines 65-67.

The joining of networks containing VoIP devices is traditionally solved by the installation of an intermediary which directs traffic from one network and unto another

1 network. For example, U.S. Patent Reg. No. 7,443,842 to Takashi Miyamoto, discusses a  
2 central “control apparatus” which facilitates communication between IP devices in two  
3 different networks. The instant invention eliminates the need for a central control  
4 apparatus, as this prior art patent teaches.

5  
6 Further prior art approaches rely on proxy servers. A proxy server is a type of  
7 intermediary service which forwards requests from clients to a server and any responses  
8 from a central server to clients. Proxy servers, contrary to this invention, nonetheless  
9 require a connection to a central server. While some proxy servers may cache requests  
10 and responses when communications with the central server are interrupted, an approach  
11 relying on proxy servers nonetheless requires one or more central servers. The instant  
12 invention facilitates communication in circumstances where a central server is  
13 consistently absent.

14  
15 A mission critical situation involving wireless communication might include a group of  
16 first responders arriving on a scene where no backhaul connection is available or has yet  
17 to be established. Here, one network node may exist on a vehicle and other network  
18 nodes may exist as part of units carried by personnel on the scene. These nodes could  
19 form an isolated cluster. However, under the prior art, it is not possible to establish VoIP  
20 sessions between VoIP devices associated with each node comprising the isolated cluster  
21 until a SIP server is also connected to the isolated cluster. Other than first responders,  
22 soldiers in the field may encounter a similar scenario. Further, the isolated cluster may  
23 be initially in communication with a SIP server through a backhaul connection, but that  
24 backhaul connection is later lost due to movement of the network nodes or a failure of the  
25 backhaul communications link. A further scenario involving wired communications, or a  
26 combination of wired and wireless communications, could involve a campus network.  
27 Here, a building or group of buildings having a wired network infrastructure may act as  
28 an isolated cluster for VoIP communications within that cluster when the backhaul  
29 connection to a SIP server which is external to the building or group of buildings is no  
30 longer available.

31

1 **SUMMARY**

2 As used herein, a “node” may include any of a number of network connectivity elements.  
3 If used in a wired environment, the node could be a network hub, a network switch, or a  
4 computer connected to the network. If wireless, the node could be an access point, a base  
5 station, a mesh node, a computer incorporating one or more wireless network interfaces  
6 and other such devices. A VoIP “client” may be any user I/O device capable of sending  
7 or receiving VoIP (IP phone, cell phone with network connectivity, PC/laptop which  
8 includes sound recording and output means, and other devices) conversations. A VoIP  
9 client may connect to a node, or may be physically combined with a node. For instance a  
10 portable wireless VoIP client unit used in military of first responder applications,  
11 especially if designed for conveyance by personnel, may also incorporate a mesh relay  
12 node. “SIP registry information” as used herein, may include, for instance, the hardware  
13 (commonly-referred to as a device’s “MAC address”) and IP addresses, and/or other  
14 information that is required in order to initiate and maintain VoIP communications  
15 between two or more VoIP client devices.

16

17 The application further describes communications between network components.  
18 Various methods of communication may be employed to implement the communications  
19 exchanged by the components of this invention, including but not limited to broadcast  
20 User Datagram Protocol (UDP) datagrams, exchanges of data using Transmission  
21 Control Protocol (TCP) connections, or other protocols. Any network communications  
22 protocol may reasonably be employed, and the choice would depend on a number of  
23 considerations such as the type of network involved in a particular deployment. For  
24 example, in deployments where reliable physical connectivity between network elements  
25 is not a problem, such as in a wired network application or a fixed-point wireless mesh,  
26 network communication protocols involving less overhead, such as UDP, may be used.  
27 In circumstances where continuous network connectivity cannot be assured, such as a  
28 mobile mesh application, network connection protocols which ensure complete receipt of  
29 data, akin to TCP socket-based communication, may be employed. Further, given the  
30 features of the instant invention, such as the use of sophisticated mesh nodes, the  
31 communication protocols may be tailored to the individual circumstances of each

1 deployment. Therefore, some embodiments of the invention are capable additional  
2 features, such as fully encrypted communications.

3  
4 The embodiments described for this invention utilize a “distributed SIP registry”  
5 functionality which is created by a self-forming methodology. The underlying basis of  
6 the network topology is a set of interconnected “nodes,” wherein VoIP client devices gain  
7 connectivity to a network (either a local network or a wider network, such as the Internet)  
8 through communication with a nearby “node.” In one embodiment, the nodes are  
9 wireless mesh access points which feature additional software and/or hardware elements  
10 used to support the features of the instant invention. However, as was discussed above,  
11 the nodes may be elements of a wired network, in which case the nodes would be a wired  
12 network switch, hub, gateway, or the like with the additional software and/or hardware  
13 elements used to support the features of the instant invention.

14  
15 There are at least two scenarios of operation for the invention described herein -- a first  
16 configuration under which a group, or cluster, of network nodes are initially isolated, and  
17 a second configuration in which the cluster is further in communication with an external  
18 SIP server containing some initial SIP registry. In both cases, each node within the  
19 cluster of nodes builds its own local SIP registry, thus self-forming a VoIP capable  
20 network where only a data network existed previously. Where the cluster of nodes is in  
21 communication with the external SIP server prior to an isolation event, communications  
22 by way of nodes outside the not-yet-isolated cluster will include information from the  
23 external SIP server, which has knowledge of nodes and clients located outside the cluster.

24  
25 In one scenario the cluster of nodes is initially intact and the nodes are initially in  
26 communication with an external SIP server containing an initial SIP registry. During this  
27 configuration, portions of the initial SIP registry that pertain to those network nodes are  
28 stored in the local SIP registries of the respective nodes, in a manner that does not require  
29 a dedicated communication path to be established between the external SIP server and  
30 each node within the cluster. If one or more network nodes later become isolated from  
31 the path to the external SIP server, any VoIP clients connected to an isolated node or

1 nodes that form an isolated cluster with network connections within the isolated cluster  
2 can still initiate and continue VoIP conversations within the isolated cluster. According  
3 to this invention, each isolated network node will contain the relevant portions (i.e. the  
4 information regarding the isolated node's clients) of independently stored SIP registry  
5 information contained in the external SIP server. Therefore, each local node's VoIP  
6 clients can locate each other even after the connection to the external SIP registry is  
7 severed. If there are three or more isolated mesh nodes in a cluster of isolated mesh  
8 nodes, then a pure relay node (i.e. a node not in communication with any clients) in the  
9 isolated cluster will understand to which node to send a VoIP packet it receives.

10  
11 The manner in which each network node with distributed SIP registry capability will  
12 build its local SIP registry is not to simply copy a portion of the registry information  
13 contained in the external SIP server. As described earlier in the background section of  
14 this specification, the purpose of having a self-forming VoIP network with distributed  
15 SIP functionality is to support mission-critical applications where maintaining voice  
16 communication amongst local VoIP clients connected to isolated network nodes is  
17 critical, and sometimes life-saving. For applications such as mobile first responders or  
18 workers deep in a coal mine, the connection to an external SIP server may be lost at any  
19 moment. When this happens, there is no guarantee that the SIP registry information at  
20 that external SIP server is in fact up-to-date given the constantly changing topology of the  
21 mobile network. As a result of this, the invention described herein builds and constantly  
22 updates local SIP registry information in each network node without the requirement to  
23 access the SIP Registry in an external or primary SIP server.

24  
25 Under a first scenario, when a network node according to this invention is initialized,  
26 usually at a power-on event, the node will immediately initiate a local SIP registry by  
27 exchanging VoIP-related address information with its local clients and between itself and  
28 other nodes in an isolated cluster, as well as any external SIP registry in communication  
29 with the node. As such, during initialization and at other stages of operation, each node  
30 can obtain information about clients from three sources. First, the node builds its own  
31 local registry by querying any clients in communication with the node. When a node

1 determines that a new client is in communication with the node, the node updates its own  
2 registry as well as communicating with the remaining nodes about the presence of the  
3 newly-discovered client. Therefore, the second source of registry information is the  
4 updates sent from other nodes. Finally, a node may receive information about clients  
5 connected to an external SIP registry instead of another node. These clients are external  
6 to the node's local cluster. Every time a network node thus enabled acquires a new piece  
7 of SIP registry information, it broadcasts that information in a broadcast information  
8 packet to other nodes similarly enabled with distributed SIP capability. Upon receiving  
9 one such special packet and learning a new piece of SIP registry information from  
10 another network node, the other node will update its own local SIP registry with that new  
11 information.

12

13 Thus, each network node with distributed SIP capability communicates with other  
14 similarly enabled nodes, and through these observations and interactions, each builds a  
15 local SIP registry with current information. Then, if suddenly disconnected from an  
16 external SIP server, each node will enter the period of isolation with the most current SIP  
17 registry information always available to it, and will itself be capable of functioning as a  
18 SIP server. Once a cluster of similarly enabled network nodes has been isolated from an  
19 external SIP server, each node in the isolated cluster will continue to observe all VoIP  
20 traffic and update its local SIP registry, again immediately broadcasting any newly  
21 discovered SIP registry information to all other nodes in the same isolated cluster. When  
22 such a cluster of nodes is in contact with an external SIP server, the external SIP registry  
23 may be updated from time to time with registry information contained in the nodes within  
24 the cluster. This can help insure that the External SIP registry has the most up to date  
25 information, or if an isolated cluster re-connects with the network containing the external  
26 SIP server, so that the external SIP server contains the current information on all clients  
27 and nodes within the previously-isolated cluster.

28

29 A second scenario exists for this distributed SIP registry functionality where initially, no  
30 connection exists to an external SIP server. In this scenario, one or more network nodes  
31 enabled with distributed SIP functionality is initialized or powered-on without being

1 connected to an external SIP server. These one or more network nodes then proceed to  
2 observe, broadcast, and receive SIP registry information within the isolated cluster-  
3 essentially self-forming VoIP connectivity. For instance, a first node might power up and  
4 find that no other nodes exist within communication range. However, a first VoIP client  
5 is connected to this node, so immediately the first node discovers the IP address and  
6 MAC address of this first client and places this information into its local SIP registry. If  
7 the first client has not been assigned an IP address, a DHCP server (Dynamic Host  
8 Configuration Protocol) incorporated into the first node can assign one. A second VoIP  
9 client connected to this node will similarly be discovered, its address information  
10 exchanged with the node with appropriate address information also added to the local SIP  
11 registry on the node. Subsequently, these first and second clients may communicate with  
12 each other through the first isolated network node, where the node functions as a SIP  
13 server, even though there is no connection to any external SIP server. This scenario of  
14 direct communication is not possible with prior-art VoIP implementations.

15

16 Building on the scenario of the preceding paragraph, if a second similarly enabled and  
17 isolated network node comes into contact with the first node, the two nodes will each  
18 broadcast their current SIP registry information to the other node, and subsequently each  
19 node will update its local SIP registry with the newly acquired information. In a like  
20 manner, information will be updated as nodes join and leave the isolated cluster, either  
21 establishing or terminating communication with the nodes within the cluster. When SIP  
22 registry information is broadcast throughout the isolated cluster, or as part of a status  
23 packet broadcast at regular intervals, each node will broadcast which nodes are currently  
24 connected to it. Accordingly, a node which has broken its connection(s) with all nodes  
25 within the isolated cluster will no longer appear or have its clients appear in any of the  
26 local SIP registries.

27

28 A network node which is enabled with local SIP registry capability may build and update  
29 a local registry at all times, or alternately only when the node lacks a direct  
30 communication path to an external SIP server. Network nodes thus enabled may be

1 constructed with a flag to determine whether the local SIP registry is enabled at all times  
2 or only when isolated.

3  
4 An object of the present invention is to provide means to facilitate VoIP communications  
5 between clients of VoIP nodes when communication with a SIP server connected to an  
6 external network is not available. A feature of the invention is that each VoIP node  
7 functions as an autonomous SIP server. An advantage of the invention is that the VoIP  
8 clients in communication with the VoIP node are able to establish VoIP communication  
9 by using the local SIP server of the node.

10  
11 Another object of the present invention is to facilitate VoIP communication with standard  
12 VoIP client communication devices. A feature of the invention is that the SIP server  
13 contained within each VoIP node is transparent to the VoIP clients. An advantage of the  
14 invention is that the VoIP clients do not require any modification to communicate with  
15 the VoIP nodes containing distributed SIP registries.

16  
17 Yet another object of the present invention is to support VoIP communications between  
18 VoIP nodes and clients associated with different VoIP nodes. A feature of the instant  
19 invention is that a first VoIP node exchanges SIP information with the remaining VoIP  
20 nodes in communications with the first VoIP node. An advantage of the invention is that  
21 the nodes in communication with one another form a decentralized SIP servers, not  
22 dependant on a connection to any one node or an external SIP server.

23  
24 Another object of the present invention is to ensure that the local registry of each VoIP  
25 node is current. A feature of the present system is that each change in the local SIP  
26 server of a VoIP node is broadcast to the remaining nodes in the cluster. An advantage of  
27 the invention is that the nodes in communication with one another contain up-to-date  
28 local copies of the SIP registry.

29  
30 Yet another object of the invention is to allow the entries of the external SIP server  
31 database to be updated upon the establishment of a connection between an external SIP

1 server and a cluster of nodes, wherein the cluster of nodes was previously disconnected  
2 from the external SIP server. A feature of the present invention is that the SIP registries  
3 within each node are compatible with pre-existing servers. An advantage of the instant  
4 invention is that the distributed SIP registries are compatible with networks currently  
5 deploying centralized SIP servers.

6  
7 In brief, the invention consists of a VoIP-capable network comprising one or more VoIP  
8 client devices, two or more VoIP nodes forming an isolated cluster wherein the two or  
9 more VoIP nodes in the isolated cluster are in communication with one another, wherein  
10 each of the VoIP client devices communicates with at least one VoIP node, wherein each  
11 of the VoIP nodes further comprises a local SIP registry built by exchanging SIP  
12 information with the remaining VoIP nodes in the isolated cluster, and wherein a first  
13 VoIP client device in communication with a first VoIP node establishes a communication  
14 with a second VoIP device in communication with a second VoIP node using the local  
15 SIP registries of the first VoIP node and the second VoIP node.

16  
17 In another embodiment, the invention consists of a method of maintaining VoIP  
18 capabilities within a network comprising forming a cluster of two or more initially  
19 isolated network nodes establishing communications between two or more client devices  
20 by way of the initially isolated network nodes, wherein in a first configuration, at least  
21 two of said initially isolated network nodes are in communication with each other but not  
22 in communication with an external SIP server, and wherein each of said at least two  
23 initially isolated network nodes supports VoIP communications based on a local SIP  
24 registry contained in each of the said nodes according to the method of communicating  
25 with at least one other initially isolated node to exchange SIP registry information,  
26 updating the local SIP registry in said node as new information is acquired, sending and  
27 receiving VoIP packets from a sender isolated node to one or more recipient isolated  
28 nodes based on said local SIP registry functionality when a client device in  
29 communication with the sender node establishes communication with a client device in  
30 communication with the recipient node.

31

1 In yet another embodiment, the invention consists of a VoIP capable network comprising  
2 a first initially isolated network node in communication with at least two VoIP clients,  
3 wherein the first isolated node further comprises a local SIP registry wherein said SIP  
4 registry contains address identifiers for each VoIP clients in communication with the first  
5 node, wherein VoIP conversations between said at least two VoIP clients are initiated by  
6 utilizing the local SIP registry.

7

### 8 **BRIEF DESCRIPTION OF THE DRAWINGS**

9 The invention together with the above and other objects and advantages will be best  
10 understood from the following detailed description of the preferred embodiment of the  
11 invention shown in the accompanying drawings, wherein:

12

13 Figure 1 shows a minimal configuration for an isolated network cluster whereby a single  
14 isolated node facilitates communication between two isolated VoIP clients.

15

16 Figure 2 shows a flowchart for a method whereby the single isolated network node of  
17 Figure 1 forms a VoIP network enabling communication between two VoIP clients.

18

19 Figure 3 shows two isolated clusters of wireless network nodes which have moved within  
20 range of each other and now may join together to form a new single isolated cluster of  
21 network nodes with VoIP communications between all clients connected to nodes within  
22 the new single cluster.

23

24 Figure 4 shows a flowchart for a method whereby the two isolated network clusters of  
25 Figure 3 may join together and operate as a single isolated cluster and VoIP network.

26

27 Figure 5 shows an isolated cluster of network nodes with VoIP capability where the  
28 isolated cluster is either initiating communications or ending communications with  
29 external network where the external network contains a conventional SIP Server.

30

1 **DETAILED DESCRIPTION OF THE INVENTION**

2 Figure 1 shows the simplest form of a self-forming VoIP network according to this  
3 invention. In this figure, a single network node 101 contains a SIP registry as well as  
4 means for updating the registry (not shown). A first VoIP client 102 and a second VoIP  
5 client 103 are in communication with the single network node 101.

6

7 In mobile scenarios such as those for first responders or soldiers, initially no clients may  
8 be communicating with the first node 101. A first VoIP client, such as client 102, may  
9 establish connectivity with node 101 and exchange identifying information with the first  
10 node 101 thereby updating the SIP registry of the first node 101. However, until a second  
11 VoIP client 103 also establishes communications with the single network node 101, a  
12 VoIP conversation is not feasible. In one embodiment of the invention, the single  
13 network node 101 may include an integral VoIP client (not shown), as in the case of a  
14 mesh node carried by personnel wherein the wireless mesh node includes a  
15 communication headset, or alternately a wireless mesh node mounted on a vehicle that  
16 includes a wired communication headset connected to an integral VoIP client function  
17 incorporated into the mesh node. Once a second client 103 is available, a call originating  
18 from client 102 will contact the local SIP server on the single network node 101, and  
19 since the SIP registry of node 101 contains the IP address and the hardware address for  
20 clients 102 and 103, a VoIP conversation between clients 102 and 103 is possible.

21

22 In every embodiment of the invention, the clients 102 and 103 may be conventional VoIP  
23 client devices which normally require communication with an external SIP server. While  
24 the single network node 101 needs to contain the local SIP logic, the clients 102 and 103  
25 are not necessarily aware that the SIP server uses a distributed paradigm of this invention.  
26 Therefore, while the present system supports custom clients, such as ones integral to the  
27 node 101, the system will also operate with completely conventional clients 102 and 103,  
28 such as a standard VoIP equipped cellular phone depicted in Figure 1.

29

30 The local SIP server within the network node 101 can communicate with the client  
31 devices 102 and 103 using any transport layer, such as TCP, UDP, or SCTP. As

1 potentially conventional clients, the client devices 102 and 103 are not required to adopt  
2 any special communication protocol with the local SIP server. Instead the client devices  
3 employ the same communications commands and protocols as the client devices would if  
4 the client devices 102 and 103 were communicating with a prior art SIP server.

5 Therefore, the current invention does not include any additional agents or supplementary  
6 services that run within each client, in conjunction with or on top of the SIP environment.

7  
8 Further, while the SIP server acts as a transparent means for the client devices 102 and  
9 103 to communicate with one another, the SIP server is not a SIP proxy. A SIP proxy is  
10 a device that acts as both a client and a server completing calls on behalf of another  
11 client. While some nodes may include an integral client, the node itself still acts as a full-  
12 fledged SIP server. A SIP proxy server requires the presence of a stand-alone SIP server  
13 to complete calls. The local SIP server within the node 101 acts as a stand-alone server  
14 in that it allows the completion of calls without an external SIP server, and is therefore  
15 not a mere proxy server.

16  
17 Figure 2 shows a flowchart describing the method whereby clients 102 and 103 in Figure  
18 1 establish the SIP registry entries necessary for VoIP communication.

19 For illustrative purposes, the flow chart of this and other figures depicts a process with a  
20 clear order of events. It should be understood that some of the steps of the method  
21 described by this invention may occur concurrently or even out of the order, depending  
22 on the real-world circumstances of the network.

23 In a contact step 201 a VoIP client connects to a node and the client exchanges its  
24 network address information with the node. This may include the client providing its  
25 MAC address to the node and also an IP address, but only if the client is preconfigured  
26 with an address. If no IP address has been previously established, the node may also  
27 incorporate DHCP server capability wherein the node assigns IP addresses to its clients.  
28 In a SIP entry creation step 202 network address information such as the hardware  
29 address and IP address for a client is placed in the local SIP registry on node. Following  
30 lapse of some time, in a subsequent contact step 203 a second or subsequent VoIP client

1 such as client 103 shown in Figure 1 connects to the node. The subsequent client  
2 exchanges its network address information with the node. Analogously as for the first  
3 client, the node then updates its local SIP registry as part of the subsequent SIP entry  
4 creation step 204. Steps 203 and 204 are repeated for every client that is in  
5 communication with the node. In a call initiation step 205, with one of clients initiates a  
6 VoIP phone call to another client. As part of a SIP lookup step 206, the SIP registry  
7 within the node is used to establish a connection between the clients.

8  
9 Figure 3 depicts an embodiment of the invention which supports the scenario where two  
10 isolated clusters of network nodes join together upon the establishment of network  
11 communication between the two Clusters. Cluster A contains network node 301 and two  
12 VoIP clients 302 and 303 in communication with the Cluster A node 301. Cluster A  
13 Node 301 contains a local SIP registry (not depicted) and the Cluster A Node 301 local  
14 SIP registry contains information regarding Cluster A node 301 clients 302 and 303 in  
15 communication with the Cluster A node 301.

16  
17 Cluster B comprises two nodes 304 and 305 wherein the Cluster B nodes 304 and 305 are  
18 in communications with each other. In one embodiment, Cluster B nodes 304 and 305  
19 connect to one another using a wireless network connection, while in another  
20 embodiment, Cluster B nodes 304 and 305 are connected together using a wired  
21 connection. The first Cluster B node 304 is in communication with its clients 306 and  
22 307. The second Cluster B node 305 is in communication with clients 308 and 309.  
23 Therefore, during the initiation of Cluster B, the first node 304 detected and recorded  
24 information regarding clients 306 and 307 into node 304 local SIP registry, while the  
25 second node 305 detected and recorded information regarding its clients 308 and 309.

26  
27 Following the initiation of the Cluster A node 301 local SIP registry, Cluster A node 301  
28 detects a neighboring Cluster B node 304 and establishes a new network connection 310  
29 between Cluster A node 301 and Cluster B node 304. At a time prior to the formation of  
30 a new network connection 310, the local SIP registry within node at 301 does not reflect  
31 any information regarding the Cluster B VoIP clients, and the local SIP registries in

1 Cluster B nodes 304 and 305 contain no information regarding VoIP clients of Cluster A.  
2 However, following the establishment of the new network connection 310 the local SIP  
3 registries of Cluster A and Cluster B nodes are updated to reflect the information of all  
4 client devices in contact with nodes comprising Cluster A and Cluster B thereby  
5 facilitating communications between any of the clients 302, 303, 306, 307, 308, and 309  
6 present in the system.

7

8 Therefore, under the present system, communication between Cluster A and Cluster B  
9 clients becomes possible without a central server. Instead, the establishment of network  
10 communications between the two previously-separated clusters is all that is required. In  
11 other words, there is no need for a central control apparatus to oversee the  
12 communications between Cluster A and Cluster B. Upon joining of the two networks,  
13 SIP servers contained in Cluster A continue to operate and exchange information with the  
14 SIP servers contained in Cluster B. In one embodiment of the invention, there is no  
15 requirement that one or more of the servers be chosen to be a predominant SIP server.  
16 Instead, the servers exchange information with one another in an ad-hoc basis.

17

18 In other words, the integral SIP servers do not operate as proxies of one another. If,  
19 contrary to the instant invention, the SIP servers were merely proxies, then a connection  
20 to one central SIP server would be required and all servers integral to individual nodes  
21 would merely forward data to the one or more central servers. Instead, in the instant  
22 invention, the SIP servers cooperate with one another as peers, with each peer SIP server  
23 containing all necessary functionality.

24

25 Figure 4 is a flowchart describing the method whereby two clusters of VoIP nodes, such  
26 as cluster A and cluster B of Figure 3 establish communication, reconcile information in  
27 the local SIP registries in the VoIP nodes within both clusters, and enable VoIP clients  
28 previously within one cluster to communicate with VoIP clients that were previously  
29 isolated within the other cluster. In the cluster communication establishment step 401 a  
30 first node within one isolated cluster, such as node 301 of Figure 3, establishes network  
31 communication with a second node, such as node 304, in another isolated cluster. In the

1 first exchange of information step 402, the first node broadcasts a special information  
2 packet containing SIP registry information to the second node within the other cluster.  
3 This second node will eventually propagate the updated SIP information to all other  
4 nodes, including all of the nodes in the second cluster. In the second exchange of  
5 information step 403 the second node 204 will then broadcast a special information  
6 packet also containing SIP registry information to all the nodes it is in communication  
7 with, including those in the cluster containing the first node. Thereafter, as part of the  
8 SIP update step 404, all nodes similarly enabled with local SIP registries will update their  
9 respective local SIP registries and will a broadcast special information packets to all other  
10 nodes they are in communication with, so that each VoIP node contains an updated  
11 version of the SIP registry. As shown in the call initiation step 405 a first VoIP client  
12 connected to a node previously in a first cluster may place a call to a second client  
13 previously located in a different cluster. Finally per the call completion step 406, a VoIP  
14 connection is then maintained between the first and second clients, facilitated by local  
15 SIP server functionality located on the node connected to the calling client.

16

17 In order for any network client device to communicate with another network client device  
18 using a modern protocol, each network client device must be assigned a unique identifier.  
19 For example, in an IP-based network, each network devices is assigned a unique IP  
20 address. IP addresses can take different forms. For example, under the IPv4 addressing  
21 scheme, an IP address is a set of four numbers separated by periods. Each number ranges  
22 from 0 to 254 (or 255 depending on the standard), i.e. in generic terms an IPv4 address is:  
23 A.X.Y.K wherein A, X,Y, and K are integers from 0 to 255.

24

25 Valid IPv4 addresses include 151.207.245.67 (one of the addresses currently assigned to  
26 uspto.gov) and 193.5.93.80 (one of the addresses currently used by WIPO).

27 Other network client identification schemes exist and serve the same purpose as the IPv4  
28 numbering scheme. For example, IPv6 uses eight groups of four hexadecimal digits  
29 (wherein each group is separated by a colon) to identify network clients.

30

1 Regardless of the identification protocol used, in order for VoIP devices to communicate  
2 with VoIP nodes, each VoIP client device and each VoIP node must be assigned an IP  
3 address. While it is possible to manually assign IP addresses to devices, this manual  
4 apportionment of addresses creates significant overhead in that each device must be  
5 tracked and its IP address assignment recorded so as to ensure that no two devices are  
6 assigned the same IP address.

7  
8 In order to avoid manual assignments of addresses, wired networks employ network-wide  
9 services such as DHCP to assign IP addresses to clients. There is typically only one  
10 DHCP server in a facility to ensure no IP conflicts are created. While wired networks  
11 may employ a single DHCP server, however isolated networks have no access to a single  
12 server. Therefore each isolated network node servicing clients according to the instant  
13 invention will include its own DHCP server.

14  
15 When cluster A and cluster B of Figure 3 establish network connectivity for the first time,  
16 there is a possibility of IP address conflicts between the client devices, especially if the  
17 nodes rely on a conventional DHCP server. An enhanced DHCP server is discussed  
18 *infra*. A conventional DHCP server may have previously assigned addresses to clients in  
19 either cluster, and inadvertently assigned redundant addresses. To avoid this problem, a  
20 method for assigning IP address is therefore disclosed for the distributed DHCP server  
21 capability in network nodes according to this invention.

22  
23 While an IP address conflict may be resolved through arbitration, prevention of address  
24 conflicts is preferable. An approach to reducing the probability of a conflict to less than  
25 1 in  $2^{15}$  is described. Note that the same approach may be used to reduce the probability  
26 even further to 1 in  $2^{32}$  or lower. Further, the approach is applicable to any device  
27 network identification scheme, such as IPv4 or IPv6.

28  
29 The reduction in the probability of a conflict is accomplished by splitting up the IP  
30 domains in an autonomous and randomized manner such that each mesh node has a range  
31 of IP addresses that it can freely assign to clients with *de minimis* risk of IP conflicts

1 occurring. Each mesh node randomly selects a DHCP range to assign client addresses.  
2 As part of the process of discovering and connecting with new network nodes, this DHCP  
3 range is broadcast in a special information packet to other nodes when the node is  
4 scanning to join other nodes. If there is a conflict in the range, it is resolved by one node  
5 selecting a new DHCP address range, a random number range set is selected and tie  
6 breaker functions are employed, and before the nodes become part of the same network.  
7 This pre-emptive measure ensures minimal disruption of client services.

8  
9 IPv4 addresses assigned by DHCP servers take the form A.X.Y.K. wherein each number  
10 is an integer from 0 to 255. Let A arbitrarily be set based on a customer identifier for the  
11 mesh network layout. K is chosen as an identifier for a client attached to the network  
12 node. Therefore, each client of a single node will share the same first three digits of an IP  
13 address, with the last digit “K” being incremented for each client device connected to a  
14 single node.

15  
16 With A and K selected, X and Y combinations provide a total of  $2^{16}$  integers or  $2^{32}$   
17 possibilities. This amounts to over 65,336 network nodes coexisting in the same place  
18 each with up to 255 clients each with no inherent IP conflicts.

19  
20 Let us assume that a 15 bit random number generator is used to generate the values for X  
21 and Y at each isolated network node. Sections of the random number may be used to set  
22 the values for X and Y for the DHCP server at each node. Let M and N be the decimal  
23 equivalent of the 7 MSB and 8 LSB of the 15 bit random number. The DHCP address  
24 space is then:

25  
26  $A.[255-M].N.0$  to  $A.[255-M].N.254$  where  $0 \leq M \leq 127$  and  $0 \leq N \leq 255$

27  
28 This allows for a network of up to 32768 network nodes with distributed DHCP  
29 capability - each of them having up to 255 clients each.

30

1 The diagram of Figure 5 can be used to describe two operational scenarios of an  
2 embodiment of the invention. In a first sequence of operation or first scenario, an  
3 isolated cluster of network nodes such as cluster A comprising a self-formed VoIP  
4 network establishes a network connection with an external network that contains a  
5 conventional SIP server. Under a second sequence or second scenario, Figure 5 can also  
6 be used to describe the response of the system to an event wherein a portion of a network  
7 loses its communication links to a main network and thus becomes isolated.

8  
9 Looking at the first scenario, the first isolated cluster comprises Cluster A network nodes  
10 501 and 504 which are used for VoIP communications with at least four Cluster A clients  
11 depicted as 502, 503, 505, and 506. In this scenario, the nodes comprising Cluster A are  
12 initially isolated from any other nodes and the Cluster A clients are only capable of intra-  
13 Cluster A communication and the communications amongst Cluster A client devices 502,  
14 503, 505, and 506 has been possible due to the presence of local SIP registries and SIP  
15 server functionality contained in Cluster A nodes 501 and 504. Upon establishing an  
16 External network connection 507 with an External network node 508 belonging to the  
17 external network, isolated Cluster A may now communicate with VoIP clients located  
18 within, or connected to, the external network. For example, Cluster A VoIP clients such  
19 as client 502 may connect with client 509 attached to the External node 508, clients 518  
20 and 519 attached to node 510, client 517 attached to wireless access point 516, client 515  
21 attached to VoIP switch 513, or any VoIP client that the main SIP server 514 contains  
22 SIP registry entries regarding, including clients that may be reachable through the  
23 Internet (not pictured).

24  
25 Upon the establishment of the External network connection 507, the local SIP registries  
26 in Cluster A nodes 501 and 504 would supply their current SIP registration information to  
27 the main SIP server 514 such that the main SIP server 514 may have the benefit of the  
28 latest information. After becoming connected to the external network through the  
29 establishment of External Network Connection 507, network nodes within previously  
30 isolated Cluster A will continue to maintain their local SIP registries and communicate  
31 SIP registry information among themselves in order to remain best prepared for operation

1 in an isolated manner should the External Network Connection 507 be lost as can happen  
2 pursuant to the second scenario described below.

3  
4 Conversely, the second scenario starts with Cluster A connected to the external network  
5 through at least one External Network Connection such as 507, and even though VoIP  
6 clients contained within Cluster A initially have access to the main SIP server located on  
7 server 514, nodes in cluster A build and maintain their own local SIP registries according  
8 to this invention, essentially a self-forming VoIP network. This self-formed VoIP  
9 network will serve clients, such as the depicted clients 502, 505, and 506 of the nodes  
10 501 and 504 in Cluster A with the most recent SIP information, especially in view of  
11 changes due to the roaming of nodes and clients in mobile situations. In addition, the  
12 self-formed VoIP network also maintains readiness for separation from the external  
13 network, which may occur at any time, especially in mission critical mobile networks.

14  
15 Figure 5 depicts Cluster A comprising nodes 501 and 504. Cluster A may contain any  
16 number of nodes, and each node may contain any number of clients, such as clients 502  
17 and 503. Further, during different time periods, participation within a cluster may change  
18 as nodes begin and end wireless communication with one another. If for instance, at a  
19 first point in time,  $\alpha$ , node 504 and the clients associated therewith are moved out of  
20 range of the communications link with node 501, the local SIP registry in node 504 will  
21 cease receiving updates from node 501. While communication between clients 505 and  
22 506 would be possible, given that at time  $\alpha$ , both continue to be associated with node 504,  
23 node 504 clients 505 and 506 cannot communicate with the remaining clients depicted in  
24 Figure 5. Therefore if at a time interval  $\beta$ , wherein time  $\beta$  follows time interval  $\alpha$ , a new  
25 client (not depicted) joins node 501, node 504 is not aware of the new client's location.  
26 However, if at a time interval  $\gamma$ , wherein  $\gamma$  occurs after  $\beta$ , the node 504 rejoins the Cluster  
27 A, node 504 receives the updated SIP registry from the node 501 which remained within  
28 Cluster A. Therefore, starting with time interval  $\gamma$ , clients of the previously removed  
29 node 504 would be once again able to communicate with all the other clients.

1 Thus, the foregoing description of preferred embodiments of the present invention has  
2 been provided for the purposes of illustration and description. It is not intended to be  
3 exhaustive or to limit the invention to the precise forms disclosed. Many modifications  
4 and variations will be apparent to one of ordinary skill in the relevant arts. For example,  
5 unless otherwise specified, steps performed in the embodiments of the invention  
6 disclosed can be performed in alternate orders, certain steps can be omitted, and  
7 additional steps can be added. The embodiments were chosen and described in order to  
8 best explain the principles of the invention and its practical application, thereby enabling  
9 others skilled in the art to understand the invention for various embodiments and with  
10 various modifications that are suited to the particular use contemplated. It is intended that  
11 the scope of the invention be defined by the claims and their equivalents.  
12

1    **CLAIMS**

2

3    1.     A VoIP-capable network comprising:  
4           one or more VoIP client devices;  
5           two or more VoIP nodes forming an isolated cluster wherein the two or more  
6    VoIP nodes in the isolated cluster are in communication with one another;  
7           wherein each of the VoIP client devices communicates with at least one VoIP  
8    node;  
9           wherein each of the VoIP nodes further comprises a local SIP registry built by  
10   exchanging SIP information with the remaining VoIP nodes in the isolated cluster; and  
11          wherein a first VoIP client device in communication with a first VoIP node  
12   establishes a communication with a second VoIP device in communication with a second  
13   VoIP node using the local SIP registries of the first VoIP node and the second VoIP node.

14

15   2.     The VoIP-capable network of Claim 1, wherein the local SIP registries of the  
16   isolated VoIP nodes are updated as the VoIP nodes and the VoIP client devices begin  
17   communication with the isolated cluster and end communication with the isolated cluster.

18

19   3.     The VoIP-capable network of Claim 1, wherein updates to the local SIP registry  
20   of a VoIP node are communicated to remaining VoIP nodes in the isolated cluster by  
21   broadcasting one or more information packets containing local SIP registry information  
22   of the VoIP node.

23

24   4.     The VoIP-capable network of Claim 1, wherein the local SIP registry of a VoIP  
25   node is updated according to information received from another VoIP nodes in the  
26   isolated cluster in special information packets that each contain local SIP registry  
27   information of another VoIP node.

28

29   5.     The VoIP-capable network of Claim 1, wherein each VoIP node has the ability to  
30   function as a DHCP server to assign IP addresses to clients in communication with the  
31   VoIP node.

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6. The VoIP-capable network of Claim 5, wherein the IP addresses are assigned from a range of IP addresses produced by a random number generator on each VoIP node.

7. The VoIP-capable network of Claim 1, further comprising means of connecting the isolated cluster to an external network, wherein upon connection to an external network, the SIP registry of an external SIP server connected to the external network is updated to include SIP registry information from the VoIP nodes.

8. A method of maintaining VoIP capabilities within a network comprising:  
forming a cluster of two or more initially isolated network nodes  
establishing communications between two or more client devices by way of the initially isolated network nodes, wherein in a first configuration, at least two of said initially isolated network nodes are in communication with each other but not in communication with an external SIP server, and wherein each of said at least two initially isolated network nodes supports VoIP communications based on a local SIP registry contained in each of the said nodes according to the method of:  
communicating with at least one other initially isolated node to exchange SIP registry information;  
updating the local SIP registry in said node as new information is acquired;  
sending and receiving VoIP packets from a sender isolated node to one or more recipient isolated nodes based on said local SIP registry functionality when a client device in communication with the sender node establishes communication with a client device in communication with the recipient node.

9. The method of Claim 8 further comprising changing said cluster from the first configuration to a second configuration wherein in the second configuration the said cluster is in communication with an external SIP server containing an external SIP registry; and updating the external SIP registry with the local SIP registries of each of said nodes comprising said cluster.

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10. The method of Claim 8, further comprising updating the local SIP registries of the isolated nodes as nodes and clients join and leave the isolated cluster.

11. The method of Claim 8, wherein updates to the local SIP registry of each node is communicated to remaining nodes in the cluster by broadcasting an information packet containing the local SIP registry information.

12. The method of Claim 8, wherein each node functions as a DHCP server to assign IP addresses to clients connected to the node.

13. The method of Claim 12, wherein the IP addresses are assigned from a range of IP addresses produced by a random number generator on each node.

14. A VoIP capable network comprising:  
a first initially isolated network node in communication with at least two VoIP clients, wherein the first isolated node further comprises a local SIP registry wherein said SIP registry contains address identifiers for each VoIP clients in communication with the first node; and  
wherein VoIP communication between said at least two VoIP clients are initiated by utilizing the local SIP registry.

15. The VoIP capable network of Claim 14, wherein the local SIP registry of the first isolated node is updated as the VoIP clients establish or terminate a network connection with the first isolated node.

16. The VoIP capable network of Claim 14, wherein the first isolated node further comprises communications means with other isolated nodes wherein the first isolated node broadcasts its SIP registry information to other nodes in communication with the first node.

1 17. The VoIP capable network of Claim 14, wherein first isolated node comes into  
2 communication with other isolated nodes to form a cluster, and the local SIP registry  
3 information of each isolated node in the cluster is updated according to information  
4 received from other isolated nodes in the cluster.  
5

6 18. The VoIP capable network of Claim 14, wherein the first isolated node further  
7 comprises a DHCP server to assign IP addresses to clients in communication with the  
8 first node.  
9

10 19. The VoIP-capable network of Claim 18, wherein the IP addresses are assigned  
11 from a range of IP addresses produced by a random number generator on the first isolated  
12 node.  
13

14 20. The VoIP capable network of Claim 18, wherein each node in the cluster has the  
15 ability to function as a DHCP server to assign IP addresses to clients connected to that  
16 node.  
17

18 21. The VoIP-capable network of Claim 20, wherein each node in the cluster assigns  
19 IP addresses from a range of IP addresses produced by a random number generator on  
20 that node.  
21

22 22. The VoIP capable network of Claim 14, wherein the information contained in an  
23 external SIP server is updated with the local SIP registry of the first isolated node upon  
24 establishment of a network connection with an external network containing the external  
25 SIP server.  
26

1 **ABSTRACT**

2 A self-forming VoIP connection capability is described that may be superimposed over  
3 wired networks, wireless networks, or combinations thereof. As described herein, a local  
4 network cluster forms while isolated from a conventional SIP server, or alternately may  
5 exist as a cluster of network nodes and clients that later becomes isolated from a  
6 conventional SIP server by a break in the network. Either way, each network node thus  
7 enabled with distributed SIP registry functionality according to this invention  
8 independently constructs a local SIP registry and SIP server capability within that node.  
9 Subsequently, while isolated from a conventional SIP server, VoIP conversations among  
10 client devices connected to nodes within an isolated cluster will continue, and nodes and  
11 clients may join or leave an isolated cluster with conversations able to be initiated or  
12 continued while a node has network connectivity to the cluster.

**DECLARATION FOR PATENT APPLICATION  
WITH POWER OF ATTORNEY**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled "SELF-FORMING VOIP NETWORK" (Attorney Ref. No. 0357-02214), the specification of which

(Check one)  is attached hereto.  
 was filed on \_\_\_\_\_  
with serial no \_\_\_\_\_

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 (a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119, of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign applications for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

<u>Prior Foreign Application(s)</u>			<u>Priority Claimed</u>	
(Number)	(Country)	(Day/Month/Year Filed)	Yes	No

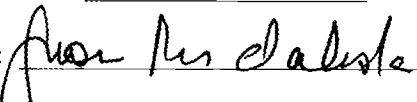
I hereby claim the benefit under Title 35, United States Code, §120, of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in title 37, Code of Federal Regulations, §1.56 (a), which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(App. Ser. No.)	(Filing Date)	(Status)

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 of any patent issuing thereon.

And I hereby appoint Donald G. Flaynik (Reg. No. 30,836) and Michael J. Cherskov (Reg. No. 33,664), Szymon M. Gurda (58,451), Charles Nissam-Sabat (42,037), are all members of the Bar of the State of Illinois, using the address CHERSKOV & FLAYNIK, The Civic Opera Building, 20 North Wacker Drive, Chicago, IL 60606 (Telephone 312-621-1330), my attorneys with full power of substitution and revocation, to prosecute this application, and to transact all business in the Patent and Trademark Office connected therewith. It is requested that all correspondence should be directed to CHERSKOV & FLAYNIK, The Civic Opera Building, 20 North Wacker Drive, Chicago, IL 60606.

Full name of **first inventor**: Francis daCosta

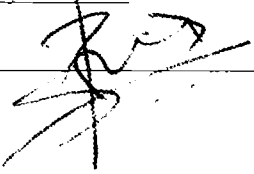
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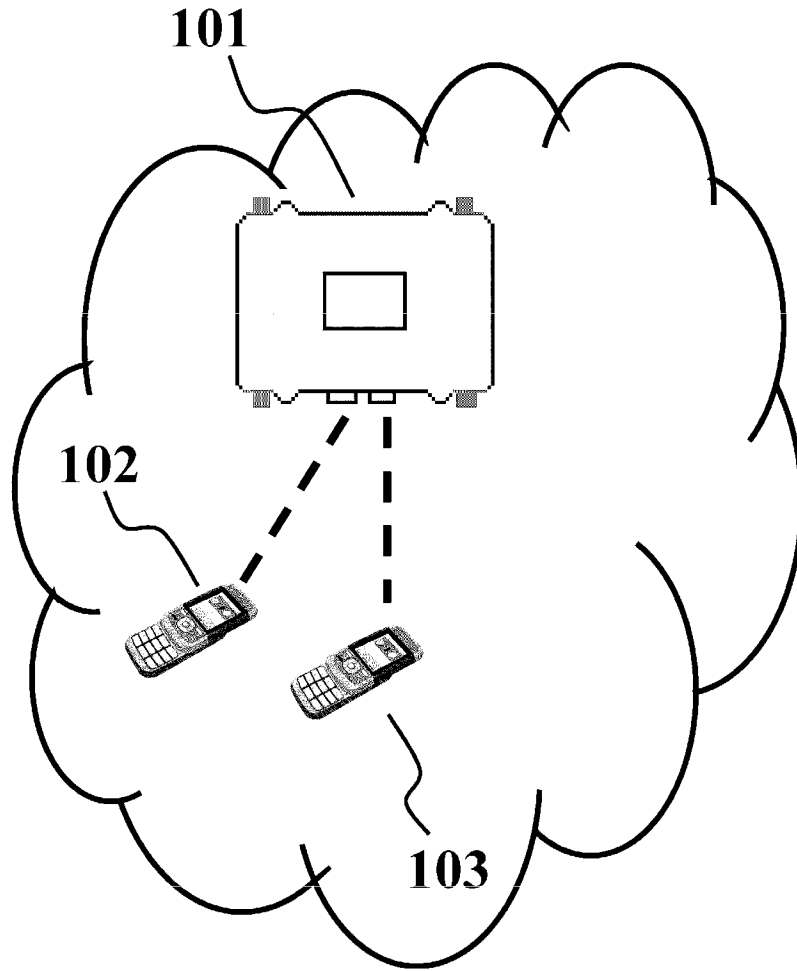
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USA

# Isolated node with 2 clients



**Figure 1**

## VoIP communication via single isolated node

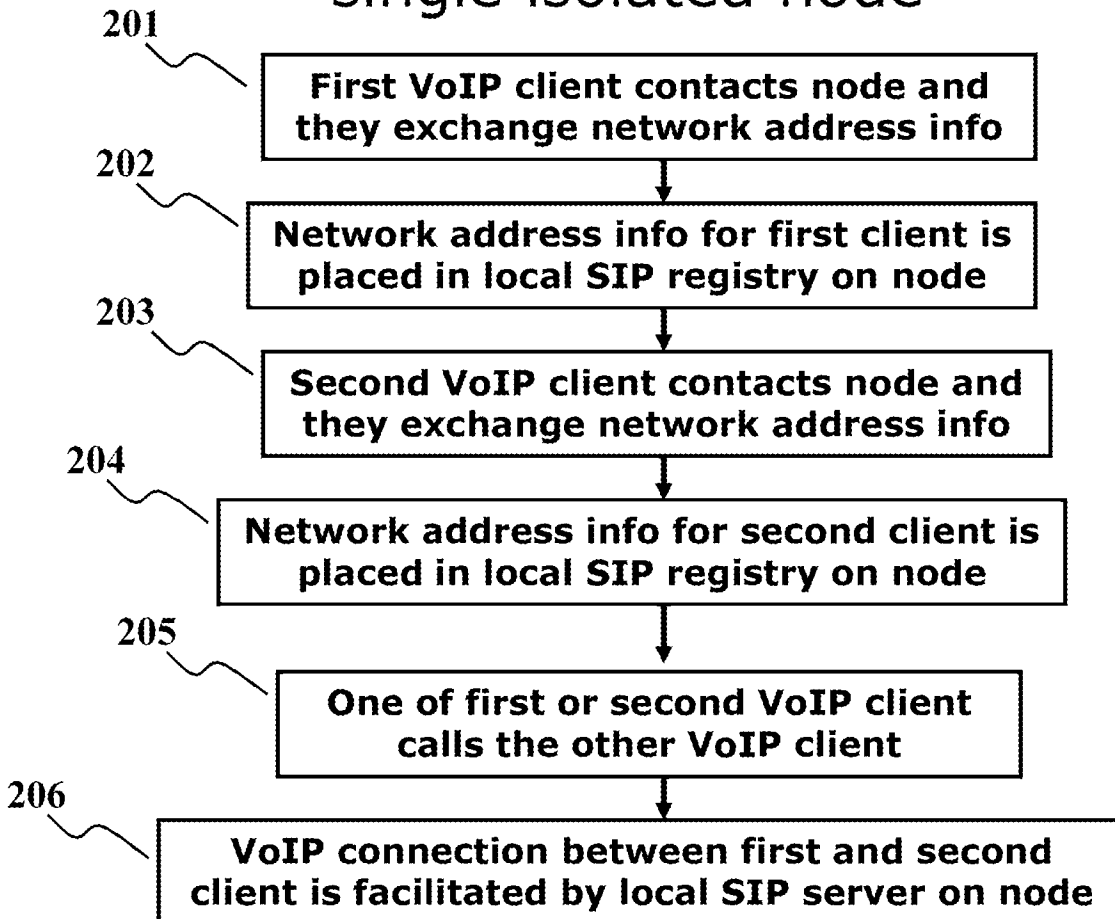


Figure 2

# Two isolated clusters joining

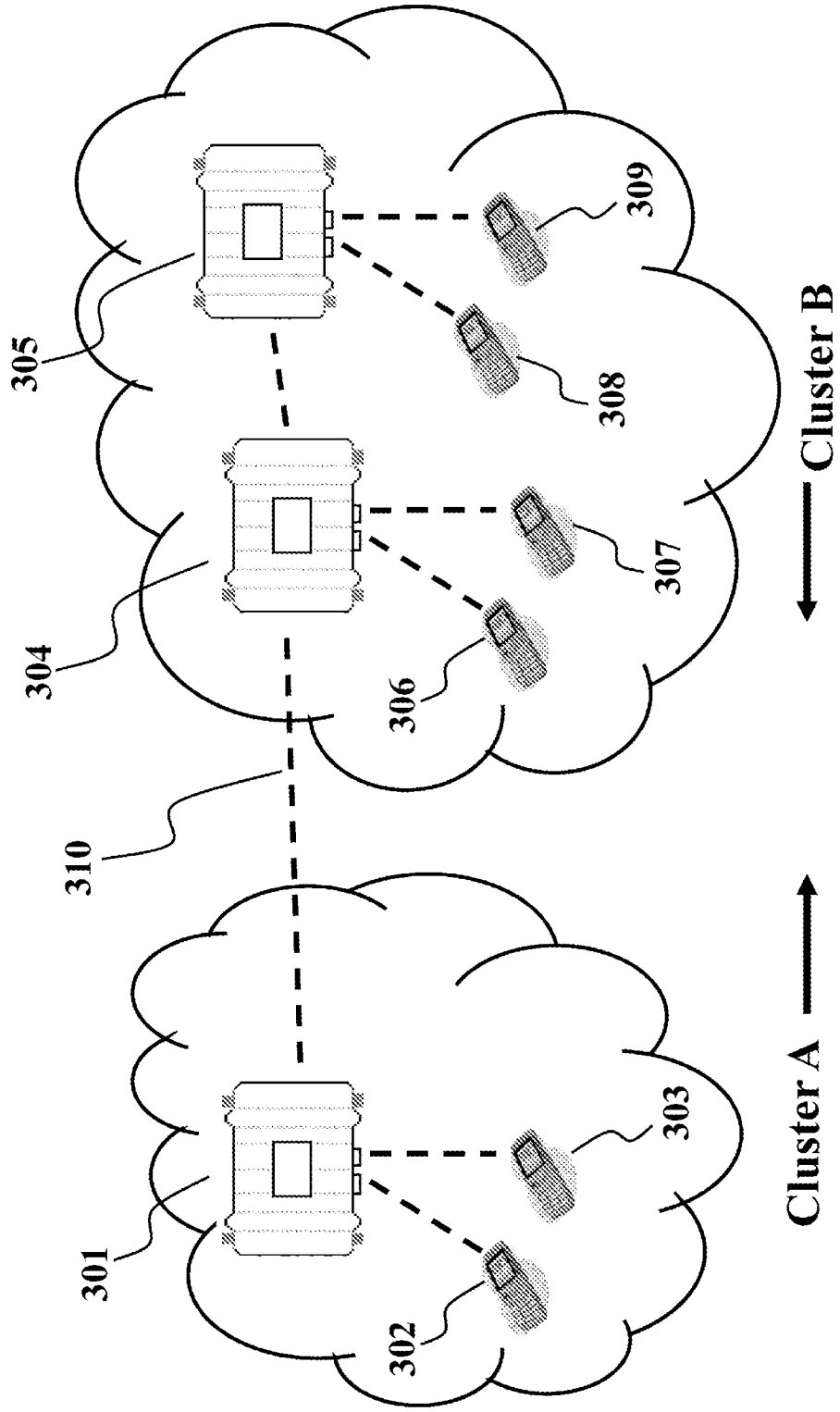


Figure 3

# VoIP communication as isolated clusters join

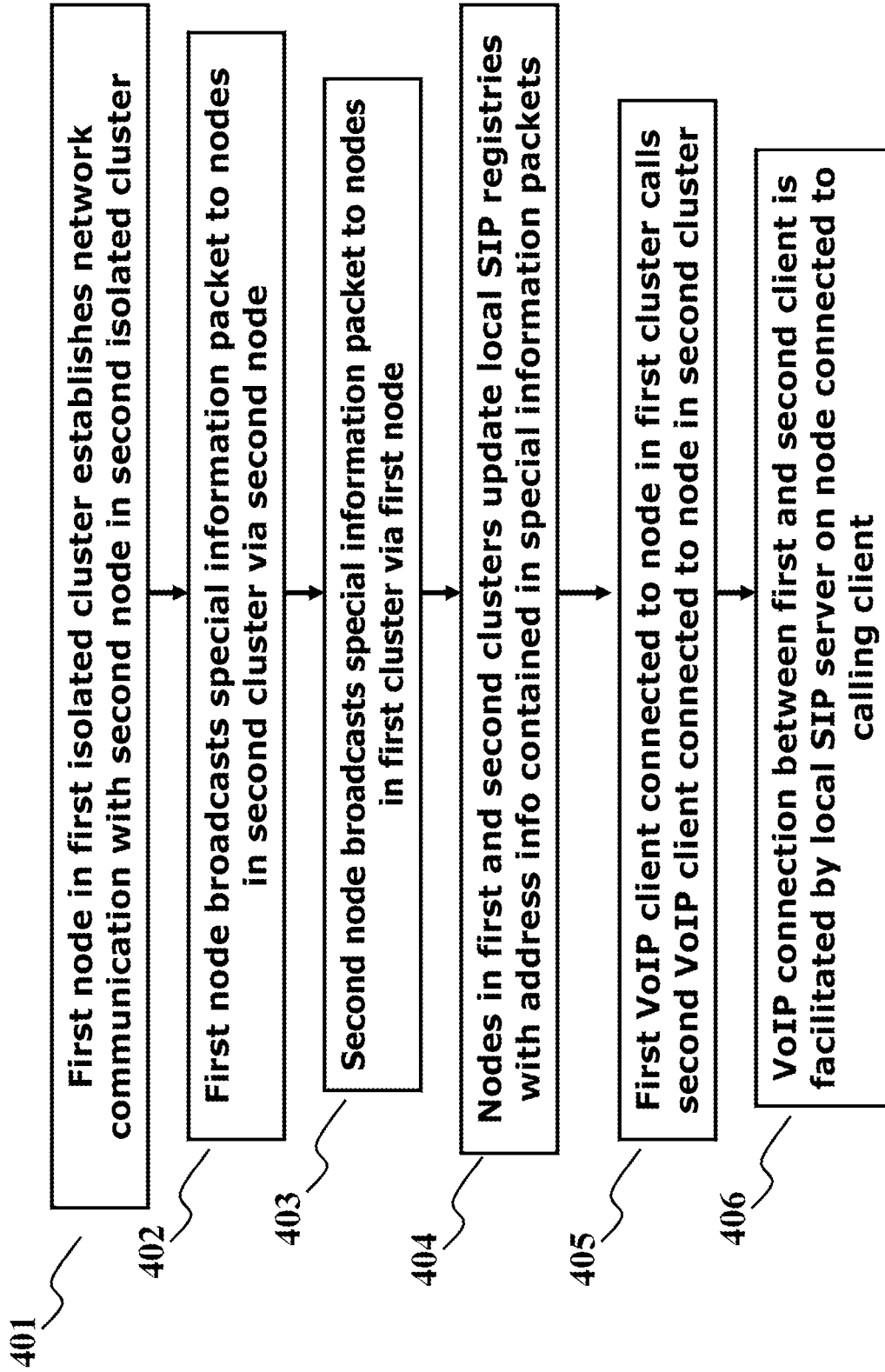


Figure 4



Filing Date: 01/12/09

Approved for use through 7/31/2006. OMB 0651-0032  
 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875	Application or Docket Number <b>12/352,457</b>
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APPLICATION AS FILED – PART I			SMALL ENTITY		OTHER THAN SMALL ENTITY	
	(Column 1)	(Column 2)				
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	<b>82</b>	N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	<b>270</b>	N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	<b>110</b>	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	<b>22</b>	minus 20 = <b>2</b>	x\$26	<b>52</b>	x\$52	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	<b>3</b>	minus 3 = *	x\$110		x\$220	
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					
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			195		390	
			<b>TOTAL</b>	<b>514</b>	<b>TOTAL</b>	

\* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II					SMALL ENTITY		OTHER THAN SMALL ENTITY	
	(Column 1)	(Column 2)	(Column 3)					
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	
Total (37 CFR 1.16(i))	*	Minus **	=	X =		X =		
Independent (37 CFR 1.16(h))	*	Minus ***	=	X =		X =		
Application Size Fee (37 CFR 1.16(s))								
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				N/A		N/A		
				<b>TOTAL ADDT FEE</b>		<b>TOTAL ADDT FEE</b>		

APPLICATION AS AMENDED – PART II					SMALL ENTITY		OTHER THAN SMALL ENTITY	
	(Column 1)	(Column 2)	(Column 3)					
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	
Total (37 CFR 1.16(i))	*	Minus **	=	X =		X =		
Independent (37 CFR 1.16(h))	*	Minus ***	=	X =		X =		
Application Size Fee (37 CFR 1.16(s))								
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				N/A		N/A		
				<b>TOTAL ADDT FEE</b>		<b>TOTAL ADDT FEE</b>		

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

\*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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

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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY,DOCKET,NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/352,457, 01/12/2009, 2614, 514, 0357-02214, 22, 3

CONFIRMATION NO. 1841

FILING RECEIPT

27197
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CHICAGO, IL 60606



Date Mailed: 01/26/2009

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)

Francis daCosta, Santa Clara, CA;
Sriram Dayanandan, Santa Clara, CA;

Assignment For Published Patent Application

MESH DYNAMICS, INC., Santa Clara, CA

Power of Attorney:

Donald Flaynik Jr--30836
Michael Cherskov--33664
Charles Nissim-Sabat--42037
Szymon Gurda--58451

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted: 01/22/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/352,457

Projected Publication Date: 07/15/2010

Non-Publication Request: No

Early Publication Request: No

\*\* SMALL ENTITY \*\*

**Title**

Self-forming VoIP Network

**Preliminary Class**

370

**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 (1-866-999-4158).

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**Title 37, Code of Federal Regulations, 5.11 & 5.15**

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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.

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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

Table with 4 columns: APPLICATION NUMBER (12/352,457), FILING OR 371(C) DATE (01/12/2009), FIRST NAMED APPLICANT (Francis daCosta), ATTY. DOCKET NO./TITLE (0357-02214)

CONFIRMATION NO. 1841

PUBLICATION NOTICE



27197
MICHAEL J. CHERSKOV
300 NORTH STATE STREET
SUITE 5102
CHICAGO, IL 60654

Title:Self-forming VoIP Network

Publication No.US-2010-0177766-A1

Publication Date:07/15/2010

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/.

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

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

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

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

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	12352457
	Filing Date	2010-07-15
	First Named Inventor	daCosta, Francis
	Art Unit	2468
	Examiner Name	Cheng, Joe H.
	Attorney Docket Number	0357-02214

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7408925	B2	2008-05-05	Bradd et al.	
	2	7443842	B2	2008-10-28	Miyamoto, et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

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	1							<input type="checkbox"/>

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NON-PATENT LITERATURE DOCUMENTS								Remove
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	12352457
	Filing Date	2010-07-15
	First Named Inventor	daCosta, Francis
	Art Unit	2468
	Examiner Name	Cheng, Joe H.
	Attorney Docket Number	0357-02214

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
	1		<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

**EXAMINER SIGNATURE**

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	12352457
Filing Date	2010-07-15
First Named Inventor	daCosta, Francis
Art Unit	2468
Examiner Name	Cheng, Joe H.
Attorney Docket Number	0357-02214

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

**OR**

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

**SIGNATURE**

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

Signature	/Szymon M. Gurda/	Date (YYYY-MM-DD)	2011-09-14
Name/Print	Szymon M. Gurda	Registration Number	58451

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## 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.

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Francis DACOSTA  
Application: Self-forming VoIP Network  
Serial No.: 12/352,457  
Filing Date: January 12, 2010  
Art Unit: 2468  
Case No.: 0357-02214  
Conf. No.: 1841

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Submitted via EFS-Web on September 14, 2011

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

123 W. Madison St.  
Suite 400  
Chicago, IL 60602

**DISCLOSURE STATEMENT PER 37 C.F.R. §§ 1.97 AND 1.98**

Dear Sir:

The citation listed on accompanying form PTO/SB/08B is submitted in compliance with the duty of disclosure defined in 37 C.F.R. § 1.98. Copies of non-patent literature references are enclosed.

This Disclosure Submission Statement is not to be construed as a representation that a search has been made, that additional matter material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art under 35 U.S.C. 102 and/or 35 U.S.C. 103.

Respectfully submitted,

**CHERSKOV & FLAYNIK**

/Szymon M. Gurda/

Szymon M. Gurda  
Reg. No. 58,451

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	10951716
<b>Application Number:</b>	12352457
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1841
<b>Title of Invention:</b>	Self-forming VoIP Network
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Customer Number:</b>	27197
<b>Filer:</b>	Szymon Maciej Gurda
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	0357-02214
<b>Receipt Date:</b>	14-SEP-2011
<b>Filing Date:</b>	12-JAN-2009
<b>Time Stamp:</b>	20:10:18
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	611758 <small>2507f30144afc7d72ad8ac9a439ae0475ea02883</small>	no	4

### Warnings:

### Information:

2	Transmittal Letter	IDSCertification.pdf	68213 2285217e14281ec15ba47908f32db19ee3d12d50	no	1
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**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	679971
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**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.**



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes details for application 12/352,457, inventor Francis daCosta, and examiner Albert T. Chou.

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

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

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

- mail@cherskov.com
sgurda@cherskov.com
mcherskov@cherskov.com

<b>Office Action Summary</b>	<b>Application No.</b> 12/352,457	<b>Applicant(s)</b> DACOSTA ET AL.	
	<b>Examiner</b> ALBERT T. CHOU	<b>Art Unit</b> 2471	

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

**Period for Reply**

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

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

**Status**

- 1)  Responsive to communication(s) filed on 12 January 2009.
- 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) 1-22 is/are pending in the application.
  - 5a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 6)  Claim(s) 1-13 is/are allowed.
- 7)  Claim(s) 14 and 15 is/are rejected.
- 8)  Claim(s) 16-22 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 12 January 2009 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 Draftperson's Patent Drawing Review (PTO-948)
- 3)  Information Disclosure Statement(s) (PTO/SB/08)
  - Paper No(s)/Mail Date 1/12/2009, 9/14/2011.
- 4)  Interview Summary (PTO-413)
  - Paper No(s)/Mail Date. \_\_\_\_\_.
- 5)  Notice of Informal Patent Application
- 6)  Other: \_\_\_\_\_.

Art Unit: 2471

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. 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 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by US PGPub. No. 2008/0320148 A1 by Capuozzo et al. (hereinafter “Capuozzo”).

Regarding claim 14, Capuozzo teaches a VoIP capable network **[Figs. 3-8]** comprising:  
a first initially isolated network node in communication with at least two VoIP clients **[Fig. 3: e.g. SIPy server 26 communicating with VoIP phones 28, 30, or SIPx server 14 communicating with clients A 16, B20; para. 0032]**, wherein the first isolated node further comprises a local SIP registry **[Figs. 3 & 7: a registrar database may be integrated inside the SIP server; para. 0056]** wherein said SIP registry contains address identifiers for each VoIP clients in communication with the first node **[Figs. 3, 4 & 7: The registrar database has a**

Art Unit: 2471

**list of users that are registered in network A 304/SIPx domain or network B 306/SIPy domain (and within any other networks served by the SIPx server and SIPy server, respectively); para. 0056];** and wherein VoIP communication between said at least two VoIP clients are initiated by utilizing the local SIP registry **[Figs. 1, 3, 4 & 7: e.g. SIPx server 14 may successfully initiate a communications session between Client A 16 and Client B 20. SIPy server 26 may successfully initiate a communications session between VoIP phone 28 and VoIP phone 32; para. 0029-0030].**

Regarding claim 15, Capuozzo teaches the local SIP registry of the first isolated node is updated as the VoIP clients establish or terminate a network connection with the first isolated node **[Figs. 3, 4 & 7: The registrar database has a list of users, i.e. updated, that are registered in network A 304/SIPx domain or network B 306/SIPy domain (and within any other networks served by the SIPx server and SIPy server, respectively); para. 0056].**

### ***Allowable Subject Matter***

2. Claims 16-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. Claims 1-13 are allowed.

Art Unit: 2471

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert T. Chou whose telephone number is 571-272-6045. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham, can be reached on 571-272-3179. 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).

/ALBERT T CHOU/

Primary Examiner, Art Unit 2471

April 26, 2012

<b>Notice of References Cited</b>	Application/Control No. 12/352,457	Applicant(s)/Patent Under Reexamination DACOSTA ET AL.	
	Examiner ALBERT T. CHOU	Art Unit 2471	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-2008/0320148 A1	12-2008	Capuozzo et al.	709/227
*	B US-2010/0115107 A1	05-2010	Mitsuhashi et al.	709/227
*	C US-2008/0063001 A1	03-2008	TANIMOTO, Yoshifumi	370/401
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
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**FOREIGN PATENT DOCUMENTS**

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**NON-PATENT DOCUMENTS**

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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		12352457		
	Filing Date		2010-07-15		
	First Named Inventor	daCosta, Francis			
	Art Unit	<del>2468</del>	2471		
	Examiner Name	<del>Cheng, Joe H.</del>	Albert T Chou		
	Attorney Docket Number		0357-02214		

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Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
/A.C./	1	7408925	B2	2008-05-05	Bradd et al.	
/A.C./	2	7443842	B2	2008-10-28	Miyamoto, et al.	

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number	12352457
	Filing Date	2010-07-15
	First Named Inventor	daCosta, Francis
	Art Unit	2468
	Examiner Name	Cheng, Joe H.
	Attorney Docket Number	0357-02214

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
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Examiner Signature	/Albert Chou/	Date Considered	04/23/2012
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<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number	12352457
Filing Date	2010-07-15
First Named Inventor	daCosta, Francis
Art Unit	2468
Examiner Name	Cheng, Joe H.
Attorney Docket Number	0357-02214

**CERTIFICATION STATEMENT**

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

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

Signature	/Szymon M. Gurda/	Date (YYYY-MM-DD)	2011-09-14
Name/Print	Szymon M. Gurda	Registration Number	58451

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## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	exchang\$3 near3 (SIP near3 database)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 21:15
L2	15	exchang\$3 adj3 (SIP adj3 information)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 21:18
S40	2	12/352,457	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/23 11:00
S41	38	(volP near3 cluster\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 15:19
S42	9	(mesh adj2 dynamics).as.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 15:24
S43	6	(mesh adj2 dynamics).as. and VolP	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 15:25
S44	179	(VolP adj2 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 15:30
S45	15	(VolP adj2 node) and (SIP adj3 registr\$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 15:31
S46	2	VolP near5 (isolated near2 cluster)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:08
S47	10	VolP and (isolated near2 cluster)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:08

S48	2	VoIP same (isolated near2 cluster)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:09
S49	104	VoIP adj1 node	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:10
S50	104	(VoIP adj1 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:10
S51	6	(VoIP adj1 node) and (voIP near2 client)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:11
S52	58	(VoIP adj1 node) and (voIP near2 (client or device or terminal))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:13
S53	8	(VoIP adj1 node) and (voIP near2 (client or device or terminal)) and (SIP near3 registr\$6)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:14
S54	27	VoIP with (peer near3 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:18
S55	1	(peer-to-peer) near2 VoIP near2 node	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:19
S56	15	(peer-to-peer) same (VoIP near2 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:20
S57	1	(VoIP near2 node) and ((local or integrated) near3 (SIP near2 registr\$7))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:23
S58	43	((local or integrated) near3 (SIP near2 registr\$7))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:24
S59	5691117	(local or regional or distributed) near3 VoIP near3 (network or cluster)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:29

S60	795	(local or regional or distributed near3 VoIP near3 (network or cluster))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:29
S61	259	(local or regional or distributed near2 VoIP near2 (network or cluster))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:29
S62	11	(local or regional or distributed near2 VoIP near2 (network or cluster) and (SIP near3 registr\$7))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:30
S63	10	(ad-hoc near3 VoIP)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 16:35
S64	143	(integrated near3 (SIP near2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 18:45
S65	28	(integrated adj2 (SIP adj2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 18:46
S66	20	(integrated adj2 (SIP adj2 server)) and VoIP	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 18:47
S67	159	(communicat\$3 near3 between near3 (SIP adj2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:15
S68	13	(inter near3 (SIP adj2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:16
S69	1	(communicat\$3 near3 between near3 peer near3 (SIP adj2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:17
S70	294	((communicat\$3 or session or establish\$4) near3 between near3 (SIP adj2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:21
S71	34	((communicat\$3 or session or establish\$4) near3 between near2 client near3 (SIP adj2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:22

S72	49	((communicat\$3 or session or establish\$4) near3 between near3 (SIP adj2 server)) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:27
S73	1897	(volP adj2 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:36
S74	5	peer-to-peer near3 (volP adj2 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:36
S75	0	(inter-connect\$3 or inteconnect) near3 (volP adj2 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:38
S76	5	((establish\$4 or connect\$3) adj3 between adj2 (volP adj2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/24 19:40
S77	3	"20060242300"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 11:19
S78	1	pct/jp2007/000925	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 11:20
S79	19	(independent near2 VolP near2 network)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 11:24
S80	21	(SIP adj1 server adj1 node)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 11:39
S81	2	"20070041528"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 17:32
S82	2	"20050047423"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 17:38
S83	18	(interconnect\$3 or inter-connect\$) near3 (SIP adj2 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 17:49


S84	927	(SIP near3 (adaptor or adapter or ((format or message) near2 conver\$4)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 17:56
S85	583	(SIP adj3 (adaptor or adapter or ((format or message) near2 conver\$4)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 17:56
S86	190	(SIP adj3 (adaptor or adapter or ((format or message) near2 conver\$4))) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 17:57
S87	92	(SIP adj3 (adaptor or adapter or ((format or message) near2 conver\$4))) and (format near2 conver\$4) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 17:58
S88	2	"20080146201"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 18:35
S89	1	12/732,561	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 18:41
S91	1	11/975,260 and (regist\$10)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/25 22:56
S92	1	11/975,260	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 10:20
S93	6	((exchang\$3 or broadcast\$3) near3 (regist\$8 near2 information)) same ((VolP near2 (node or network)) or ((SIP or VolP) near2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 10:30
S94	28	((interwork\$3 or inter-work\$3) near3 ((SIP or VolP) near2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 10:43
S95	307	((interwork\$3 or inter-work\$3 or interconnect\$3 or inter-connect\$3 or exchang\$3) near3 ((SIP or VolP) near2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 10:45
S96	279	S95 not S94	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 10:47

S97	88	(S95 not S94) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 10:48
S98	1	11/975,260 and (regist\$10) and (exchang\$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 11:02
S99	1	11/975,260 and (regist\$10) and (exchang\$3) and database	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 11:10
S100	5	((exchang\$3 or broadcast\$3) near3 (SIP near2 regist\$8 near2 information))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 11:14
S101	413	((SIP near2 regist\$8 near2 information))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 11:50
S102	28	(propagat\$3 or transmit\$4 or broadcast\$3 or exchang\$3) near3 (SIP near2 (((regist\$8 or configuration) near2 information) or database))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 11:55
S103	508	(between near2 ((SIP or VoIP) adj2 server))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:07
S104	127	(between near2 ((SIP or VoIP) adj2 server)) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:08
S105	0	(exchang\$ adj2 (SIP adj2 database)) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:25
S106	6	(exchang\$ adj2 (regist\$10 adj2 database)) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:26
S107	6	(exchang\$3 adj2 (regist\$10 adj2 database)) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:29
S108	0	(broadcast\$3 adj2 (regist\$10 adj2 database)) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:30

S109	14	(forward\$3 adj2 (regist\$10 adj2 database)) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:30
S110	110	(exchang\$3 adj2 (regist\$6 adj2 information)) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:32
S111	4	(exchang\$3 adj2 (regist\$6 adj2 information)) and (SIP near2 server) and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:32
S112	16	exchang\$3 adj2 SIP adj2 regist\$7	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 12:40
S113	88	plurality near2 (SIP adj1 server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 15:34
S114	25	updat\$3 near3 (SIP near2 database)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 15:57
S115	38	updat\$3 near3 (SIP near3 database)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 15:59
S116	0	(propagat\$3) near3 (SIP near3 database)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 16:52
S117	7	(forward\$3) near3 (SIP near3 database)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/04/26 16:52

4/26/2012 10:16:09 PM

C:\Users\achou\Documents\EAST\Workspaces\12,352,457 self-forming VoIP.wsp

<b>Index of Claims</b>  	<b>Application/Control No.</b> 12352457	<b>Applicant(s)/Patent Under Reexamination</b> DACOSTA ET AL.
	<b>Examiner</b> ALBERT T CHOU	<b>Art Unit</b> 2471

✓	<b>Rejected</b>
=	<b>Allowed</b>


-	<b>Cancelled</b>
÷	<b>Restricted</b>

N	<b>Non-Elected</b>
I	<b>Interference</b>

A	<b>Appeal</b>
O	<b>Objected</b>

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

CLAIM		DATE							
Final	Original	04/26/2012							
	1	=							
	2	=							
	3	=							
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	11	=							
	12	=							
	13	=							
	14	✓							
	15	✓							
	16	O							
	17	O							
	18	O							
	19	O							
	20	O							
	21	O							
	22	O							

<b>Search Notes</b>  	<b>Application/Control No.</b>  12352457	<b>Applicant(s)/Patent Under Reexamination</b>  DACOSTA ET AL.
	<b>Examiner</b>  ALBERT T CHOU	<b>Art Unit</b>  2471

SEARCHED			
Class	Subclass	Date	Examiner
370	227352, 401	4/24/2012	AC
709		4/24/2012	AC

SEARCH NOTES		
Search Notes	Date	Examiner
Text Search - EAST	4/24/2012	AC

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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**BIB DATA SHEET**
**CONFIRMATION NO. 1841**

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.	
12/352,457	01/12/2009	370	2471	0357-02214	
<b>APPLICANTS</b> Francis daCosta, Santa Clara, CA; Sriram Dayanandan, Santa Clara, CA; <b>** CONTINUING DATA *****</b> <b>** FOREIGN APPLICATIONS *****</b> <b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY **</b> 01/22/2009					
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No 35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Verified and Acknowledged <u>/ALBERT T CHOU/</u> Examiner's Signature	<input type="checkbox"/> Met after Allowance Initials _____	<b>STATE OR COUNTRY</b> CA	<b>SHEETS DRAWINGS</b> 5	<b>TOTAL CLAIMS</b> 22	<b>INDEPENDENT CLAIMS</b> 3
<b>ADDRESS</b> MICHAEL J. CHERSKOV 123 WEST MADISON STREET SUITE 400 CHICAGO, IL 60602 UNITED STATES					
<b>TITLE</b> Self-forming VoIP Network					
<b>FILING FEE RECEIVED</b> 514	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		<input type="checkbox"/> All Fees <input type="checkbox"/> 1.16 Fees (Filing) <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) <input type="checkbox"/> 1.18 Fees (Issue) <input type="checkbox"/> Other _____ <input type="checkbox"/> Credit		

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		12/352,457	
	Filing Date		2009-01-12	
	First Named Inventor	da Costa		
	Art Unit	2471		
	Examiner Name	Not Yet Assigned <i>Albert T Chou</i>		
	Attorney Docket Number	0357-02214		

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
<i>/A.C./</i>	1	7408928	B2	2008-05-05	Bradd, et. al.	Col. 4, Lines 65-67	
<i>/A.C./</i>	2	7443842	B2	2008-10-28	Miyamoto, et. al.	Col. 3, Lines 1-5	

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Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number			
	Filing Date		2009-01-12	
	First Named Inventor	da Costa		
	Art Unit			
	Examiner Name	Not Yet Assigned		
	Attorney Docket Number	0357-02214		

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>5</sup>
/A.C./	1	JOINT ANNONYMOUS AUTHORS, "Session Initiation Protocol," Wikipedia.org, January 12, 2009, 1-6, Wikimedia Foundation, Inc., San Francisco, California, United States.	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

**EXAMINER SIGNATURE**

Examiner Signature	/Albert Chou/	Date Considered	04/23/2012
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.

UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: DACOSTA, Francis  
Application: SELF-FORMING VOIP NETWORK  
Serial No.: 12/352,457  
Art Unit: 2471  
Filing Date: January 12, 2009  
Examiner: Albert T. Chou  
Atty. Dkt. No.: 0357-02214

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Submitted via EFS-Web on May 29, 2012.

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

123 West Madison St.  
Suite 400  
Chicago, IL 60602  
312-621-1330

**AMENDMENT AND RESPONSE TO OFFICE ACTION**

Dear Sir:

Applicants submit this Amendment in response to the Office Action dated May 2, 2012. Claims 14 and 15 were rejected while claims 16-22 were objected-to and claims 1-13 were allowed. By this amendment, the objected-to claims are re-written in independent form. Applicant submits that the claims are allowable and requests entry of the instant amendment and that this case be passed to issuance.

**Amendments to the Claims** are reflected in the listing of claims beginning on page two of this paper.

**Remarks/Arguments** begin on page seven this paper.

### AMENDMENTS TO THE CLAIMS

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

1. (Original) A VoIP-capable network comprising:

one or more VoIP client devices;

two or more VoIP nodes forming an isolated cluster wherein the two or more VoIP nodes in the isolated cluster are in communication with one another;

wherein each of the VoIP client devices communicates with at least one VoIP node;

wherein each of the VoIP nodes further comprises a local SIP registry built by exchanging SIP information with the remaining VoIP nodes in the isolated cluster; and

wherein a first VoIP client device in communication with a first VoIP node establishes a communication with a second VoIP device in communication with a second VoIP node using the local SIP registries of the first VoIP node and the second VoIP node.

2. (Original) The VoIP-capable network of Claim 1, wherein the local SIP registries of the isolated VoIP nodes are updated as the VoIP nodes and the VoIP client devices begin communication with the isolated cluster and end communication with the isolated cluster.

3. (Original) The VoIP-capable network of Claim 1, wherein updates to the local SIP registry of a VoIP node are communicated to remaining VoIP nodes in the isolated cluster by broadcasting one or more information packets containing local SIP registry information of the VoIP node.

4. (Original) The VoIP-capable network of Claim 1, wherein the local SIP registry of a VoIP node is updated according to information received from another VoIP nodes in the isolated cluster in special information packets that each contain local SIP registry information of another VoIP node.

5. (Original) The VoIP-capable network of Claim 1, wherein each VoIP node has the ability to function as a DHCP server to assign IP addresses to clients in communication with the VoIP node.

6. (Original) The VoIP-capable network of Claim 5, wherein the IP addresses are assigned from a range of IP addresses produced by a random number generator on each VoIP node.

7. (Original) The VoIP-capable network of Claim 1, further comprising means of connecting the isolated cluster to an external network, wherein upon connection to an external network, the SIP registry of an external SIP server connected to the external network is updated to include SIP registry information from the VoIP nodes.

8. (Original) A method of maintaining VoIP capabilities within a network comprising:

forming a cluster of two or more initially isolated network nodes

establishing communications between two or more client devices by way of the initially isolated network nodes, wherein in a first configuration, at least two of said initially isolated network nodes are in communication with each other but not in communication with an external SIP server, and wherein each of said at least two initially isolated network nodes supports VoIP communications based on a local SIP registry contained in each of the said nodes according to the method of:

communicating with at least one other initially isolated node to exchange SIP registry information;

updating the local SIP registry in said node as new information is acquired;

sending and receiving VoIP packets from a sender isolated node to one or more recipient isolated nodes based on said local SIP registry functionality when a client device in

communication with the sender node establishes communication with a client device in communication with the recipient node.

9. (Original) The method of Claim 8 further comprising changing said cluster from the first configuration to a second configuration wherein in the second configuration the said cluster is in communication with an external SIP server containing an external SIP registry; and updating the external SIP registry with the local SIP registries of each of said nodes comprising said cluster.

10. (Original) The method of Claim 8, further comprising updating the local SIP registries of the isolated nodes as nodes and clients join and leave the isolated cluster.

11. (Original) The method of Claim 8, wherein updates to the local SIP registry of each node is communicated to remaining nodes in the cluster by broadcasting an information packet containing the local SIP registry information.

12. (Original) The method of Claim 8, wherein each node functions as a DHCP server to assign IP addresses to clients connected to the node.

13. (Original) The method of Claim 12, wherein the IP addresses are assigned from a range of IP addresses produced by a random number generator on each node.

14. (Cancelled)

15. (Presently Amended) The VoIP capable network of Claim ~~[[14]]~~ 16, wherein the local SIP registry of the first isolated node is updated as the VoIP clients establish or terminate a network connection with the first isolated node.

16. (Presently Amended) ~~The VoIP capable network of Claim 14~~ A VoIP capable network comprising:

a first initially isolated network node in communication with at least two VoIP clients, wherein the first isolated node further comprises a local SIP registry wherein said SIP registry contains address identifiers for each VoIP clients in communication with the first node; and

wherein VoIP communication between said at least two VoIP clients are initiated by utilizing the local SIP registry, wherein the first isolated node further comprises communications means with other isolated nodes wherein the first isolated node broadcasts its SIP registry information to other nodes in communication with the first node.

17. (Presently Amended) The VoIP capable network of Claim ~~[[14]]~~ 16, wherein first isolated node comes into communication with other isolated nodes to form a cluster, and the local SIP registry information of each isolated node in the cluster is updated according to information received from other isolated nodes in the cluster.

18. (Presently Amended) The VoIP capable network of Claim ~~[[14]]~~ 16, wherein the first isolated node further comprises a DHCP server to assign IP addresses to clients in communication with the first node.

19. (Original) The VoIP-capable network of Claim 18, wherein the IP addresses are assigned from a range of IP addresses produced by a random number generator on the first isolated node.

20. (Original) The VoIP capable network of Claim 18, wherein each node in the cluster has the ability to function as a DHCP server to assign IP addresses to clients connected to that node.

21. (Original) The VoIP-capable network of Claim 20, wherein each node in the cluster assigns IP addresses from a range of IP addresses produced by a random number generator on that node.

22. (Presently Amended) The VoIP capable network of Claim [[14]] 16, wherein the information contained in an external SIP server is updated with the local SIP registry of the first isolated node upon establishment of a network connection with an external network containing the external SIP server.

## REMARKS

In a Non-final Office Action dated May 2, 2012, claims 14 and 15 were rejected, claims 1-13 were allowed and claims 16-22 were objected-to. Applicants hereby cancel rejected subject matter without prejudice to prosecution of these claims in a continuation filing. The application is therefore being limited to the allowed claims 1-13 and the objected-to claims 16-22 along with claims depending thereto. Rejected claim 15 has been rewritten to depend from claim 16, which defines allowable subject matter as amended. The objected-to claims have been re-written into independent form with all limitations of the parent claims.

Consequently, applicant respectfully submits that the pending claims define allowable subject matter and that the amendment to the claims be entered after Final Office Action.

No fee payment is believed due with this response. The Commissioner is authorized to charge any necessary fees to the undersigned's Deposit Account No. 501709.

An earnest attempt has been made hereby to address the October 27, 2010 Official Action. All claims are deemed in condition for allowance and same is respectfully requested. If the Examiner feels that a telephonic interview will expedite allowance, the Examiner is respectfully urged to contact the undersigned. Claims 5-17 are pending. Applicant requests reconsideration of all of the aforementioned claims.

Respectfully Submitted,

May 29, 2012

/Szymon M. Gurda/  
Szymon M. Gurda  
Reg. No. 58,451

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	12884131
<b>Application Number:</b>	12352457
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1841
<b>Title of Invention:</b>	Self-forming VoIP Network
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Customer Number:</b>	27197
<b>Filer:</b>	Szymon Maciej Gurda
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	0357-02214
<b>Receipt Date:</b>	29-MAY-2012
<b>Filing Date:</b>	12-JAN-2009
<b>Time Stamp:</b>	17:22:29
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Response.pdf	92861 <small>7a85d07f8ef6f9da0c225d4f6bc6067b91758f9a</small>	yes	7

<b>Multipart Description/PDF files in .zip description</b>			
<b>Document Description</b>		<b>Start</b>	<b>End</b>
Applicant Arguments/Remarks Made in an Amendment		1	1
Claims		2	6
Applicant Arguments/Remarks Made in an Amendment		7	7

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**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**

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<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875	Application or Docket Number <b>12/352,457</b>	Filing Date <b>01/12/2009</b>	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	SMALL ENTITY <input checked="" type="checkbox"/>	OR			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)		RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A		OR	N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (j), or (m))</small>	N/A	N/A	N/A		OR	N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A		OR	N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(j))</small>	minus 20 =	*	X \$ =		OR	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =		OR	X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 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).				OR		
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>					OR		
			TOTAL		OR	TOTAL	

\* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY			
	(Column 1)	(Column 2)	(Column 3)					
AMENDMENT	05/29/2012	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 21	Minus ** 22	= 0	X \$30 =	0	OR	X \$ =
	Independent (37 CFR 1.16(h))	* 3	Minus *** 3	= 0	X \$125 =	0	OR	X \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						OR	
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR	
					TOTAL ADD'L FEE	0	OR	TOTAL ADD'L FEE

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY			
	(Column 1)	(Column 2)	(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	X \$ =		OR	X \$ =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	X \$ =		OR	X \$ =
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))						OR	
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						OR	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:  
 /MYRTLE LEIGH/

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NOTICE OF ALLOWANCE AND FEE(S) DUE

27197 7590 06/12/2012
MICHAEL J. CHERSKOV
123 WEST MADISON STREET
SUITE 400
CHICAGO, IL 60602

EXAMINER
CHOU, ALBERT T
ART UNIT PAPER NUMBER

2471

DATE MAILED: 06/12/2012

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

12/352,457 01/12/2009 Francis daCosta 0357-02214 1841

TITLE OF INVENTION: SELF-FORMING VOIP NETWORK

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional YES \$870 \$300 \$0 \$1170 09/12/2012

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 SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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.

**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)

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.

27197 7590 06/12/2012  
**MICHAEL J. CHERSKOV**  
 123 WEST MADISON STREET  
 SUITE 400  
 CHICAGO, IL 60602

**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.
12/352,457	01/12/2009	Francis daCosta	0357-02214	1841

TITLE OF INVENTION: SELF-FORMING VOIP NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$870	\$300	\$0	\$1170	09/12/2012

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHOU, ALBERT T	2471	370-352000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b></p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____</p> <p>3 _____</p>
---	---

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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
---	--

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

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information 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.



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

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Values: 12/352,457, 01/12/2009, Francis daCosta, 0357-02214, 1841

27197 7590 06/12/2012
MICHAEL J. CHERSKOV
123 WEST MADISON STREET
SUITE 400
CHICAGO, IL 60602

EXAMINER

CHOU, ALBERT T

ART UNIT PAPER NUMBER

2471

DATE MAILED: 06/12/2012

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 782 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 782 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## 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.**

12/352,457

**Examiner**

ALBERT T. CHOU

**Applicant(s)**

DACOSTA ET AL.

**Art Unit**

2471

**-- 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 amendments filed on May 29, 2012.
- 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 1-13 and 15-22.
- 4.  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 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.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  - 6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_.
    - (b)  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).**
- 7.  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.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3.  Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_
- 4.  Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5.  Notice of Informal Patent Application
- 6.  Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_ .
- 7.  Examiner's Amendment/Comment
- 8.  Examiner's Statement of Reasons for Allowance
- 9.  Other \_\_\_\_.

**DETAILED ACTION**

***Allowable Subject Matter***

1. Claims 1-13 and 15-22 are allowed.

***Reasons for Allowance***

2. The following is an examiner's statement of reasons for allowance.

The prior art does not teach or fairly suggest the following:

A VoIP-capable network comprising:

two or more VoIP nodes forming an isolated cluster wherein the two or more VoIP nodes in the isolated cluster are in communication with one another; wherein each of the VoIP nodes further comprises a local SIP registry built by exchanging SIP information with the remaining VoIP nodes in the isolated cluster; and

wherein a first VoIP client device in communication with a first VoIP node establishes a communication with a second VoIP device in communication with a second VoIP node using the local SIP registries of the first VoIP node and the second VoIP node, as specified in claim 1.

A method of maintaining VoIP capabilities within a network comprising: forming a cluster of two or more initially isolated network nodes, wherein each of said at least two initially isolated network nodes supports VoIP communications based on a local SIP registry contained in each of the said nodes according to the method of:

Art Unit: 2471

communicating with at least one other initially isolated node to exchange SIP registry information;

updating the local SIP registry in said node as new information is acquired;

sending and receiving VoIP packets from a sender isolated node to one or more recipient isolated nodes based on said local SIP registry functionality when a client device in communication with the sender node establishes communication with a client device in communication with the recipient node, as specified in claim 8.

A VoIP capable network comprising: a first initially isolated network node in communication with at least two VoIP clients, wherein the first isolated node further comprises a local SIP registry, wherein said SIP registry contains address identifiers for each VoIP clients in communication with the first node; and

wherein VoIP communication between said at least two VoIP clients are initiated by utilizing the local SIP registry, wherein the first isolated node further comprises communications means with other isolated nodes wherein the first isolated node broadcasts its SIP registry information to other nodes in communication with the first node, as specified in claim 16.

The closest prior art, either singularly or in combination, fails to anticipate or render the above limitations obvious.

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Dependent claims 2-7, 9-13, 15 and 17-22 depends from claims 1, 8 and 16, respectively. These claims include the limitations to the allowable claims 1, 8 and 16 and, therefore, are allowable for the same reasons as stated in the above paragraphs of this office action.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert T. Chou whose telephone number is 571-272-6045. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham, can be reached on 571-272-3179. 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).

/ALBERT T CHOU/  
Primary Examiner, Art Unit 2471  
June 3, 2012

<b>Search Notes</b>  	<b>Application/Control No.</b>  12352457	<b>Applicant(s)/Patent Under Reexamination</b>  DACOSTA ET AL.
	<b>Examiner</b>  ALBERT T CHOU	<b>Art Unit</b>  2471

SEARCHED			
Class	Subclass	Date	Examiner
370	352, 401	4/24/2012	AC
709	227	4/24/2012	AC

SEARCH NOTES		
Search Notes	Date	Examiner
Text Search - EAST	4/24/2012	AC
Text Search - EAST	6/3/2012	AC

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
370	352 (Updated)	6/3/2012	AC

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## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3	(volP near3 cluster\$3).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/06/03 14:42
L2	1	((VolP adj2 node) and (SIP adj3 registr\$6)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/06/03 14:43
L3	1	(VolP with (peer near3 node)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/06/03 14:44
L4	1	((VolP adj1 node) and (volP near2 (client or device or terminal)) and (SIP near3 registr\$6)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/06/03 14:45
L5	0	((local or regional or distributed) near2 VolP near2 (network or cluster) and (SIP near3 registr\$7)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/06/03 14:45
L6	2	((integrated adj2 (SIP adj2 server)) and VolP).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/06/03 14:46
L7	15	("20010046237"   "20020101965"   "20020103898"   "20020164003"   "20040234059"   "6252944"   "6512818"   "6615236"   "6798755"   "6823050"   "6842449"   "6845092"   "6965614"   "7012888"   "7283519").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2012/06/03 14:46
L8	5	((SIP adj3 (adaptor or adapter or ((format or message) near2 conver\$4))) and (format near2 conver\$4)).clm. and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/06/03 14:47

6/ 3/ 2012 2:48:14 PM

C:\Users\achou\Documents\EAST\Workspaces\12,352,457 Interface.wsp

<b>Index of Claims</b> 	<b>Application/Control No.</b> 12352457	<b>Applicant(s)/Patent Under Reexamination</b> DACOSTA ET AL.
	<b>Examiner</b> ALBERT T CHOU	<b>Art Unit</b> 2471

✓	<b>Rejected</b>
=	<b>Allowed</b>

-	<b>Cancelled</b>
÷	<b>Restricted</b>

N	<b>Non-Elected</b>
I	<b>Interference</b>

A	<b>Appeal</b>
O	<b>Objected</b>

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

CLAIM		DATE							
Final	Original	04/26/2012	06/03/2012						
1	1	=	=						
2	2	=	=						
3	3	=	=						
4	4	=	=						
5	5	=	=						
6	6	=	=						
7	7	=	=						
8	8	=	=						
9	9	=	=						
10	10	=	=						
11	11	=	=						
12	12	=	=						
13	13	=	=						
	14	✓	-						
15	15	✓	=						
14	16	O	=						
16	17	O	=						
17	18	O	=						
18	19	O	=						
19	20	O	=						
20	21	O	=						
21	22	O	=						

**UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Francis DACOSTA et al.  
**Serial No.:** 12/352,457  
**Invention:** SELF-FORMING VOIP NETWORK  
**Filing Date:** January 12, 2009  
**Examiner:** Chou, Albert T.  
**Art Unit:** 2471  
**Atty. Dkt. No.:** 0357-02214

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Submitted via EFS-Web on September 6, 2012.

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Mail Stop Petitions  
COMMISSIONER OF PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

123 W. Madison St.  
Suite 400  
Chicago, IL 60602  
312-621-1330

**PETITION TO MAKE UNINTENTIONALLY DELAYED  
PRIORITY CLAIM UNDER 37 CFR 1.78(a)(3)**

Dear Sir:

Applicant is hereby petitioning to make a claim for the benefit of priority as a continuation in part of U.S. Application Serial Number 11/266,884, filed on November 4, 2005, issued as U.S. Patent No. 7,583,648 on September 1, 2009. The entire delay in making this claim was unintentional. The appropriate fee under 37 CFR 1.17(t) has been filed in conjunction with this petition.

Respectfully submitted,

**CHERSKOV FLAYNIK & GURDA**

**BY:** /Szymon M. Gurda/  
Szymon M. Gurda  
(Reg. No. 58,451)

**UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Francis DACOSTA et al.  
**Serial No.:** 12/352,457  
**Invention:** SELF-FORMING VOIP NETWORK  
**Filing Date:** January 12, 2009  
**Examiner:** Chou, Albert T.  
**Art Unit:** 2471  
**Atty. Dkt. No.:** 0357-02214

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Submitted via EFS-Web on September 6, 2012.

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COMMISSIONER OF PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

123 W. Madison St.  
Suite 400  
Chicago, IL 60602  
312-621-1330

**AMENDMENT AND REQUEST FOR CONTINUED EXAMINATION**

Dear Sir:

Applicant is hereby submitting a Request for Continued Examination, which contains the following amendments:

**Amendments to the Specification** begin on page two of this paper.

**Remarks** begin on page three of this paper.

**Specification**

Applicant requests that the following claim of priority be included as the first paragraph of the specification:

The instant application claims priority as a continuation in part of U.S. Application Serial Number 11/266,884, filed on November 4, 2005, patented as U.S. Patent No. 7,583,648 on September 1, 2009.

## REMARKS

Through this amendment, applicant requests entry of a claim of priority. Also included is a petition to add the priority claim. The requested priority claim is a continuation in part of U.S. Application Serial Number 11/266,884, filed on November 4, 2005, patented as U.S. Patent No. 7,583,648 on September 1, 2009. The conditions for claiming priority are met inasmuch as the present application was filed during the pendency of the parent application and because the inventive entities are the same. The parent application, "Managing Latency and Jitter on Wireless LANS" was filed on Nov. 4, 2005 and issued as U.S. Patent 7,583,648 on September 1, 2009. The instant application was filed on January 12, 2009. On January 12, 2009, the parent application was pending, given that a non-final office action had issued in the case on September 5, 2008, which was answered with the required extension of time on Feb. 5, 2009. Both cases list Francis DaCosta as an inventor/applicant.

However, the sixteen month time frame in which to make the claim of priority has unintentionally passed.

Therefore, Applicant has filed this Request for Continued Examination in order to amend the Specification to include the claim of priority. The Request for Continued Examination is proper because the Notice of Allowance, issued on June 12, 2012, closed prosecution of the application. The appropriate fee for a Request for Continued Examination has been included. In conjunction with this Request, Applicant has also filed a Petition for an Unintentionally Delayed Claim under 37 CFR 1.78(a)(3). The petition includes a statement that the entire delay was unintentional and the appropriate fee under 37 CFR 1.17(t).

Applicant submits that the Request for Continued Examination is proper and respectfully requests that the above claim be entered in the specification. If a telephonic interview would expedite the consideration of this request, the Examiner is invited to contact the undersigned.

Date: September 6, 2012

Respectfully Submitted,

**CHERSKOV, FLAYNIK & GURDA**

**BY:** /Szymon M. Gurda/  
Szymon M. Gurda  
(Reg. No. 58,451)

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

Application Number	12352457	Filing Date	2009-01-12	Docket Number (if applicable)	0357-02214	Art Unit	2471
First Named Inventor	DaCosta, Francis			Examiner Name	Chou, Albert T.		

**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  
Petition to add priority claim

**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 501709

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED**

Patent Practitioner Signature

Applicant Signature

Signature of Registered U.S. Patent Practitioner			
Signature	/Szymon M. Gurda/	Date (YYYY-MM-DD)	2012-09-06
Name	Szymon M. Gurda	Registration Number	58451

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

<b>Application Number:</b>	12352457
<b>Filing Date:</b>	12-Jan-2009
<b>Title of Invention:</b>	SELF-FORMING VOIP NETWORK
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Filer:</b>	Szymon Maciej Gurda
<b>Attorney Docket Number:</b>	0357-02214

Filed as Small Entity

### Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
Priority accept. unintent. delayed claim	1454	1	1410	1410

**Patent-Appeals-and-Interference:**

**Post-Allowance-and-Post-Issuance:**

**Extension-of-Time:**

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Miscellaneous:</b>				
Request for continued examination	2801	1	465	465
<b>Total in USD (\$)</b>				<b>1875</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	13671097
<b>Application Number:</b>	12352457
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1841
<b>Title of Invention:</b>	SELF-FORMING VOIP NETWORK
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Customer Number:</b>	27197
<b>Filer:</b>	Szymon Maciej Gurda
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	0357-02214
<b>Receipt Date:</b>	06-SEP-2012
<b>Filing Date:</b>	12-JAN-2009
<b>Time Stamp:</b>	12:11:21
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1875
RAM confirmation Number	13163
Deposit Account	501709
Authorized User	CHERSKOV,MICHAEL J

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

**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.	PriorityPetition.pdf	73001 a3345e027b2ded50a02e2b347260ec3d58e1c8b5	no	1

**Warnings:**

**Information:**

2		RCE.pdf	79773 9efc8d005922284ed33559563e816f1970c4b0bc	yes	4
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**Multipart Description/PDF files in .zip description**

Document Description	Start	End
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Specification	2	2
Applicant Arguments/Remarks Made in an Amendment	3	4

**Warnings:**

**Information:**

3	Request for Continued Examination (RCE)	sb0030e_fill.pdf	697531 e1ef1a70fe73d050b69ca6a0c7080a42961e db06	no	3
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**Warnings:**

**Information:**

4	Fee Worksheet (SB06)	fee-info.pdf	31909 cb119c1c83c31da6053f8250b7e0f23c2d89d7f8	no	2
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**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>			882214		
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**This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.**

**New Applications Under 35 U.S.C. 111**

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

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

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

**New International Application Filed with the USPTO as a Receiving Office**

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

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

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875	Application or Docket Number <b>12/352,457</b>	Filing Date <b>01/12/2009</b>	<input type="checkbox"/> To be Mailed
---	---	----------------------------------	---------------------------------------

APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	SMALL ENTITY <input checked="" type="checkbox"/>	OR			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	OR	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (j), or (m))</small>	N/A	N/A	N/A			N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A			N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(j))</small>	minus 20 =	*	X \$ =		OR	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =			X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 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).						
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY				
	(Column 1)	(Column 2)	(Column 3)						
AMENDMENT	<b>09/06/2012</b>	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	<small>Total (37 CFR 1.16(i))</small>	* 21	Minus ** 22	= 0	X \$30 =	0	OR	X \$ =	
	<small>Independent (37 CFR 1.16(h))</small>	* 3	Minus ***3	= 0	X \$125 =	0	OR	X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE	<b>0</b>	OR	TOTAL ADD'L FEE	

	(Column 1)	(Column 2)	(Column 3)						
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)
	<small>Total (37 CFR 1.16(i))</small>	*	Minus **	=	X \$ =		OR	X \$ =	
	<small>Independent (37 CFR 1.16(h))</small>	*	Minus ***	=	X \$ =		OR	X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>								
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.  
 \*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".  
 \*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".  
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:  
 /DIANIECE JACOBS/

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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 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 www.uspto.gov



Bib Data Sheet

CONFIRMATION NO. 1841

<b>SERIAL NUMBER</b> 12/352,457	<b>FILING OR 371(c) DATE</b> 01/12/2009 <b>RULE</b>	<b>CLASS</b> 370	<b>GROUP ART UNIT</b> 2471	<b>ATTORNEY DOCKET NO.</b> 0357-02214
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**APPLICANTS**  
 Francis daCosta, Santa Clara, CA;  
 Sriram Dayanandan, Santa Clara, CA;

**\*\* CONTINUING DATA \*\*\*\*\***  
 This application is a CIP of 11/266,884 11/04/2005 PAT 7583648

**\*\* FOREIGN APPLICATIONS \*\*\*\*\***

**IF REQUIRED, FOREIGN FILING LICENSE GRANTED \*\* SMALL ENTITY \*\***  
**\*\* 01/22/2009**

Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no	<b>STATE OR COUNTRY</b> CA	<b>SHEETS DRAWING</b> 5	<b>TOTAL CLAIMS</b> 22	<b>INDEPENDENT CLAIMS</b> 3	
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance					
Verified and Acknowledged	Examiner's Signature _____	Initials _____			

**ADDRESS**  
 27197

**TITLE**  
 SELF-FORMING VOIP NETWORK

<b>FILING FEE RECEIVED</b> 514	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees
		<input type="checkbox"/> 1.16 Fees ( Filing )
		<input type="checkbox"/> 1.17 Fees ( Processing Ext. of time )
		<input type="checkbox"/> 1.18 Fees ( Issue )
		<input type="checkbox"/> Other _____
		<input type="checkbox"/> Credit



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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY,DOCKET,NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/352,457, 01/12/2009, 2471, 514, 0357-02214, 22, 3

CONFIRMATION NO. 1841

CORRECTED FILING RECEIPT



27197
MICHAEL J. CHERSKOV
123 WEST MADISON STREET
SUITE 400
CHICAGO, IL 60602

Date Mailed: 09/21/2012

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

Inventor(s)

Francis daCosta, Santa Clara, CA;
Sriram Dayanandan, Santa Clara, CA;

Applicant(s)

Francis daCosta, Santa Clara, CA;
Sriram Dayanandan, Santa Clara, CA;

Assignment For Published Patent Application

MESH DYNAMICS, INC., Santa Clara, CA

Power of Attorney:

Donald Flaynik Jr--30836
Michael Cherskov--33664
Charles Nissim-Sabat--42037
Szymon Gurda--58451

Domestic Priority data as claimed by applicant

This application is a CIP of 11/266,884 11/04/2005 PAT 7583648

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: 01/22/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/352,457

Projected Publication Date: Not Applicable

Non-Publication Request: No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

SELF-FORMING VOIP NETWORK

**Preliminary Class**

370

## **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 (1-866-999-4158).

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**Title 35, United States Code, Section 184**  
**Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

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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 Assets Control, 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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**MAILED**

SEP 24 2012

**OFFICE OF PETITIONS**

MICHAEL J. CHERSKOV  
123 WEST MADISON STREET  
SUITE 400  
CHICAGO, IL 60602

In re Application of DaCosta et al. :  
Application No. 12/352,457 : DECISION ON PETITION  
Filing Date: January 12, 2009 : UNDER 37 CFR 1.78(a)(3)  
Attorney Docket No. 0357-02214 :

This is a decision on the petition under 37 CFR 1.78(a)(3) filed September 6, 2012, to accept an unintentionally delayed claim under 35 U.S.C. § 120 for the benefit of priority to the prior-filed nonprovisional application set forth in the amendment filed with the petition.

The petition is **GRANTED**.

A petition for acceptance of a claim for late priority under 37 CFR 1.78(a)(3) is only applicable to those applications filed on or after November 29, 2000. Further, the petition is appropriate only after the expiration of the period specified in 37 CFR 1.78(a)(2)(ii). In addition, the petition under 37 CFR 1.78(a)(3) must be accompanied by:

- (1) the reference required by 35 U.S.C. § 120 and 37 CFR 1.78(a)(2)(i) of the prior-filed application, unless previously submitted;
- (2) the surcharge set forth in § 1.17(t); and
- (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2)(ii) 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.

All of the above requirements having been satisfied, the late claim for priority under 35 U.S.C. § 120 is accepted as being unintentionally delayed.

**The granting of the petition to accept the delayed benefit claim to the prior-filed application under 37 CFR 1.78(a)(3) should not be construed as meaning that this application is entitled to the benefit of the prior-filed application. In order for this application to be entitled to the benefit of the prior-filed application, all other requirements under 35 U.S.C. § 120 and 37 CFR 1.78(a)(1) and (a)(2) must be met. Similarly, the fact that the corrected Filing Receipt accompanying this decision on petition includes the**

**prior-filed application should not be construed as meaning that applicant is entitled to the claim for benefit of priority to the prior-filed application noted thereon. Accordingly, the examiner will, in due course, consider this benefit claim and determine whether the application is entitled to the benefit of the earlier filing date.**

A corrected Filing Receipt, which includes the priority claim to the prior-filed nonprovisional application, accompanies this decision on petition.

This application is being forwarded to Technology Center Art Unit 2471 for consideration by the examiner of applicant's entitlement to claim benefit of priority under 35 U.S.C. § 120 to the prior-filed application.

Any inquiries concerning this decision may be directed to Senior Petitions Attorney Steven Brantley at (571) 272-3203. All other inquiries concerning either the examination procedures or status of the application should be directed to the Technology Center.



Charles Steven Brantley  
Senior Petitions Attorney  
Office of Petitions

ATTACHMENT: Corrected Filing Receipt



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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE RECD, ATTY.DOCKET.NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/352,457, 01/12/2009, 2471, 514, 0357-02214, 22, 3

CONFIRMATION NO. 1841

CORRECTED FILING RECEIPT

27197
MICHAEL J. CHERSKOV
123 WEST MADISON STREET
SUITE 400
CHICAGO, IL 60602



Date Mailed: 09/21/2012

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

Inventor(s)

Francis daCosta, Santa Clara, CA;
Sriram Dayanandan, Santa Clara, CA;

Applicant(s)

Francis daCosta, Santa Clara, CA;
Sriram Dayanandan, Santa Clara, CA;

Assignment For Published Patent Application

MESH DYNAMICS, INC., Santa Clara, CA

Power of Attorney:

Donald Flaynik Jr-30836
Michael Cherskov-33664
Charles Nissim-Sabat-42037
Szymon Gurda-58451

Domestic Priority data as claimed by applicant

This application is a CIP of 11/266,884 11/04/2005 PAT 7583648

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: 01/22/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/352,457

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

**\*\* SMALL ENTITY \*\***

Title

SELF-FORMING VOIP NETWORK

Preliminary Class

370

## **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 (1-866-999-4158).

**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 Assets Control, 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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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/352,457	01/12/2009	Francis daCosta	0357-02214

**CONFIRMATION NO. 1841**

**PUB REQUEST ACCEPTANCE  
LETTER**

27197  
MICHAEL J. CHERSKOV  
123 WEST MADISON STREET  
SUITE 400  
CHICAGO, IL 60602



Date Mailed: 09/25/2012

**NOTICE OF ACCEPTANCE OF PUBLICATION REQUEST**

The request for voluntary publication, amended publication, early publication, redacted publication, republication, corrected publication or revised publication has been received for this application. The request, including payment of any necessary fee(s), is in compliance with 37 CFR 1.215, 1.217, 1.219 or 1.221.

The projected publication date is 01/03/2013.

/dtery/

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

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MICHAEL J. CHERSKOV  
123 WEST MADISON STREET  
SUITE 400  
CHICAGO, IL 60602



**Courtesy Reminder for  
Application Serial No: 12/352,457**

Attorney Docket No: 0357-02214

Customer Number: 27197

Date of Electronic Notification: 09/25/2012

This is a courtesy reminder that new correspondence is available for this application. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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

mail@cherskov.com

sgurda@cherskov.com

mcherskov@cherskov.com

Please verify that these email addresses are correct.

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



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
12/352,457 01/12/2009 Francis daCosta 0357-02214 1841

27197 7590 11/02/2012
MICHAEL J. CHERSKOV
123 WEST MADISON STREET
SUITE 400
CHICAGO, IL 60602

EXAMINER

CHOU, ALBERT T

ART UNIT PAPER NUMBER

2471

NOTIFICATION DATE DELIVERY MODE

11/02/2012

ELECTRONIC

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

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

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

- mail@cherskov.com
sgurda@cherskov.com
mcherskov@cherskov.com

<b>Office Action Summary</b>	<b>Application No.</b> 12/352,457	<b>Applicant(s)</b> DACOSTA ET AL.	
	<b>Examiner</b> ALBERT T. CHOU	<b>Art Unit</b> 2471	

**-- 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 06 September 2012 for RCE.
- 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) 1-13 and 15-22 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 6)  Claim(s) 1-13 and 15-22 is/are allowed.
- 7)  Claim(s) \_\_\_\_\_ 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 \_\_\_\_\_ 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 Draftperson'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: \_\_\_\_\_.

## DETAILED ACTION

### *Response to RCE/Amendment*

1. Applicants' RCE and Amendment, filed on September 6, 2012, requesting the claim of priority, **"The instant application claims priority as a continuation in part of U.S. Application Serial Number 11/266,884, filed on November 4, 2005, patented as U.S. Patent No. 7,583,648 on September 1, 2009"**, be included as the first paragraph of the specification as a continuation-in-part under 35 U.S.C. 120 is acknowledged. However, the request will not be entered.

2. Applicant is advised that the design disclosed in the parent application is not the same design as the design disclosed in this application. Therefore, this application does not satisfy the written description requirement of 35 U.S.C. 112, first paragraph, under 35 U.S.C. 120 and is not entitled to benefit of the earlier filing date. However, unless the filing date of the earlier application is actually needed, such as to avoid intervening prior art, the entitlement to priority in this CIP application will not be considered. See *In re Corba*, 212 USPQ 825 (Comm'r Pat. 1981).

For example, the instant application, US Application 12/352,457, is directed to a self-forming VoIP connection or isolated cluster capability for exchanging SIP information between nodes in each isolated cluster using a local SIP registry or server. However, none of these features and design is disclosed in U.S. Application Serial Number 11/266,884, filed on November 4, 2005, patented as U.S. Patent No. 7,583,648 on September 1, 2009.

***Allowable Subject Matter***

3. Claims 1-13 and 14-22 are allowed.
  
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert T. Chou whose telephone number is 571-272-6045. The examiner can normally be reached on 8:30 - 17:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham, can be reached on 571-272-3179. 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).

/ALBERT T CHOU/

Primary Examiner, Art Unit 2471

October 28, 2012

<b>Search Notes</b>  	<b>Application/Control No.</b>  12352457	<b>Applicant(s)/Patent Under Reexamination</b>  DACOSTA ET AL.
	<b>Examiner</b>  ALBERT T CHOU	<b>Art Unit</b>  2471

SEARCHED			
Class	Subclass	Date	Examiner
370	352, 401	4/24/2012	AC
709	227	4/24/2012	AC
370	352, 401	10/28/2012	AC

SEARCH NOTES		
Search Notes	Date	Examiner
Text Search - EAST	4/24/2012	AC
Text Search - EAST	6/3/2012	AC
Text Search - EAST	10/28/2012	AC

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
370	352 (Updated)	6/3/2012	AC

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## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("7,583,648").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 15:58
L2	0	("7,583,648").pn. and (SIP near2 registry)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 15:59
L3	0	("7,583,648").pn. and (cluster)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 15:59
L4	1	12/352,457 and (SIP near2 registry)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 16:01
L5	6	("7,408,928").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 16:03
L6	2	("7,583,648").pn.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 16:04
S131	2	12/352,457	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 12:28
S132	6	11/266,864	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 12:30
S133	2	11/266,884	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2012/10/28 12:30

10/28/2012 5:09:20 PM

C:\Users\achou\Documents\EAST\Workspaces\12,352,457 CIP.wsp

<b>Index of Claims</b>  	<b>Application/Control No.</b> 12352457	<b>Applicant(s)/Patent Under Reexamination</b> DACOSTA ET AL.
	<b>Examiner</b> ALBERT T CHOU	<b>Art Unit</b> 2471

✓	<b>Rejected</b>
=	<b>Allowed</b>

-	<b>Cancelled</b>
÷	<b>Restricted</b>

N	<b>Non-Elected</b>
I	<b>Interference</b>

A	<b>Appeal</b>
O	<b>Objected</b>

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

CLAIM		DATE							
Final	Original	04/26/2012	06/03/2012	10/28/2012					
1	1	=	=	=					
2	2	=	=	=					
3	3	=	=	=					
4	4	=	=	=					
5	5	=	=	=					
6	6	=	=	=					
7	7	=	=	=					
8	8	=	=	=					
9	9	=	=	=					
10	10	=	=	=					
11	11	=	=	=					
12	12	=	=	=					
13	13	=	=	=					
	14	✓	-	-					
15	15	✓	=	=					
14	16	O	=	=					
16	17	O	=	=					
17	18	O	=	=					
18	19	O	=	=					
19	20	O	=	=					
20	21	O	=	=					
21	22	O	=	=					



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Table with 4 columns: APPLICATION NUMBER (12/352,457), FILING OR 371(C) DATE (01/12/2009), FIRST NAMED APPLICANT (Francis daCosta), ATTY. DOCKET NO./TITLE (0357-02214)

CONFIRMATION NO. 1841

PUBLICATION NOTICE



27197
MICHAEL J. CHERSKOV
123 WEST MADISON STREET
SUITE 400
CHICAGO, IL 60602

Title:SELF-FORMING VOIP NETWORK

Publication No.US-2013-0003718-A9

Publication Date:01/03/2013

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/.

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

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

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

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

**UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicant:** Francis DACOSTA et al.  
**Serial No.:** 12/352,457  
**Invention:** SELF-FORMING VOIP NETWORK  
**Filing Date:** January 12, 2009  
**Examiner:** Chou, Albert T.  
**Art Unit:** 2471  
**Atty. Dkt. No.:** 0357-02214

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Submitted via EFS-Web on January 25, 2013.

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COMMISSIONER OF PATENTS  
P.O. Box 1450  
Alexandria, VA 22313-1450

123 W. Madison St.  
Suite 400  
Chicago, IL 60602  
312-621-1330

**AMENDMENT AND RESPONSE AFTER NON-FINAL OFFICE ACTION**

Dear Sir:

In response to the November 2, 2012 Non-Final Office Action Applicant is hereby submitting the following amendments:

**Amendments to the Claims** begin on page two of this paper.

**Remarks** begin on page three of this paper.

### **Specification**

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

1. (Original) A VoIP-capable network comprising:

one or more VoIP client devices;

two or more VoIP nodes forming an isolated cluster wherein the two or more VoIP nodes in the isolated cluster are in communication with one another;

wherein each of the VoIP client devices communicates with at least one VoIP node;

wherein each of the VoIP nodes further comprises a local SIP registry built by exchanging SIP information with the remaining VoIP nodes in the isolated cluster; and

wherein a first VoIP client device in communication with a first VoIP node establishes a communication with a second VoIP device in communication with a second VoIP node using the local SIP registries of the first VoIP node and the second VoIP node.

2. (Original) The VoIP-capable network of Claim 1, wherein the local SIP registries of the isolated VoIP nodes are updated as the VoIP nodes and the VoIP client devices begin communication with the isolated cluster and end communication with the isolated cluster.

3. (Original) The VoIP-capable network of Claim 1, wherein updates to the local SIP registry of a VoIP node are communicated to remaining VoIP nodes in the isolated cluster by broadcasting one or more information packets containing local SIP registry information of the VoIP node.

4. (Original) The VoIP-capable network of Claim 1, wherein the local SIP registry of a VoIP node is updated according to information received from another VoIP nodes in the isolated cluster in special information packets that each contain local SIP registry information of another VoIP node.

5. (Original) The VoIP-capable network of Claim 1, wherein each VoIP node has the ability to function as a DHCP server to assign IP addresses to clients in communication with the VoIP node.

6. (Original) The VoIP-capable network of Claim 5, wherein the IP addresses are assigned from a range of IP addresses produced by a random number generator on each VoIP node.

7. (Original) The VoIP-capable network of Claim 1, further comprising means of connecting the isolated cluster to an external network, wherein upon connection to an external network, the SIP registry of an external SIP server connected to the external network is updated to include SIP registry information from the VoIP nodes.

8. (Original) A method of maintaining VoIP capabilities within a network comprising:

forming a cluster of two or more initially isolated network nodes

establishing communications between two or more client devices by way of the initially isolated network nodes, wherein in a first configuration, at least two of said initially isolated network nodes are in communication with each other but not in communication with an external SIP server, and wherein each of said at least two initially isolated network nodes supports VoIP communications based on a local SIP registry contained in each of the said nodes according to the method of:

communicating with at least one other initially isolated node to exchange SIP registry information;

updating the local SIP registry in said node as new information is acquired;

sending and receiving VoIP packets from a sender isolated node to one or more recipient isolated nodes based on said local SIP registry functionality when a client device in

communication with the sender node establishes communication with a client device in communication with the recipient node.

9. (Original) The method of Claim 8 further comprising changing said cluster from the first configuration to a second configuration wherein in the second configuration the said cluster is in communication with an external SIP server containing an external SIP registry; and updating the external SIP registry with the local SIP registries of each of said nodes comprising said cluster.

10. (Original) The method of Claim 8, further comprising updating the local SIP registries of the isolated nodes as nodes and clients join and leave the isolated cluster.

11. (Original) The method of Claim 8, wherein updates to the local SIP registry of each node is communicated to remaining nodes in the cluster by broadcasting an information packet containing the local SIP registry information.

12. (Original) The method of Claim 8, wherein each node functions as a DHCP server to assign IP addresses to clients connected to the node.

13. (Cancelled)

14. (Cancelled)

15. (Previously Amended) The VoIP capable network of Claim 16, wherein the local SIP registry of the first isolated node is updated as the VoIP clients establish or terminate a network connection with the first isolated node.

16. (Previously Amended) A VoIP capable network comprising:

a first initially isolated network node in communication with at least two VoIP clients, wherein the first isolated node further comprises a local SIP registry wherein said SIP registry contains address identifiers for each VoIP clients in communication with the first node; and

wherein VoIP communication between said at least two VoIP clients are initiated by utilizing the local SIP registry, wherein the first isolated node further comprises communications means with other isolated nodes wherein the first isolated node broadcasts its SIP registry information to other nodes in communication with the first node.

17. (Previously Amended) The VoIP capable network of Claim 16, wherein first isolated node comes into communication with other isolated nodes to form a cluster, and the local SIP registry information of each isolated node in the cluster is updated according to information received from other isolated nodes in the cluster.

18. (Previously Amended) The VoIP capable network of Claim 16, wherein the first isolated node further comprises a DHCP server to assign IP addresses to clients in communication with the first node.

19. (Original) The VoIP-capable network of Claim 18, wherein the IP addresses are assigned from a range of IP addresses produced by a random number generator on the first isolated node.

20. (Original) The VoIP capable network of Claim 18, wherein each node in the cluster has the ability to function as a DHCP server to assign IP addresses to clients connected to that node.

21. (Original) The VoIP-capable network of Claim 20, wherein each node in the cluster assigns IP addresses from a range of IP addresses produced by a random number generator on that node.

22. (Previously Amended) The VoIP capable network of Claim 16, wherein the information contained in an external SIP server is updated with the local SIP registry of the first isolated node upon establishment of a network connection with an external network containing the external SIP server.

23. (New) The VoIP-capable network of claim 1 wherein said nodes comprise mesh nodes.

24. (New) The VoIP-capable network of claim 23 wherein said mesh nodes provide VoIP optimized services within said mesh nodes.

## REMARKS

In the November 2, 2012 Office Action, Examiner has rejected the priority claim due to the apparent differences between the invention disclosed in applicant's U.S. Patent No. 7,583,648 and the instantly pending application. Applicant respectfully submits that the application is entitled to the priority claim, especially given the newly added claims.

In the absence of an interference or rejection which would require the PTO to make a determination of priority, the PTO does not make such findings as a matter of course in prosecution. PowerOasis, Inc. v. T-Mobile USA, Inc., 522 F.3d 1299, 1305, 86 U.S.P.Q.2d 1385 (Fed. Cir. 2008). The Court in PowerOasis further explained that “[t]here would be no reason for the PTO to undertake what could be a very time consuming written description analysis simply to pronounce the effective filing date of each claim, absent some dispute over it during prosecution.” Id. at 1305, n.4. The MPEP § 208.01 further states:

Unless the filing date of the earlier nonprovisional application is actually needed, for example, in the case of an interference or to overcome a reference, there is no need for the Office to make a determination as to whether the requirement of **35 U.S.C. 120**, that the earlier nonprovisional application discloses the invention of the second application in the manner provided by the first paragraph of **35 U.S.C. 112**, is met and whether a substantial portion of all of the earlier nonprovisional application is repeated in the second application in a continuation-in-part situation. *Accordingly, an alleged continuation-in-part application should be permitted to claim the benefit of the filing date of an earlier nonprovisional application if the alleged continuation-in-part application complies with the other requirements of 35 U.S.C. 120 and 37 CFR 1.78*, such as [having at least on common inventor, filing the CIP application during the pendency of the parent application, and containing a specific reference to the earlier application].

(emphasis added). The Examiner cited the case of In re Corba in rejecting the claim of priority.

However, in this case, the Office of the Commissioner of Patents reversed the decision of the Group Director denying continuation status. In re Corba, 212 U.S.P.Q. 825, 826 (Com'r Pat. &

Trademarks 1981). The Commissioner stated that “the issue of entitlement to an earlier filing date is better left to review by the Board of Appeals of a rejection based on a reference . . . .” Id.

Whether the claims of the present application are entitled to the benefit of the filing date of the parent application is irrelevant to the determination of whether the present application properly claims status as a continuation-in-part of the parent application. In the instant case, a proper claim as a continuation-in-part to the parent application was made because there was:

1. at least one common inventor,
2. the applications were co-pending, and
3. the current application was amended to contain a specific reference to the earlier application.

As such, given that it is not necessary to overcome the prior art of record applicants will not address whether the previously-allowable claims are entitled to the priority claim.

In regards to the relatedness of the inventions, applicants submit that the newly added claims 22 have support in both applications and clarify how the two inventions are related.

In regards to claim 23, ¶9 of the published application discusses how in one embodiment the network of nodes can comprise wireless mesh nodes. The ‘648 patent col. 4, lines 56 to 67 discuss the usability of the disclosed transmission system in mesh nodes, the mesh nodes in ‘648 having a 2-radio backhaul.

In regards to claim 24, the limitation introduced therein provides that the mesh nodes must include VoIP optimized services within the nodes. Support for adding VoIP optimized services to a mesh node is found in the instant application ¶37 which provides for the addition of a SIP Server Service “within the network node 101.” In ¶41, the instant application further

discusses the addition of a DHCP Server service: “the node may also incorporate DHCP server capability...”

The ‘648 patent describes several additions to mesh nodes to facilitate data transmissions. The elimination of latency and jitter in the ‘648 patent are both goals specific to VoIP transmissions. In regards to the limitations of claim 23, col. 8 lines 7-15 discuss use of a dedicated voice radio for VoIP transmissions. Further, the “Dual radio AP 1404 supports both voice and data functionality integrated within the same unit.” Col. 8, lines 8-10.

Applicants respectfully submit that the two inventions relate to improvements to VoIP mesh nodes, and the newly added claims are entitled to claim priority to the ‘648 patent.

As all the claims are allowable, there are no rejections which require priority to be considered. Therefore, the Applicant’s request that the current application be considered a continuation-in-part of U.S. Application No. 11/266,884 (U.S. Patent No. 7,583,648) especially in light of the newly added claims.

Applicant submits that the priority claim be entered and the case moved to issuance. If a telephonic interview would expedite the consideration of this request, the Examiner is invited to contact the undersigned.

Date: January 25, 2013

Respectfully Submitted,

**CHERSKOV, FLAYNIK & GURDA**

BY: /Szymon M. Gurda/  
Szymon M. Gurda  
(Reg. No. 58,451)

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	14795231
<b>Application Number:</b>	12352457
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1841
<b>Title of Invention:</b>	SELF-FORMING VOIP NETWORK
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Customer Number:</b>	27197
<b>Filer:</b>	Szymon Maciej Gurda
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	0357-02214
<b>Receipt Date:</b>	25-JAN-2013
<b>Filing Date:</b>	12-JAN-2009
<b>Time Stamp:</b>	15:30:37
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	no
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### File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Response.pdf	144683 <small>ab39512ca3c52abfa167b996ae5ad9ea01e21d9b</small>	yes	9

<b>Multipart Description/PDF files in .zip description</b>			
<b>Document Description</b>		<b>Start</b>	<b>End</b>
Amendment/Req. Reconsideration-After Non-Final Reject		1	1
Claims		2	6
Applicant Arguments/Remarks Made in an Amendment		7	9

**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	144683
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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.

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.

<b>PATENT APPLICATION FEE DETERMINATION RECORD</b> Substitute for Form PTO-875	Application or Docket Number <b>12/352,457</b>	Filing Date <b>01/12/2009</b>	<input type="checkbox"/> To be Mailed
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APPLICATION AS FILED – PART I			OTHER THAN SMALL ENTITY			
	(Column 1)	(Column 2)	SMALL ENTITY <input checked="" type="checkbox"/>	OR		
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A		N/A	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (j), or (m))</small>	N/A	N/A	N/A		N/A	
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A		N/A	
TOTAL CLAIMS <small>(37 CFR 1.16(j))</small>	minus 20 =	*	X \$ =	OR	X \$ =	
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =		X \$ =	
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 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).					
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>						
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL		TOTAL	

APPLICATION AS AMENDED – PART II					OTHER THAN SMALL ENTITY			
	(Column 1)	(Column 2)	(Column 3)					
AMENDMENT	<b>01/25/2013</b>	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	* 22	Minus	** 22	=		OR	X \$ =
	Independent <small>(37 CFR 1.16(h))</small>	* 3	Minus	***3	=		OR	X \$ =
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>						OR	
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						OR	
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE

	(Column 1)	(Column 2)	(Column 3)					
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=		OR	X \$ =
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=		OR	X \$ =
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>						OR	
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>						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.					Legal Instrument Examiner: /KATRINA . TURNER/			
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".								
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".								
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.								

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



NOTICE OF ALLOWANCE AND FEE(S) DUE

27197 7590 03/04/2013
MICHAEL J. CHERSKOV
123 WEST MADISON STREET
SUITE 400
CHICAGO, IL 60602

EXAMINER

CHOU, ALBERT T

ART UNIT PAPER NUMBER

2471

DATE MAILED: 03/04/2013

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

12/352,457 01/12/2009 Francis daCosta 0357-02214 1841

TITLE OF INVENTION: SELF-FORMING VOIP NETWORK

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional YES \$885 \$300 \$0 \$1185 06/04/2013

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 SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

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.

**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.

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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.

27197 7590 03/04/2013  
**MICHAEL J. CHERSKOV**  
 123 WEST MADISON STREET  
 SUITE 400  
 CHICAGO, IL 60602

**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.
12/352,457	01/12/2009	Francis daCosta	0357-02214	1841

TITLE OF INVENTION: SELF-FORMING VOIP NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$885	\$300	\$0	\$1185	06/04/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHOU, ALBERT T	2471	370-352000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b></p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____</p> <p>3 _____</p>
---	---

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

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
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5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information 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.

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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Values: 12/352,457, 01/12/2009, Francis daCosta, 0357-02214, 1841

27197 7590 03/04/2013
MICHAEL J. CHERSKOV
123 WEST MADISON STREET
SUITE 400
CHICAGO, IL 60602

EXAMINER

CHOU, ALBERT T

ART UNIT PAPER NUMBER

2471

DATE MAILED: 03/04/2013

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

The Patent Term Adjustment to date is 782 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 782 day(s).

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 Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

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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 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.**

12/352,457

**Examiner**

ALBERT T. CHOU

**Applicant(s)**

DACOSTA ET AL.

**Art Unit**

2471

**-- 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 Amendments/Remarks filed on Jan. 25, 2013.
- 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 1-12 and 15-24.
- 4.  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 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.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  - 6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_.
    - (b)  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).**
- 7.  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.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3.  Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_
- 4.  Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5.  Notice of Informal Patent Application
- 6.  Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_ .
- 7.  Examiner's Amendment/Comment
- 8.  Examiner's Statement of Reasons for Allowance
- 9.  Other \_\_\_\_.

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## **DETAILED ACTION**

### ***Response to Remarks***

1. Applicant requests, filed on September 6, 2012, that the following claim of priority be included as the first paragraph of the specification:

*The instant application claims priority as a continuation in part of U.S. Application Serial Number 11/266,884, filed on November 4, 2005, patented as U.S. Patent No. 7,583,648 on September 1, 2009.*

The above request or amendment to the Specification will be entered.

### ***Allowable Subject Matter***

2. Claims 1-12 and 15-24 are allowed.

### ***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance.

The prior art does not teach or fairly suggest the following:

A VoIP-capable network comprising:

two or more VoIP nodes forming an isolated cluster wherein the two or more VoIP nodes in the isolated cluster are in communication with one another; wherein each of the VoIP nodes further comprises a local SIP registry built by exchanging SIP information with the remaining VoIP nodes in the isolated cluster; and

Art Unit: 2471

wherein a first VoIP client device in communication with a first VoIP node establishes a communication with a second VoIP device in communication with a second VoIP node using the local SIP registries of the first VoIP node and the second VoIP node, as specified in claim 1.

A method of maintaining VoIP capabilities within a network comprising: forming a cluster of two or more initially isolated network nodes, wherein each of said at least two initially isolated network nodes supports VoIP communications based on a local SIP registry contained in each of the said nodes according to the method of:

communicating with at least one other initially isolated node to exchange SIP registry information;

updating the local SIP registry in said node as new information is acquired;

sending and receiving VoIP packets from a sender isolated node to one or more recipient isolated nodes based on said local SIP registry functionality when a client device in communication with the sender node establishes communication with a client device in communication with the recipient node, as specified in claim 8.

A VoIP capable network comprising: a first initially isolated network node in communication with at least two VoIP clients, wherein the first isolated node further comprises a local SIP registry, wherein said SIP registry contains address identifiers for each VoIP clients in communication with the first node; and

Art Unit: 2471

wherein VoIP communication between said at least two VoIP clients are initiated by utilizing the local SIP registry, wherein the first isolated node further comprises communications means with other isolated nodes wherein the first isolated node broadcasts its SIP registry information to other nodes in communication with the first node, as specified in claim 16.

The closest prior art, either singularly or in combination, fails to anticipate or render the above limitations obvious.

Dependent claims 2-7, 23-34, 9-12, 15 and 17-22 depends from claims 1, 8 and 16, respectively. These claims include the limitations to the allowable claims 1, 8 and 16 and, therefore, are allowable for the same reasons as stated in the above paragraphs of this office action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALBERT T. CHOU whose telephone number is (571)272-6045. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham, can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2471

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).

/ALBERT T CHOU/

Primary Examiner, Art Unit 2471

February 20, 2013




## EAST Search History

## EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	((VolP adj1 node) and (volP near2 client)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 12:42
L2	2	((VolP adj2 node) and (SIP adj3 registr\$6)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 12:43
L3	2	((VolP and (isolated near2 cluster)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 12:45
L4	2	((VolP adj1 node) and (volP near2 (client or device or terminal)) and (SIP near3 registr\$6)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 12:46
L5	0	((local or regional or distributed) near2 VolP near2 (network or cluster) and (SIP near3 registr\$7)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 12:46
L6	6	((communicat\$3 or session or establish\$4) near3 between near2 client near3 (SIP adj2 server)).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 12:47
L7	0	((communicat\$3 or session or establish\$4) near3 between near2 client near3 (SIP adj2 server)).clm. and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 12:47
L8	7	((SIP adj3 (adaptor or adapter or (format or message) near2 conver\$4)) and (format near2 conver\$4)).clm. and @rlad<"20090112"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/02/20 12:48

2/ 20/ 2013 12:49:00 PM

C:\Users\achou\Documents\EAST\Workspaces\12,352,457 Interference CIP.wsp

<b>Index of Claims</b>  	<b>Application/Control No.</b> 12352457	<b>Applicant(s)/Patent Under Reexamination</b> DACOSTA ET AL.
	<b>Examiner</b> ALBERT T CHOU	<b>Art Unit</b> 2471

✓	<b>Rejected</b>
=	<b>Allowed</b>


-	<b>Cancelled</b>
÷	<b>Restricted</b>

N	<b>Non-Elected</b>
I	<b>Interference</b>

A	<b>Appeal</b>
O	<b>Objected</b>

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

CLAIM		DATE							
Final	Original	04/26/2012	06/03/2012	10/28/2012	02/20/2013				
1	1	=	=	=	=				
2	2	=	=	=	=				
3	3	=	=	=	=				
4	4	=	=	=	=				
5	5	=	=	=	=				
6	6	=	=	=	=				
7	7	=	=	=	=				
10	8	=	=	=	=				
11	9	=	=	=	=				
12	10	=	=	=	=				
13	11	=	=	=	=				
14	12	=	=	=	=				
	13	=	=	=	=				
	14	✓	-	-	-				
16	15	✓	=	=	=				
15	16	O	=	=	=				
17	17	O	=	=	=				
18	18	O	=	=	=				
19	19	O	=	=	=				
20	20	O	=	=	=				
21	21	O	=	=	=				
22	22	O	=	=	=				
8	23				=				
9	24				=				

<b>Search Notes</b>  	<b>Application/Control No.</b>  12352457	<b>Applicant(s)/Patent Under Reexamination</b>  DACOSTA ET AL.
	<b>Examiner</b>  ALBERT T CHOU	<b>Art Unit</b>  2471

SEARCHED			
Class	Subclass	Date	Examiner
370	352, 401	4/24/2012	AC
709	227	4/24/2012	AC
370	352, 401	10/28/2012	AC

SEARCH NOTES		
Search Notes	Date	Examiner
Text Search - EAST	4/24/2012	AC
Text Search - EAST	6/3/2012	AC
Text Search - EAST	10/28/2012	AC
Text Search - EAST	2/20/2013	AC

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
370	352 (Updated)	6/3/2012	AC
370	352 (Updated)	2/20/2013	AC

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**PART B - FEE(S) TRANSMITTAL**

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

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

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

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.

27197 7590 03/04/2013  
**MICHAEL J. CHERSKOV**  
 123 WEST MADISON STREET  
 SUITE 400  
 CHICAGO, IL 60602

**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.

Szymon M. Gurda	(Depositor's name)
/Szymon M. Gurda/	(Signature)
June 4, 2013 via EFS-Web	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/352,457	01/12/2009	Francis daCosta	0357-02214	1841

TITLE OF INVENTION: SELF-FORMING VOIP NETWORK

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$885	\$300	\$0	\$1185	06/04/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHOU, ALBERT T	2471	370-352000

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

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

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

2. For printing on the patent front page, list

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

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

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 Mesh Dynamics, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY) Santa Clara, California

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 credit any overpayment, to Deposit Account Number 501709 (enclose an extra copy of this form).

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

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Szymon M. Gurda/ Date June 4, 2013

Typed or printed name Szymon M. Gurda Registration No. 58451

This collection of information 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.

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	12352457
<b>Filing Date:</b>	12-Jan-2009
<b>Title of Invention:</b>	SELF-FORMING VOIP NETWORK
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Filer:</b>	Szymon Maciej Gurda
<b>Attorney Docket Number:</b>	0357-02214

Filed as Small Entity

### Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Basic Filing:</b>				
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				
<b>Post-Allowance-and-Post-Issuance:</b>				
Utility Appl Issue Fee	2501	1	890	890
Publ. Fee- Early, Voluntary, or Normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>1190</b>

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	15949382
<b>Application Number:</b>	12352457
<b>International Application Number:</b>	
<b>Confirmation Number:</b>	1841
<b>Title of Invention:</b>	SELF-FORMING VOIP NETWORK
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Customer Number:</b>	27197
<b>Filer:</b>	Szymon Maciej Gurda
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	0357-02214
<b>Receipt Date:</b>	04-JUN-2013
<b>Filing Date:</b>	12-JAN-2009
<b>Time Stamp:</b>	18:32:09
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1190
RAM confirmation Number	6109
Deposit Account	501709
Authorized User	CHERSKOV, MICHAEL J

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

### 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)	IssueFeeTransmittal.pdf	91086 9e1fc8a0a35e95da39f3f1949a71b77071845102	no	1

### Warnings:

### Information:

2	Fee Worksheet (SB06)	fee-info.pdf	31690 c33c302cb93e4443d6539a4293b1ecfee926f2f9	no	2
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### Warnings:

### Information:

**Total Files Size (in bytes):**

122776

**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.**

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		12/352,457	
	Filing Date		2009-01-12	
	First Named Inventor	da Costa		
	Art Unit	2471		
	Examiner Name	Not Yet Assigned <i>Albert T Chou</i>		
	Attorney Docket Number	0357-02214		

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
<i>Change(s) applied to document, J.E.A.C.I. 7/27/2012</i>	1	7408928	B2	<sup>08</sup> <del>05</del> -05	Bradd, et. al.	Col. 4, Lines 65-67	
	2	7443842	B2	2008-10-28	Miyamoto, et. al.	Col. 3, Lines 1-5	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS							Remove
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1						

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS								Remove
Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> j	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1							<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button. Add

NON-PATENT LITERATURE DOCUMENTS							Remove
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		12352457		
	Filing Date		2010-07-15		
	First Named Inventor	daCosta, Francis			
	Art Unit	<del>2468</del>	2471		
	Examiner Name	<del>Cheng, Joe H.</del>	Albert T Chou		
	Attorney Docket Number		0357-02214		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
I.A.C./	1	740892 <del>18</del>	B2	2008- <del>05</del> <sup>08</sup> -05	Bradd et al.	
I.A.C./	2	7443842	B2	2008-10-28	Miyamoto, et al.	

Change(s) applied to document. If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code <sup>1</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1					

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS								Remove
Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup>	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/352,457	07/02/2013	8477762	0357-02214	1841

27197            7590            06/12/2013  
 MICHAEL J. CHERSKOV  
 123 WEST MADISON STREET  
 SUITE 400  
 CHICAGO, IL 60602

### 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 908 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):

Francis daCosta, Santa Clara, CA;  
 Sriram Dayanandan, Santa Clara, CA;

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](http://SelectUSA.gov).

**PETITION TO ACCEPT UNINTENTIONALLY DELAYED PAYMENT OF MAINTENANCE FEE IN AN EXPIRED PATENT (37 CFR 1.378(b))**

Patent Number	Issue Date	Application Number	Filing Date	Docket Number (if applicable)
8477762	02-Jul-2013	12352457	12-Jan-2009	

CAUTION: Maintenance fee (and surcharge, if any) payment must correctly identify: (1) the patent number and (2) the application number of the actual U.S. application leading to issuance of that patent to ensure the fee(s) is/are associated with the correct patent. 37 CFR 1.366(c) and (d).

Applicants claims the following fee status:

Small Entity

Micro Entity

Regular Undiscounted

Applicants selects the following :

3 1/2

7 1/2

11 1/2

**PETITION FEE**

The petition fee required by 37 CFR 1.17(m) (Fee Code 1558/2558) must be paid as a condition of accepting unintentionally delayed payment of the maintenance fee.

**MAINTENANCE FEE (37 CFR 1.20(e)-(g))**

The appropriate maintenance fee must be submitted with this petition.

**STATEMENT**

The delay in payment of the maintenance fee for this patent was unintentional.

Petitioner is reminded that a delay resulting from a deliberately chosen course of action or a change in circumstance is not an unintentional delay.

Petitioner is further reminded that a person seeking reinstatement of an expired patent should not make a statement that the delay in payment of the maintenance fee was unintentional unless the entire delay was unintentional, including the period from discovery that the maintenance fee was not timely paid until payment of the maintenance fee. For example, a statement that the delay in payment of the maintenance fee was unintentional would not be proper when the patentee becomes aware of an unintentional failure to timely pay the maintenance fee and then intentionally delays filing a petition for reinstatement of the patent under 37 CFR 1.378. See MPEP 2590.

**NOTE:** Where the petition under 37 CFR 1.378 is filed more than two years after the date the patent expired for nonpayment of the maintenance fee, the United States Patent and Trademark Office requires an additional explanation of the circumstances surrounding the delay that establishes the entire delay was unintentional. This requirement is in addition to the requirement to provide a statement that the entire delay was unintentional. 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). See MPEP 711.03(c)(II)(C)-(F) for additional guidance on the information required to establish that the entire delay was unintentional.

PETITIONER(S) REQUEST THAT THE DELAYED PAYMENT OF THE MAINTENANCE FEE BE ACCEPTED AND THE PATENT REINSTATED

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

37 CFR 1.378(c) states: "Any petition under this section must be signed in compliance with 37 CFR 1.33(b) ."

I certify, in accordance with 37 CFR 1.4(d)(4) that I am

- An attorney or agent registered to practice before the Patent and Trademark Office who has been given power of attorney in this application.
- An attorney or agent registered to practice before the Patent and Trademark Office
- A sole patentee
- A joint patentee; I certify that I am authorized to sign this submission on behalf of all the other patentees as evidenced by the power of attorney in the application
- A joint patentee; all of whom are signing this e-petition
- The assignee of record of the entire interest that qualifies as an authorized party under 37 CFR 1.33(b)

Patent Practitioner

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	/Szymon M. Gurda/		
Name	Szymon Gurda	Registration Number	58451

## Electronic Patent Application Fee Transmittal

<b>Application Number:</b>	12352457			
<b>Filing Date:</b>	12-Jan-2009			
<b>Title of Invention:</b>	SELF-FORMING VOIP NETWORK			
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta			
<b>Filer:</b>	Szymon Maciej Gurda			
<b>Attorney Docket Number:</b>	0357-02214			
Filed as Small Entity				
<b>Filing Fees for Utility under 35 USC 111(a)</b>				
<b>Description</b>	<b>Fee Code</b>	<b>Quantity</b>	<b>Amount</b>	<b>Sub-Total in USD(\$)</b>
<b>Basic Filing:</b>				
MAINTENANCE FEE DUE AT 7.5 YEARS	2552	1	1880	1880
PET. DELAY PYMT MAINTAIN PATENT IN FORCE	2558	1	1050	1050
<b>Pages:</b>				
<b>Claims:</b>				
<b>Miscellaneous-Filing:</b>				
<b>Petition:</b>				
<b>Patent-Appeals-and-Interference:</b>				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
<b>Post-Allowance-and-Post-Issuance:</b>				
<b>Extension-of-Time:</b>				
<b>Miscellaneous:</b>				
<b>Total in USD (\$)</b>				<b>2930</b>



UNITED STATES PATENT AND TRADEMARK OFFICE

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Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

In re Patent No. 8477762 :  
Issue Date: July 2,2013 :  
Application No. 12352457 :DECISION GRANTING PETITION  
Filed: January 12,2009 :UNDER 37 CFR 1.378(b)  
Attorney Docket No. 0357-02214 :

This is a decision on the electronic petition, filed April 18,2022 ,under 37 CFR 1.378(b) to accept the unintentionally delayed payment of the 7.5 year maintenance fee for the above-identified patent.

The petition is **GRANTED**.

The maintenance fee is accepted, and the above-identified patent reinstated as of April 18,2022 . This decision also constitutes notice that the fee has been accepted. An electronic copy of the petition and this decision has been created as an entry in the Image File Wrapper. Nevertheless, petitioner should print and retain an independent copy.

Telephone inquiries related to this electronic decision should be directed to the Electronic Business Center at 1-866-217-9197.

## Electronic Acknowledgement Receipt

<b>EFS ID:</b>	45500245
<b>Application Number:</b>	12352457
<b>Patent Number:</b>	8477762
<b>Confirmation Number:</b>	1841
<b>Petition Issued Date:</b>	April 18,2022
<b>Title of Invention:</b>	SELF-FORMING VOIP NETWORK
<b>First Named Inventor/Applicant Name:</b>	Francis daCosta
<b>Customer Number:</b>	27197
<b>Filer:</b>	Szymon Maciej Gurda
<b>Filer Authorized By:</b>	
<b>Attorney Docket Number:</b>	0357-02214
<b>Receipt Date:</b>	18-APR-2022
<b>Filing Date:</b>	12-JAN-2009
<b>Time Stamp:</b>	18:29:11
<b>Application Type:</b>	Utility under 35 USC 111(a)

### Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$2930
RAM confirmation Number	E20224HI29062201
Deposit Account	
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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**File Listing:**

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	ePetition Request Form	petition-request.pdf	47991	no	2
			5a24d5776fa0316ec4e504461558ea7382d81e9f		

**Warnings:**

**Information:**

2	Fee Worksheet (SB06)	fee-info.pdf	40167	no	2
			7017c5835419141db828b78b7f24ea77f4995ad0		

**Warnings:**

**Information:**

<b>Total Files Size (in bytes):</b>	88158
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**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.**



**ACKNOWLEDGEMENT OF LOSS OF ENTITLEMENT TO ENTITY STATUS DISCOUNT**

APPLICATION #	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET #	REQUEST ID
12/352,457	01/12/2009	Francis daCosta	0357-02214	333427

The entity status change request below filed through Patent Center on 12/30/2024 has been accepted.

*Certifications*

APPLICANT CHANGING TO REGULAR UNDISCOUNTED FEE STATUS

*Signature*

I certify, in accordance with 37 CFR 1.4(d)(4), that I am one of the signatories making the entity status change.

Signature	Name	Registration #
/Szymon M. Gurda/	Szymon Gurda	58451



478

Berwin

PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): daCosta et. al
Title: SELF-FORMING VOIP NETWORK
Filing Date: January 12, 2009
Serial Number: 12/352,457
Patent Number: 8,477,762
Conf. No.: 1841
Atty. Docket: 0357-02214

2025 JAN 16 AM 9:00

USPTO RECEIPTS ACCOUNTING DIVISION

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail, pursuant to 37 C.F.R. §1.8 addressed to Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, VA, 22313-1450 on December 30, 2024.

Szymon M. Gurda Name of Representative
Signature of Representative
December 30, 2024 Date of Signature

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
903 Commerce Drive Oak Brook, IL 60523 312-621-1330

CORRECTION OF ENTITY STATUS UNDER 37 CFR 1.28

The Applicant hereby petitions to correct an error in claiming small entity status when paying fees in this application. The facts of this case are as follows:

The applicant licensed the patent to a third party on December 20, 2014.

The applicant inadvertently failed to consider that a third-party licensee does not qualify for the small entity discount.

In light of the foregoing the applicant petitions the Office to change its records to indicate that this case is subject to large entity fees. The applicant further petitions the Office to accept its direction for payment of the deficiency owed.

The following table is a calculation and itemization of the deficiency owed:

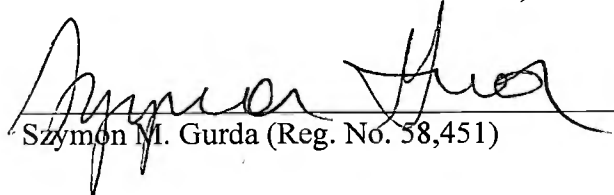
Payment Code	Description	Fee paid	Date paid	Current fee	Deficiency owed
2558	Delayed Payment Fee	\$1050	April 18, 2022	\$2100	\$1050
2552	7.5 Year Maintenance Fee	\$1880	April 18, 2022	\$3760	\$1880
2551	3.5 Year Maintenance Fee	\$800	January 14, 2017	\$2000	\$1200
2554	Six Month Payment	\$80	January 14, 2017	\$500	\$420
				<b>TOTAL:</b>	<b>\$4550</b>

This is a full and complete disclosure of the payments mistakenly made under an assertion of small entity status in this case. The applicant contends that the mistake was made in good faith and would like to now rectify the underpayment. Attached is a credit card payment form for payment of the deficiency owed.

If a telephonic conversation would expedite the processing of this request, the Office employee is welcome to contact the undersigned.

Respectfully submitted,

**CHERSKOV FLAYNIK & GURDA, LLC**



Szymon M. Gurda (Reg. No. 58,451)