PATENT ASSIGNMENT

Electronic Version v1.1
Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY AGREEMENT

CONVEYING PARTY DATA

Name	Execution Date
Level 3 Communications, Inc.	06/27/2006
ICG Communications, Inc.	06/27/2006

RECEIVING PARTY DATA

Name:	Merrill Lynch Capital Corporation, as Collateral Agent
Street Address:	N. Tower, World Financial Center
City:	New York
State/Country:	NEW YORK
Postal Code:	10281

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13465966

CORRESPONDENCE DATA

Fax Number: (720)888-5619
Email: kathleen.mcinnish@level3.com
Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent via US Mail.
Correspondent Name: Jonathan C. Siekmann
Address Line 1:   1025 Eldorado Blvd.
Address Line 4:   Broomfield, COLORADO 80021

ATTORNEY DOCKET NUMBER:	0077-US-C1
NAME OF SUBMITTER:	Jonathan C. Siekmann

Total Attachments: 40
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PATENT AND TRADEMARK SECURITY AGREEMENT, dated as of June 27, 2006, among LEVEL 3 COMMUNICATIONS, INC. ("*Level 3*"), ICG COMMUNICATIONS, INC. ("*ICG*", together with Level 3 the "*Grantors*") and MERRILL LYNCH CAPITAL CORPORATION ("*MLCC*"), as Collateral Agent (the "*Collateral Agent*").

Reference is made to (a) the Collateral Agreement dated as of December 1, 2004 (as amended, supplemented or otherwise modified from time to time, (the "*Collateral Agreement*"), among Level 3, Level 3 Financing, Inc. (the "*Borrower*"), the subsidiaries of Level 3 party thereto and the Collateral Agent and (b) recordations made in the United States Patent and Trademark Office on Schedule I attached hereto. The Lenders (as defined below) have extended credit to the Borrower subject to the terms and conditions set forth in the Credit Agreement dated as of December 1, 2004 and as amended and restated as of June 27, 2006, (as amended, supplemented or otherwise modified from time to time, the "*Credit Agreement*") among the Level 3, the Borrower, the lenders from time to time party thereto (the "*Lenders*") and MLCC, as administrative agent (in such capacity, the "*Administrative Agent*") and as Collateral Agent for the Lenders. The obligations of the Lenders to continue to extend such credit are conditioned upon, among other things, the execution and delivery of this Agreement. The Grantors are affiliates of the Borrower, will derive substantial benefits from the continuation of extension of credit to the Borrower pursuant to the Credit Agreement and are willing to execute and deliver this Agreement in order to induce the Lenders to continue to extend such credit. Accordingly, the parties hereto agree as follows:

SECTION 1. *Terms.* Capitalized terms used in this Agreement and not otherwise defined herein have the meanings specified in the Collateral Agreement or the Credit Agreement, as applicable. The rules of construction specified in Section 1.02 of the Credit Agreement also apply to this Agreement.

SECTION 2. *Grant of Security Interest.* As security for the payment or performance, as the case may be, in full of the Obligations, each Grantor, pursuant to the Collateral Agreement, did and hereby does grant to the Collateral Agent, its successors and assigns, for the ratable benefit of the Secured Parties, a security interest in, all right, title or interest in or to any and all of the following assets and properties now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title or interest (collectively, the "*Patent and Trademark Collateral*"):

(i) (A) all letters patent of the United States, all registrations and recordings thereof, and all applications for letters patent of the United States, including registrations, recordings and pending applications in the United States Patent and Trademark Office (or any successor), including those listed on Schedule II and (B) all reissues, continuations, divisions, continuations-in-part, renewals or extensions thereof in the United States, and the inventions disclosed or claimed therein, including the right to

make, use and/or sell the inventions disclosed or claimed therein in the United States; and

(ii) (A) all trademarks, service marks, trade names, corporate names, company names, business names, fictitious business names, trade styles, trade dress, logos, other source or business identifiers, designs and general intangibles of like nature, now existing or hereafter adopted or acquired, all registrations and recordings thereof, and all registration and recording applications filed in connection therewith, including registrations and registration applications in the United States Patent and Trademark Office (or any successor office) or any similar offices in any State of the United States, and all extensions or renewals thereof, including those listed on Schedule III, (B) all goodwill associated therewith or symbolized thereby, and (C) all other assets, rights and interests that uniquely reflect or embody such goodwill.

SECTION 3. *Collateral Agreement.* The security interests granted to the Collateral Agent herein are granted in furtherance, and not in limitation of, the security interests granted to the Collateral Agent pursuant to the Collateral Agreement. Each Grantor hereby acknowledges and affirms that the rights and remedies of the Collateral Agent with respect to the Patent and Trademark Collateral are more fully set forth in the Collateral Agreement, the terms and provisions of which are hereby incorporated herein by reference as if fully set forth herein. In the event of any conflict between the terms of this Agreement and the Collateral Agreement, the terms of the Collateral Agreement shall govern.
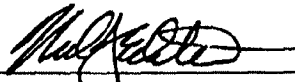
SECTION 4. *Counterparts.* This Agreement may be executed in counterparts (and by different parties hereto on different counterparts), each of which shall constitute an original but all of which when taken together shall constitute a single contract. Delivery of an executed signature page to this Agreement by facsimile transmission shall be as effective as delivery of a manually signed counterpart of this Agreement.

SECTION 5. *Applicable Law.* **THIS AGREEMENT SHALL BE CONSTRUED IN ACCORDANCE WITH AND GOVERNED BY THE LAWS OF THE STATE OF NEW YORK.**

[[2615693]]

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

LEVEL 3 COMMUNICATIONS, INC.
ICG COMMUNICATIONS, INC.

by _____

Name: Neil Eckstein

Title: Assistant Secretary

MERRILL LYNCH CAPITAL CORPORATION,
as Collateral Agent,

by _____

Name:

Title:

IN WITNESS WHEREOF, the parties hereto have duly executed this Agreement as of the day and year first above written.

LEVEL 3 COMMUNICATIONS, INC.,
ICG COMMUNICATIONS, INC.

by

_____
Name:
Title:

MERRILL LYNCH CAPITAL
CORPORATION, as Collateral Agent,

by

_____
Name: STEPHEN IARAS
Title: VICE PRESIDENT

SCHEDULE I

<u>UNITED STATES PATENT AND TRADEMARK OFFICE FILINGS</u>

RECORDATION DATE	REEL/FRAME
02/25/2005	003124/0489
02/25/2005	016283/0190
11/07/2005	003189/0131
02/25/2005	003130/0262
02/25/2005	003124/001
02/25/2005	016283/0647
02/25/2005	016323/0174
02/25/2005	003136/0228
02/28/2005	003130/0192

SCHEDULE II

PATENTS

LEVEL 3 COMMUNICATIONS, INC.

Solely Owned U.S. Patent Status Chart as of June 21, 2006

Identification Nos.	Title/Assignee/ Primary Inventor(s)	Technology Area: Summary	Prosecution Actions
U.S. Patent No. 6,940,849 (LVL3- 6832) (Fag-302258)	Title: System and method for IP telephony ping Assignee: LVL3 Primary Inventor(s): Elliot Eichen	VOIP: Establishing the availability of a node to receive a voice over internet protocol (VoIP) call using a VoIP "Ping" server which attempts calls to VoIP endpoints and stores the results of the attempted calls.	Application Serial No. 10/417,415 filed on April 16, 2003; Issued on September 6, 2005 as U.S. Patent No. 6,940,849.
U.S. Patent No. 6,938,081 (LVL3- 13424) (Fag-301379)	Title: Methods and systems for managing network infrastructure change including obtaining approval for the network infrastructure changes Assignee: LVL3 (Gen) Primary Inventor(s): Majid Mir	Network Management: Managing changes to the infrastructure of a computer network, and more particularly, to methods that coordinate the activities of the entities that will participate in, approve of, or be affected by the infrastructure change.	Application Serial No. 09/602,665 filed on June 26, 2000 (claiming priority to provisional 60/141,919 [06.30.99]); Issued on August 30, 2005 as U.S. Patent No. 6,938,081.
U.S. Patent No. 6,850,525 (LVL3- 6822) (Fag-301398)	Title: Voice over internet protocol (VoIP) network performance monitor Assignee: LVL3 (Gen) Primary Inventor(s):	VOIP: Packet delivery statistics are derived from a User Datagram Protocol (UDP) stream simulating a service level provided by a Voice over Internet Protocol (VoIP) network and transmitted across the VoIP network at a first pre-defined interval. The derived packet delivery statistics are processed to generate network performance statistics for the VoIP network and, if any of the network performance statistics exceed a threshold, triggering a traceroute routine that traces a network route to more specifically monitor	Application Serial No. 10/038,837 filed on January 4, 2002; Issued on February 1, 2005 as U.S. Patent No. 6,850,525.

Identification Nos.	Title/Assignee/Primary Inventor(s)	Technology Area: Summary	Prosecution Actions
	Derek Mitusmori	router performance statistics along the route.	
U.S. Patent No. 6,831,932 (LVL3- 6429) (Fag-297816)	Title: Transfer of SONET traffic over a packet-switched network Assignee: LVL3 Primary Inventor(s): Joe Lawrence	Packet-Based Routing: A received SONET transmission is decoded into a data structure. The data structure is thereafter converted into one or more data packets and the packets are transmitted across a packet network. At the other end of the packet network, the packets may be converted back to SONET, thereby providing end-to-end SONET transmission service while maintaining the cost savings and efficiencies associated with packet switched networks. The dependent claims of the recited method are directed to more specific embodiments of converting the data structure into data packets	Application Serial No. 09/616,878 filed on July 14, 2000; Issued on December 14, 2004 as U.S. Patent No. 6,831,932.
U.S. Patent No. 6,817,515 (LVL3- 6807) (Fag-301400)	Title: Verifiable voting Assignee: LVL3 (Gen) Primary Inventor(s): Steven Winnett	Business Model: A method of verifiable voting includes receiving election selections, producing a receipt representation of the election selections, the receipt having a unique receipt number for a voter and publishing election results, the election results including the election selections and unique receipt number.	Application Serial No. 09/842,533 filed on April 25, 2001; Issued on November 16, 2004 as U.S. Patent No. 6,817,515.
U.S. Patent No. 6,779,031 (LVL3- 6708) (Fag-301387)	Title: Network architecture with event logging Assignee: LVL3 (Gen) Primary Inventor(s): Heidi Picher-Dempsey	Network Management: Gathering and logging network event information using Simple Network Management Protocol (SNMP) messaging in routers that otherwise are not adaptable to contain a Management Information Base (MIB). Specifically, communications between an originating router and a destination router are monitored to ascertain network performance. To accomplish this, state query (e.g., TelNet) messages are transmitted to the routers and state information is received at a central server. The state information is converted to SNMP, which is used to access information from certain network elements relative to the performance of the network.	CIP Application Serial No. 09/362,781 filed on July 28, 1999 (claiming priority to 08/990,096 [12.12.97]); Issued on August 17, 2004 as U.S. Patent No. 6,779,031.
U.S. Patent No. 6,725,263 (LVL3- 13421) (Fag-301382)	Title: Systems and methods for analyzing network traffic Assignee: LVL3 (Gen) Primary Inventor(s): Javier Torres	Network Management: Analyzing traffic in a nodal network to determine projected traffic between a plurality of nodes therein. The analysis involves forecasting a total amount of traffic transmitted to and from the nodes based on observed traffic statistics and an estimated growth. The analysis also involves generating a traffic matrix using the observed traffic statistics and the forecasted traffic associated with each of the plurality of nodes. The traffic matrix is ultimately used to project traffic.	Application Serial No. 09/531,882 filed on March 21, 2000; Issued on April 20, 2004 as U.S. Patent No. 6,725,263.
U.S. Patent No. 6,614,781 (LVL3- 6472)	Title: Voice over data telecommunications network architecture	VOIP: Softswitch: Generally related to transmitting voice information over a packet-switched network. More particularly, the issued claims recite a method servicing a telecommunications call initiated by a caller at an origination location based on a plan specific to the caller. The call is	Application Serial No. 09/197,203 filed on November 20, 1998; Issued on September 2, 2003 as U.S. Patent No. 6,614,781.

PATENT
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Identification Nos.	Title/Assignee/Primary Inventor(s)	Technology Area/Summary	Prosecution Actions
(Fag-297800)	Assignee: LVL3 Primary Inventor(s): Ike Elliot, Rich Terpstra, Andrew Dugan, Shawn Lewis	directed to a callee at a termination location. The caller's plan specifies one or more processes that are to be implemented prior to connecting the telecommunications call between the origination gateway and the termination gateway. The method involves receiving a signaling message associated with the telecommunications call and including a look-up key specific to the caller. The look-up key is used to query a customer profile database to extract the caller's plan from the database.	
U.S. Patent Application No. 10/366,061 (LVL3-10101) (Fag-297801)	Title: Voice Over Data Telecommunications Network Architecture Assignee: LVL3 Primary Inventor(s): Ike Elliot, Rich Terpstra, Andrew Dugan, Shawn Lewis	VOIP: Softswitch: As above, generally related to transmitting voice information over a packet-switched network, but broader in scope than parent. More specifically, this application is directed to transmitting both voice and data communications over a single network using a media gateway and a soft switch. The media gateway converts media traffic from a first media format (e.g., circuit switch format) to a second media format (e.g., packet-based format). The soft switch converts signaling information from a first signaling format to a second signaling format. The soft switch controls the media gateway in response to the signaling information.	Continuation Application Serial No. 10/366,061 filed on February 12, 2003 (claiming priority to 09/197,203); Published as Publication No. 20040022237 on February 5, 2004;
U.S. Patent No. 6,442,169 (LVL3- 6472) (Fag-297803)	Title: System and method for bypassing data from egress facilities Assignee: LVL3 Primary Inventor(s): Shawn Lewis	Packet-Based Routing: Switching modem-based data calls to a packet-based network rather than directing the data calls through the public switched telephone network (PSTN). The transmission of data between a source computer and a destination computer is therefore implemented over the packet-based network such that the PSTN is used only for voice communication. As with conventional telephone calls, modem-based data calls are initiated by a source computer dialing into a local telephone company. Upon detection of a dialed call being a data call, the invention switches the call to the packet-based network for transmission of the data to a destination computer.	Application Serial No. 09/196,756 filed on November 20, 1998; Issued on August 27, 2002 as U.S. Patent No. 6,442,169.
U.S. Patent Application No. 10/179,613 (LVL3-6472USC1) (Fag-297804)	Title: System and Method for Bypassing Data From Egress Facilities Assignee: LVL3 Primary Inventor(s): Shawn Lewis	Packet-Based Routing: Same as parent, but claims explicitly recite a gateway, network access server (NAS) and a control server. The gateway communicates with a telecommunications carrier by receiving and transmitting signaling messages. The NAS terminates and re-originates data calls. The control server communicates with the gateway, distinguishes between voice and data calls and, based on this distinction, sends the data calls to the NAS.	Continuation Application Serial No. 10/179,613 filed on June 24, 2002 (claiming priority to 09/196,756); Published as Publication No. 20030198216 on October 23, 2003; Restriction Requirement mailed on December 21, 2005; Response to Restriction Requirement filed on January 23, 2006; Non-Final Office Action mailed on April 3, 2006;
U.S. Patent Application No. 10/671,826	Title: Architecture for Providing Internet Protocol (IP) Telephony	VOIP: Providing flexible IP telephony services using a distributed, loosely coupled and modular VoIP service system architecture. All, part or none of the VoIP service modules may be hosted at the customer premises and the	Application Serial No. 10/671,826 filed on September 25, 2003 (claiming priority to Provisional Application 60/413,363 [05.25.02]);

PATENT
REEL: 028252 FRAME: 0536

Identification Nos.	Title/Assignee/Primary Inventor(s)	Technology Area: Summary	Prosecution Actions
(LVL3-11103) (Fag-295776)	Services Assignee: LVL3 Primary Inventor(s): Bruce Young, Matthey Collier, Hemant Agrawal	remainder of the VoIP service modules may be hosted remote from customer premises. This application only includes one (1) claim that recites interfacing a presentation interface layer and a feature integration layer with a distributed services layer and interfacing a softswitch interface layer with the feature integration layer.	
U.S. Patent Application No. 10/057,041 (LVL3-6472) (Fag-297791)	Title: Automated Installation of Network Service in a Telecommunications Network Assignee: LVL3 Primary Inventor(s): Alex Henes, Richard Wall	Network Design: OnTap: Generally directed to an automated approach for installing network services in a communications network. First, this automated approach provisions components in the network to provide a private line design. Next, the private line design is validated and, if not found valid, the provisioning and validating actions are re-tried until a circuit design is found that may be validated and configured.	Application Serial No. 10/057,041 filed on January 25, 2002; Published as Publication No. 20030142633 on July 31, 2003; Non-Final Office Action mailed on October 31, 2005; Reply to Office Action filed (w/ 2-Mos ext fee) on March 30, 2006;
U.S. Patent Application No. 10/057,362 (LVL3-6472) (Fag-297794)	Title: Routing Engine for Telecommunications Network Assignee: LVL3 Primary Inventor(s): Alex Henes, Richard Wall	Network Design: OnTap: Generally directed to an automated approach for designing an optimal route for a private line circuit between a source and a destination location, as specified in a communication line installation request. Based on the current available capacity between the source location and the destination location, a routing engine automates the design of a least cost route for the private line circuit through a communications network. The routing engine then provides details of the route to a system managing the installation of the private line circuit	Application Serial No. 10/057,362 filed on January 25, 2002; Published as Publication No. 20030142808 on July 31, 2003; Non-Final Office Action mailed on December 12, 2005; Reply to Non-Final Office Action filed on April 12, 2006;
U.S. Patent Application No. 10/209,527 (LVL3- XX) (Fag-297797)	Title: Order Entry System for Telecommunications Network Service Assignee: LVL3 Primary Inventor(s): Richard Wall	Network Design: OnTap: Generally directed to a world wide web order entry system for network service on a telecommunication network. Specifically, this invention provides an approach for ordering network service over the internet during the automated performance of the sequential tasks necessary to deliver the network service to an ordering customer. To accomplish this, the customer logs onto the order entry system from the Internet, and the order entry system acts a communication medium for the customer to request, check availability for routes and reserve routes (in addition to providing pricing information).	Application Serial No. 10/209,527 filed on July 31, 2002; Published as Publication No. 20040024862 on February 5, 2004; Non-Final Office Action mailed March 13, 2006;
U.S. Patent Application No. 10/060,412	Title: System and Method for Determining an Evolving Combination of Network Components to	Business Model: Method for managing cost and revenue of a communications network. Initially, the method receives information regarding network design and price establishment for a communications service. After this information is received, the revenue for each of the	Application Serial No. 10/060,412 filed on February 1, 2002 (claiming priority to provisionals 60/265,327 [02.01.01] and 60/301,790 [07.02.01]); Published as Publication No. 20030046127 on March 6, 2003; Non-Final OA mailed June 3, 2005; Amendment (plus 1-Mos

Identification Nos.	Title/Assignee/ Primary Inventor(s)	Technology Area/ Summary	Prosecution Actions
(LVL3-11664) (Fag-297818)	Maximize the Net Present Value of a Provider's Cash Flow Assignee: LVL3 Primary Inventor(s): Jim Crowe	consecutive time periods is modeled on the basis of price and demand for each time period to create a revenue expression representing a function of price and demand for each product during each time period. After the revenue expression is complete, the method models the network topology by determining the network traffic capacity per link and time period. Next, the method models various costs for providing the communications service to create a costs expression representative of a function of demand for each product during each time period. After the revenue and costs expressions have been formed, the method models net present value to form an expression representing an objective function of revenue and costs. Finally, the method optimizes the objective function, thereby maximizing a net present value of cash flow resulting from provisioning the communications service. Specifically, the allowed claims recite equations for use in the business model.	Ext. fee) filed on September 22, 2005; Notice of Allowance mailed on December 6, 2005; Issue Fee paid on March 6, 2005;
U.S. Patent Application No. 11/384,460 (LVL3-XX) (Fag-333069)	Title: System and Method for Determining an Evolving Combination of Network Components to Maximize the Net Present Value of a Provider's Cash Flow Assignee: LVL3 Primary Inventor(s): Jim Crowe	Business Model: Same as above, but the claims recite a broader scope and specifically don't recite the equations.	Application Serial No. 11/384,460 filed on March 20, 2006;
U.S. Patent Application No. 09/988,821 (LVL3-6481) (Fag-297810)	Title: Cable Installation Assignee: LVL3 Primary Inventor(s): Ron Vidal	Mechanical Process: Approach for installing cables for a communications network over long distances. The installation occurs across a region presenting particular difficulty or delay, such as a large body of water or mountain-like terrain. The invention facilitates the provisioning of a point-to-point cable connection between a first location (point) and a second location (point) separated by a body of water that includes a first region of shallow water and a second region of relatively deeper water. Multiple ducts are provided from the first location through the shallow water to an offshore termination location.	Application Serial No. 09/988,821 filed on November 20, 2001 (claiming priority to provisional 60/252,130 [11.21.00]); Published as Publication No. 20030026662 on February 6, 2003; Amended Appeal Brief filed March 23, 2006;

Identification No.	Title/Assigned/ Primary Inventor(s)	Technology Area/ Summary	Prosecution Actions
U.S. Patent Application No. 10/961,811 (LVL3-11885) (Fag-299629)	Title: Digital Content Distribution Framework Assignee: LVL3 Primary Inventor(s): Erich Jacobs	Software Application: Generally directed to a centralized software distribution framework and services in support thereof for facilitating the digital distribution of software. Generally, this invention provides a flexible, scalable, industry-wide solution for distribution of digital content, such as software. A centralized software distribution framework is provided that facilitates the distribution of software from distributors to enterprises in a fast, flexible, reliable, and secure manner. The software distribution framework may also provide a centralized environment for the dissemination of product and licensing information.	Application Serial No. 10/961,811 filed on October 8, 2004;
U.S. Patent Application No. 08/990,096 (LVL3-13423) (Fag-301380)	Title: Secure Network Architecture with Quality of Service Assignee: LVL3 (Gen) Primary Inventor(s): Heidi Picher-Dempsey	Network Management: Same as above with U.S. Patent No. 6,779,031 – implementing SNMP type service in routers which otherwise don't have such capability.	Application Serial No. 08/990,096 filed on December 12, 1997; Notice of Abandonment mailed November 11, 2001; Petition to Revive granted March 12, 2002; Petition to for Withdrawanl of Apparent Holding of Abandonment filed on August 24, 2005; Decision Granting Petition to Withdrawn Apparent Holding of Abandonment mailed September 6, 2005 (application placed back on appeal).
U.S. Patent Application No. 09/855,103 (LVL3-6809) (Fag-301389)	Title: Service Level Agreements Based On Objective Voice Quality Testing for Voice Over IP (VoIP) Networks Assignee: LVL3 (Gen) Primary Inventor(s): Lee Goodman	VOIP: Generally directed to a voice call listening quality test scheme for a Voice Over IP (VOIP) network. Test probes are deployed along the border of the VOIP network. Each test probe is capable of placing calls over the VOIP network to the other test probes at different levels of service and measuring call quality using an objective measurement algorithm such as PAMS or PSQM. The measurement results are collected on an ongoing basis to obtain information on the VOIP network's voice call quality. The information is compared to thresholds to measure performance against Service Level Agreement guarantees.	Application Serial No. 09/855,103 filed on May 14, 2001; Published as Publication No. 20020167936 on November 14, 2002; Notice of Allowance mailed August 30, 2005; Issue fee paid November 30, 2005; Notice of Abandonment mailed on April 17, 2006; Petition to Revive (with amended drawings) filed on May 5, 2006;
U.S. Patent Application No. 09/855,156 (LVL3-6810) (Fag-301394)	Title: Embedding Sample Voice Files in Voice Over IP (VoIP) Gateways for Voice Quality Measurements Assignee: LVL3 (Gen) Primary Inventor(s): Lee Goodman	VOIP: Generally directed to testing voice call quality in a Voice Over Internet Protocol (VOIP) network. This invention involves enabling a communications device connected to the VOIP network to answer a test call received over the VOIP network by playing a voice file, generating a test call over the VOIP network to the communications device and measuring voice call listening quality from the voice file played by the communications device.	Application Serial No. 09/855,156 filed on May 14, 2001; Published as Publication No. 20020167937 on November 14, 2002; Non-Final Office Action mailed on January 24, 2006; Reply to Non-Final OA filed on April 24, 2006;

Identification Nos.	Title/Assignee/ Primary Inventor(s)	Technology Area: Summary	Prosecution Actions
U.S. Patent Application No. 09/878,572 (LVL3-6812) (Fag-301395)	Title: Voice Over Internet Protocol (VoIP) Real Time Protocol Routing Assignee: LVL3 (Gen) Primary Inventor(s): Jim O'Brien, Eichen Elliot	VOIP: A method for call signaling and media flow in a network including receiving call signaling information from an originating Voice over Internet Protocol (VoIP) endpoint, relaying the call signaling information to a destination VoIP endpoint, directing the originating VoIP endpoint to use a RTP media proxy and receiving a stream of media to the RTP media proxy from the originating VoIP endpoint	Application Serial No. 09/878,572 filed on June 11, 2001; Published as Publication No. 20020186685 on December 12, 2002; Non-Final Office Action mailed on December 28, 2005Reply to Non-Final Office Action filed on March 28, 2006;
U.S. Patent Application No. 09/982,721 (LVL3-6820) (Fag-301396)	Title: Content Request Routing and Load Balancing for Content Distribution Networks Assignee: LVL3 (Gen) Primary Inventor(s): Mike Slocombe	Content Distribution: Generally directed to hosting and distributing content on a content delivery network. This invention involves associating devices in a Domain Name System (DNS) with content server systems (i.e., caches) located on the edges of a network. The content server systems maintain and serve content of a content provider originated on an origin server. The invention involves assigning to the DNS devices a common address, the common address being usable to resolve the name of the content provider such that a request for content of the content provider by a content requestor is sent to the content server system nearest the content requestor (as opposed to the origin server).	Application Serial No. 09/982,721 filed on October 18, 2001; Published as Publication No. 20030079027 on April 24, 2003; Final Office Action mailed June 23, 2005; Reply (plus 2-Mos extension) filed on November 21, 2005; Advisory Action mailed on December 12, 2005; Notice of Appeal (plus 1-Mos extension) filed on December 22, 2005; Amendment (with RCE) and 3-Mos Extension filed on May 22, 2006;
U.S. Patent Application No. 09/826,697 (LVL3-6804) (Fag-301397)	Title: QOS Testing of a Hardware Device or a Software Client Assignee: LVL3 (Gen) Primary Inventor(s): Mike Baj	VOIP: Generally directed to an approach for testing the Quality of Service (QoS) of a component (e.g., a hardware module or a software client) in a Voice-over-IP (VOIP) network path. The approach involves testing a component in a VoIP network by: sending a digital audio file through the component to a destination, recording the digital audio file at the destination and measuring characteristics of the recording to analyze the component.	Application Serial No. 09/826,697 filed on April 5, 2001; Published as Publication No. 20020145979 on October 10, 2002; Final Office Action mailed October 5, 2005; Amendment (plus 2-mos extension) filed March 6, 2006; Examiner conference (DAR) occurred on March 9, 2006; Notice of Allowance mailed on March 20, 2006
U.S. Patent Application No. 10/339,082 (LVL3-6830) (Fag-301401)	Title: Routing Calls Through a Network Assignee: LVL3 (Gen) Primary Inventor(s): Harry Mussman, Jim O'Brien	VOIP: Calls are routed through a network using a single device that is configured to support two protocols: a first protocol for initiation, maintenance, and termination of a communication session, and a second protocol for resolving endpoint addresses for the communication session.	Application Serial No. 10/339,082 filed on January 9, 2003; Published as Publication No. 20040139209 on July 14, 2004; Non-Final Office Action mailed on September 7, 2006; Reply to Non-Final Office Action (plus 3-Mos extension fee) filed on March 7, 2006;
U.S. Patent No. 7,051,099 (LVL3-6811)	Title: ISDN Disconnect alarm Generation Tool for Use in Voice Over IP (VoIP) Networks	VOIP: Generally directed to fault management in a Voice over IP (VoIP) network based on failure rate information from VoIP call usage records associated with VoIP call traffic (original claim). More limited features relate to an alarm generation tool that operates within a Voice over IP	Application Serial No. 09/870,228 filed on May 31, 2001; Patent No. 7,051,099 issued on May 23, 2006.

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Identification No.	Title/Assignee/Primary Inventor(s)	Technology Area Summary	Prosecution Activity
(Fag-301403)	Assignee: LVL3 (Gen) Primary Inventor(s): Fred Ziegler	(VoIP) network environment to generate alarms based on ISDN disconnect cause codes. The tool examines call-specific usage records associated with VoIP traffic to detect ISDN disconnect cause codes and determines failure rate information from failure-type disconnect cause codes among the ISDN disconnect cause codes on a per-gateway basis. The tool generates alarms when the failure rate information, such as failure rates and/or counts, exceeds defined thresholds.	
U.S. Patent Application No. __/_____ (LVL3-____) (Fag-336242)	Title: ISDN Disconnect alarm Generation Tool for Use in Voice Over IP (VoIP) Networks Assignee: LVL3 (Gen) Primary Inventor(s): Fred Ziegler	VOIP: Same as above, but the claims recite a broader scope (e.g., packet-based voice network rather than VoIP).	Continuation application filed on May 22, 2006 and accorded Serial No. __/_____;
U.S. Patent Application No. 09/978,768 (LVL3-6819) (Fag-301404)	Title: Distribution of Traffic Across a Computer Network Assignee: LVL3 (Gen) Primary Inventor(s): Vincent Fuller	Content Distribution: A relay apparatus for engineering desired traffic flow and facilitating bandwidth utilization. The relay apparatus is a device that interfaces with a communications network in order to receive requests for content and determine the appropriate origin server from which to pull the content. To accomplish this, the relay apparatus includes a data store having data elements that associate a first network address of a server with a second network address of a server. The content request corresponds to a data element in the data store and the data element is used to determine the corresponding server, to which the relay apparatus forwards the content request such that any response is sent to the relay apparatus (rather than directly to the requestor).	Application Serial No. 09/978,768 filed on October 18, 2001; Non-Final Office Action mailed on March 14, 2006;
U.S. Patent Application No. 09/843,787 (LVL3-6808) (Fag-301406)	Title: Screening Inbound Calls in a Packet-Based Communications Network Assignee: LVL3 (Gen) Primary Inventor(s): Harry Mussman	VOIP: Generally directed to call routing and control in packet-based networks, and more particularly to call screening in a packet-based voice transmission system, e.g., VoIP. To accomplish this, a call screening database device is provided for use in a VoIP network. The call screening database includes one or more communication devices providing access to a gatekeeper. A memory device in the call screening database devices includes a screening database. A processor receives a request from the gatekeeper through a communication device and responds to the request by querying the screening database, determining a response to the received request, and sending the response to the gatekeeper.	Application Serial No. 09/843,787 filed on April 30, 2001; Published as Publication No. 20020159440 on October 31, 2002; Non-Final Office Action mailed November 1, 2004; Reply to Non-Final Office Action filed February 3, 2005; Examiner's interview conducted on April 8, 2005; Examiner's Amendment and Notice of Allowance mailed on April 22, 2005; Issue fee and Rule 312 Amendment filed on July 22, 2005; Rule 312 Communication mailed on April 25, 2006;
U.S. Patent	Title: Alternate Routing	VOIP: A directory gatekeeper is provided for performing alternate routing	Application Serial No. 09/827,352

Identification Nos.	Title/Assignee/ Primary Inventor(s)	Technology Area Summary	Prosecution Actions
Application No. 09/827,352 (LVL3-13415) (Fag-301407)	of Voice Communications in a Packet-Based Network Assignee: LVL3 (Gen) Primary Inventor(s): Harry Mussman	of calls through gateway resources in a distributed network (e.g., H.323 Voice over IP). The directory gatekeeper includes one or more communication devices providing access to resource management gatekeepers. Each resource management gatekeeper is associated with one or more gateway resources. A memory device accessible by the directory gatekeeper stores a list of routes where each route is associated with one of the resource management gatekeepers A processor receives a request through one of the communication devices, and performs alternate routing by selecting a route from the list of routes using the corresponding resource management gatekeeper to determine resource availability.	filed on April 06, 2001; Published as Publication No. 20030012178 on January 16, 2003; Non-Final Office Action mailed on January 24, 2005; Reply to Non-Final Office Action filed (with 1-Mos ext. fee) on May 24, 2005; Final Office Action mailed August 10, 2005; RCE (with 3-Mos ext. fee) filed on February 13, 2006; Non-Final Office Action mailed on May 3, 2006;
U.S. Patent Application No. 09/969,437 (LVL3-6818) (Fag-301412)	Title: Automated Server Replication Assignee: LVL3 (Gen) Primary Inventor(s): Justin Aborn	Content Distribution: Approach for detecting a change in demand for server resources across a load-bearing system having one or more content servers hosting identical content. Specifically, this invention involves automatically modifying the number of content servers on the load-bearing system in response to the change in demand. To accomplish this, each content server in a network has an associated priority level. The associated priority levels are used to select a content server that will be transitioned from a first load-bearing system to a second load-bearing system based on a change in demand for server resources in the second load-bearing system.	Application Serial No. 09/969,437 filed on October 2, 2001; Published as Publication No. 20030065703 on April 3, 2003; Non-Final Office Action mailed on January 13, 2005; Reply to Non-Final Office Action filed (with 2-Mos ext. fee) on June 13, 2005; Final Office Action mailed on September 2, 2005; RCE and Reply to Final OA (plus 3-Mos Ext. Fee) filed on March 2, 2006;
U.S. Patent Application No. 10/414,825 (LVL3-13411) (Fag-302259)	Title: System and Method for Internet Protocol Telephony Advertisement Protocol Assignee: LVL3 (Gen) Primary Inventor(s): Lee Goodman	VOIP: Approach for allowing a plurality of IP telephony devices to communicate with each other without requiring the use of a telephony gateway or similar call set up service. In other words, a mechanism for facilitating completion of VoIP calls over a local network without requiring the use of a gateway of similar call setup service to perform address resolution and call completion. To accomplish this, the invention involves receiving a telephony advertisement packet comprising addressing information and storing the telephony advertisement packet. The stored telephony advertisement packet is used to complete the call. When the call cannot be completed by utilizing the stored telephony advertisement packet, a telephony gateway may be accessed to complete the call.	Application Serial No. 10/414,825 filed on April 16, 2003; Published as Publication No. 20040208185 on October 21, 2004; Final Office Action mailed on December 7, 2005; RCE filed on February 10, 2006; Notice of Allowance mailed on April 13, 2006;
U.S. Patent Application No. 10/653,561 (LVL3-13410) (Fag-302260)	Title: System and Method for Evaluating the Quality of Service in an IP Telephony Network Using Call Forwarding Assignee: LVL3 (Gen)	VOIP: Forwarding a test signal between network nodes to evaluate QoS of an IP based telephony system.	Application Serial No. 10/653,561 filed on September 2, 2003;

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Identification Nos.	Title/Assignee/Primary Inventor(s)	Technology Area - Summary	Prosecution Actions
	Primary Inventor(s): Harry Mussman		
U.S. Patent Application No. 10/629,517 (LVL3-13409) (Fag-302261)	Title: System and Method for Providing Alternate Routing in a Network Assignee: LVL3 (Gen) Primary Inventor(s): Harry Mussman	VOIP: Performing alternate routing of a communication originating on an origination endpoint of a packet-switched network to a destination endpoint via a circuit-switched network based. The origination endpoint and the destination endpoint are located at different sites and associated with a private dialing plan (PDP) as indicated by a PDP number. A customer-specific identifier is appended to the PDP number and used to route the communication through the circuit-switched network if it is determined (based on selection criticria whether such routing should be accomplished). An exemplary criteria involves determining available bandwidth.	Application Serial No. 10/629,517 filed July 29, 2003; Final Office Action mailed on July 12, 2005; Reply to Final Offfice Action filed on September 29, 2005; Advisory Action (not entering Reply) mailed on November 1, 2005; Notice of Abandonment mailed on February 2, 2006; Petition to Revive (w/ RCE) filed on March 29,2006.
U.S. Patent Application No. 10/629,521 (LVL3-13408) (Fag-302262)	Title: System and Method for Monitoring Communications in a Network Assignee: LVL3 (Gen) Primary Inventor(s): Mike Baj, Derek Mitsumori	VOIP: Monitoring VoIP calls to provide enhanced call detail information which can be used for billing purposes, quality of service ("QoS") monitoring, network usage tracking, and other similar purposes. The invention is phrased as a method that involves initiating a communication between a network endpoint associated with a call mediator and at least a second network endpoint. The call mediator, which isresponsible for processing calls to and from the VoIP network endpoint, records information associated with the communication and forwards that information to an enterprise gatekeeper for further processing (e.g., billing) after the call is completed. The independent claims actually recite a broader applicabililty than to VOIP implementation.	Application Serial No. 10/629,521 filed on July 29, 2003; Published as Publication No. 20050025124 on February 3, 2005;
U.S. Patent Application No. 10/629,518 (LVL3-13407) (Fag-302263)	Title: System and Method for Generating Reports in a Network Assignee: LVL3 (Gen) Primary Inventor(s): Derek Mitsumori, Harry Mussman	VOIP: Using the information forwarded to the enterprise gatekeeper (from 10/629,521 above) to generate reports indicative of the VoIP call. The independent claims actually recite a broader applicabililty than to VOIP implementation.	Application Serial No. 10/629,518 filed on July 29, 2003; Published as Publication No. 20050025123 on February 3, 2005;
U.S. Patent Application No. 11/001,887 (LVL3-13406) (Fag-302064)	Title: Systems and Methods for Accessing IP Transmissions Assignee: LVL3 Primary Inventor(s): Jeff	VOIP: Monitoring real time transmissions ongoing in relation to one or more selected endpoints (e.g., telephones) in a VOIP network for purposes of wire-tapping under the United States Cooperative Assistance to Law Enforcement Act (CALEA).	Application Serial No. 11/001,887 filed on December 01, 2004 (claiming priority to provisional 60/555,603 [03.23.2004]);

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Schedule II

Identification No.	Title/Assignee/Primary Inventor(s)	Technology Area Summary	Prosecution Actions
	Pelletier, Elliot Eichen		
U.S. Patent Application No. 11/086,471 (LVL3-13406) (Fag-302604)	Title: Systems and Methods for Accessing IP Transmissions Assignee: LVL3 Primary Inventor(s): Jeff Pelletier, Elliot Eichen	VOIP: Monitoring real time transmissions ongoing in relation to one or more selected endpoints (e.g., telephones) in a VOIP. network. To accomplish this, an audio transmission (e.g., a VOIP telephone call) is detected and at least a portion of the audio transmission is directed to an acquisition facility where the audio transmission is monitored. For use with United States Cooperative Assistance to Law Enforcement Act (CALEA).	CIP Application Serial No. 11/086,471 filed on March 21, 2005 (claiming priority to utility 11/001,887 [12.01.04] and provisional 60/555,603 [03.23.2004]);
U.S. Patent Application No. 11/311,829 (LVL3-XX) (Fag-309647)	Title: Providing SIP Signaling Data for Third Party Surveillance Assignee: LVL3 Primary Inventor(s): John Hearty	VOIP: Facilitating surveillance of communication sessions conducted over a voice over Internet protocol (VoIP) network that employs a session initiation protocol (SIP). To accomplish this, a subscription request is received at an API from a third party subscriber (e.g., law enforcement). The subscription request identifies a targeted user to be monitored. Communication sessions in which the targeted user is a participant are monitored to detect SIP events corresponding to state transitions. The third party subscriber is notified of any such detected events by way of SIP data. For use with United States Cooperative Assistance to Law Enforcement Act (CALEA).	Application Serial No. 11/311,829 filed on December 19, 2005; Assignment filed on February 20, 2006; IDS filed on May 23, 2006;
U.S. Patent Application No. 11/009,204 (LVL3-13842) (Fag-309648)	Title: Systems and Methods for Dynamically Registering Endpoints in a Network Assignee: LVL3 Primary Inventor(s): Rich Terpstra, Daryl Malas	VOIP: Methodology for servicing network access requests issued by a communication device to a VOIP network. Specifically, the invention relates to dynamically assigning feature servers for use by communication devices communicating over the VOIP network. Accordingly, the communication device need not necessarily access a network by an assigned feature server, thereby providing, among other things, an ability to avoid network congestion and/or device failures. To accomplish this, a network service resource list is periodically updated to indicate a feature server for use in response to a registration request.	Application Serial No. 11/009,204 filed on December 9, 2005; IDS filed on April 12, 2005;

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Schedule II

Identification Nos.	Title/Assignee/ Primary Inventor(s)	Technology Area Summary	Prosecution Actions
U.S. Patent Application No. 11/009,216 (LVL3-XX) (Fag-309649)	Title: Systems and Methods for Locating Endpoints in a Communication Network Assignee: LVL3 Primary Inventor(s): Bob Hagens, Rich Terpstra, John Morgan	VOIP: E-911: Identifying the location of a device (e.g., VOIP phone) originating a communication and/or providing location information to an emergency services dispatcher. To accomplish this, a communication device stability module (SIP phone, modem) capable of determining a location status of a communication device is provisioned and used to detect a change event (IP address, power on, etc.), which triggers a query as to whether the communication device has indeed moved locations.	Application Serial No. 11/009,216 filed on December 9, 2004; IDS filed on March 25, 2005;
U.S. Patent Application No. 11/064,391 (LVL3- XX) (Fag-309650)	Title: Voice Call Coordinator Assignee: LVL3 Primary Inventor(s): John Ward, Rich Terpstra, Tom Traylor, Andrew Lundgren, Tim Missner	VOIP: Collecting signaling information of a call through a VOIP network. In response to a request to receive signaling information associated with a particular call on the VOIP network, a network element is queried for the signaling information, which is subsequently displayed, for example, on a graphical output device. The signaling information is routinely described as being SS7 information.	Application Serial No. 11/064,391 filed on February 22, 2005; IDS filed on February 22, 2005;
U.S. Patent Application No. 11/146,752 (LVL3-13845) (Fag-309651)	Title: Internet Packet Quality Monitor Assignee: LVL3 Primary Inventor(s): Darren Loher	Network Management: Monitoring packet quality over VOIP network by identifying a set of nodes and deriving the existence of the links between these nodes. The combination of these nodes and links logically make up network paths. A packet test device traces multiple paths on the IP-based network to obtain node identifiers corresponding to nodes on each path. An Internet quality monitor (IQM) associates a quality metric with each path, and associates identified links in a path with one of the quality metrics.	Application Serial No. 11/146,752 filed on June 7, 2005;
U.S. Patent Application No. 11/027,561 (LVL3- XX) (Fag-310339)	Title: Systems and Methods for Applying a Variable Encoding/Decoding Scheme in a Communication Network Assignee: LVL3 Primary Inventor(s): Darren Loher	VOIP: Directed to selection of a coder/decoder from a plurality of coder/decoders based on analysis of network performance. In other words, if network performance (or, non-performance as the case may be) warrants it, the invention involves selectively emplying a coder/decoder mechanism. The network performance analysis may be accomplished at a single endpoint or between endpoints.	Application Serial No. 11/027,561 filed on December 29, 2004 (claiming priority to provisional 60/567,540 [05.03.2004]); IDS filed on February 3, 2005;

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Schedule II

Identification No.	Title/Assignee/Primary Inventor(s)	Technology Area Summary	Prosecution Actions
U.S. Patent Application No. 11/027,564 (LVL3- XX) (Fag-310340)	Title: Registration Redirect Server Assignee: LVL3 Primary Inventor(s): Rich Terpstra, John Hearty, Daryl Malas	VOIP: Registering communication devices (e.g., TAs or VoIP phones) to the closest feature servers to facilitate roaming while also performing other performance enhancing features such as load balancing for capacity, scalability, and congestion control within the network. Basically, this invention provides a mechanism for re-directing a communication device to a closer feature server rather than sending that phone to the feature server to which it is "homed." The network may try to communicate with the TA via the home feature server. In such a situation, a communication device or TA is not limited to accessing the network by predefined feature servers, but can rather register with the network and be provisioned with any of a number of feature servers. To accomplish this, each of the feature servers are assigned the same virtual IP address and periodically update a local network service resource list to denote available access.	Application Serial No. 11/027,564 filed on December 31, 2004 (claiming priority to provisional 60/567,542 [05.03.2004]); Request to add inventor Daryl Malas filed on May 30, 2006;
U.S. Patent Application No. 11/009,212 (LVL3-13972) (Fag-311057)	Title: Systems and Methods for Third Party Emergency Call Termination Assignee: LVL3 Primary Inventor(s): Rich Terpstra	VOIP: E-911: Identifying the location of a device originating a communication and/or providing location information to an emergency services dispatcher. A location database includes physical location information about a communication device that is either directly or indirectly by an emergency service answering system, while concealing the information from a network responsible for terminating the call. The method involves receiving an emergency call request from a communication device on a third party network. The call request includes an indication of an emergency service answering system and a key in place of a call back number. The key is provided to the emergency service answering system, and a communication connection between the communication device and the emergency service answering system is initiated.	Application Serial No. 11/009,212 filed on December 9, 2004; IDS filed on March 22, 2005;
U.S. Patent Application No. 09/726,056 (LVL3-99-463C) (Fag-315065)	Title: Systems and Methods for Implementing Second-Link Routing in Packet Switched Networks Assignee: LVL3 (Ver) Primary Inventor(s): Bob Donaghey	Packet-Based Routing: Routing Internet Protocol (IP) traffic between local-area networks (LANs) connected via connection-oriented packet switches in mobile adhoc networks using virtual circuits. To accomplish this, mechanisms assign virtual circuit identifiers to LAN gateways and distribute the VCIs to other LAN gateways throughout a network. Distribution of these VCIs permits each receiving LAN gateway to implement virtual circuit paths with other LAN gateways in the network.	Application Serial No. 09/726,056 filed on November 30, 2000 (claiming priority to provisional 60/197,918 [11.30.1999]); Published as Publication No. 20010030972 on October 18, 2001; Non-Final Office Action mailed February 13, 2004; Reply to Non-Final Office Action filed May 13, 2004; Final Office Action mailed August 2, 2004; Notice of Appeal filed February 2, 2005; RCE filed on April 1, 2005; Status check with Examiner; Case is going through RCE and awaiting examination; Notice of Allowance mailed on April 20, 2006;
U.S. Patent Application No.	Title: VoIP Call Through Tester	VOIP: Verifying the routing of a call through a network by generating an outbound call from a test tool in a first network (e.g., VOIP). The outbound includes a test key and a destination number. The outbound call is routed to	Application Serial No. 11/064,415 filed on February 22, 2005; IDS filed on February 22, 2005;

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Schedule II

Identification No.	Title/Assignee/Primary Inventor(s)	Technology Area Summary	Prosecution Actions
11/064,415 (LVL3-XX) (Fag-315637)	Assignee: LVL3 Primary Inventor(s): Rich Terpstra, John Ward, Thomas Traylor, Greg Brown, Andrew Lundgren	and received by a second network (e.g., PSTN), which accesses the key and based at least in part on the key routes the call to the test tool.	
U.S. Patent Application No. 11/319,918 (LVL3-14549) (Fag-316803)	Title: Customer Owned Telephone Numbers Assignee: LVL3 Primary Inventor(s): Chris Middleton, Dena Hunter	VOIP: Routing telephone calls to a remote switch in a network. A host switch communicably coupled with a plurality of remote switches and with a public switched telephone network ("PSTN") is provided in a VOIP network. A call is received by the host switch from the PSTN and a target remote switch is identified (hence, selected from the plurality of remote switches) and the call is sent thereto. Seems to cover 3VT.	Application Serial No. 11/319,918 filed on December 27, 2005;
U.S. Patent Application No. 11/259,448 (LVL3-14550) (Fag-316804)	Title: Systems and Methods for Discovering Network Topology Assignee: LVL3 Primary Inventor(s): Chris Coston, Josh Voight, Dan Youngblood, Robert Feuerstein	Network Management: Identifying network elements and interconnections among network elements (NEs) that have been provisioned on a network. To accomplish this, a port on a network element is selected and iteratively subjected to validation tests associated with a specific "type" of network element. The validation tests yield a result that indicates whether a port on another network element of the specific type is connected to the selected port. The network elements are described as various types of elements including WDMs, ADMs, routers and switches.	Application Serial No. 11/259,448 filed on October 26, 2005;
U.S. Patent Application No. 11/315,644 (LVL3-13847) (Fag-317084)	Title: Registration of Multiple VoIP Devices Assignee: LVL3 Primary Inventor(s): Rich Terpstra, Daryl Malas	VOIP: Facilitating registration of multiple voice communications devices on a VOIP network (motivation is based on businesses with numerous VOIP phones). A voice distribution server is communicably coupled to an integrated access device and associated with a computer readable medium having a customer profile that includes at least one registered access number associated with the integrated access device. At least two quasi-registered access numbers are associated with the integrated access device, which is communicably coupled to a plurality of VOIP phones. The integrated access device is further associated with a computer readable medium, which includes instructions executable by the integrated access device to register the plurality of voice communication devices with a calling network using a unified registration request.	Application Serial No. 11/315,644 filed on December 22, 2005;
U.S. Patent Application	Title: Geo-Locating Load Balancing	VOIP: Load Balancing: Directing geographically dispersed clients to the closest application servers and balancing the load among such application	CIP Application Serial No. 11/271,941 filed on November 10, 2005 (claiming priority to utility application 11/027,275 [12.31.04] and to

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Identification No.	Title/Assignee/ Primary Inventor(s)	Technology Area: Summary	Prosecution Actions
No. 11/271,941 (LVL3-13840) (Fag-317085)	Assignee: LVL3 Primary Inventor(s): Craig Sirkin	servers. A service request (e.g., for a VOIP call) is received by a load balancer from a client and directed to a specific server in a group of servers. The load balancer advertises a virtual IP address that is shared by at least one other load balancer. In a specific embodiment, a voice client coupled to a communication network issues a Session Initiation Protocol (SIP) Register message to an Anycast address serviced by multiple proxy servers coupled to the VOIP network. The SIP Register message is received by the proxy server determined to be closest to the voice client based on metrics associated with the communication network. The closest proxy server then causes the SIP Register message to be directed to a particular registrar server of multiple registrar servers associated with the proxy server based on a load balancing routine.	provisional 60/567,542 [05.03.2004];
U.S. Patent Application No. 60/707,657 (LVL3-15252) (Fag-321219)	Title: Systems and Methods for Flow Signature Formation and Use Assignee: LVL3 Primary Inventor(s): Rick Nooner, Gerald (Jay) Gorsegner, Dan Rock and Pat Callahan	VOIP: Identifying and classifying transaction flows in furtherance for arranging data. Identifying and classifying transaction flows in furtherance for arranging data. To accomplish this, transactions are identified and examined to determine whether any terminating activity has occurred relative to the transaction. In response to detecting a transaction associated with a terminating activity, a signature is formed based upon such activity and the signature is compared with previous signatures. If the detected signature matches a previous signature, the signature is classified as such; otherwise, a new classification is formed.	Provisional Serial No. 60/707,657 filed on August 11, 2005.
U.S. Patent Application No. 11/347,810 (LVL3-15374) (Fag-321996)	Title: Ethernet-Based Systems and Methods for Improved Network Routing Assignee: LVL3 Primary Inventor(s): Joe Lawrence, Nasser El-Aawar, Roy Alcala, Darren Loher, Steven White	Packet-Based Routing: Routing IP traffic over an Ethernet-based backbone network. Also describes parallel backbone networks (both Ethernet and MPLS based) and multi-chassis Ethernet routers (MERs).	Application Serial No. 11/347,810 filed on February 3, 2006 (claiming priority to provisional 60/650,312 [02.02.2005]); Notice to file Missing Parts mailed March 6, 2006; Filing Receipt mailed March 6, 2006;
U.S. Patent Application No.	Title: Traffic Distribution in a Communications Network	VOIP: Dynamically establishing a communications session based on criteria other than the caller's current geographic location. An accessing module is configured to receive a request to establish the communications session	Application Serial No. 11/322,168 filed on December 29, 2005; Notice to file Missing Parts mailed February 7, 2006; Declaration in reply to NTFMP filed on April 4, 2006;

[[2615693]]

Identification Nos.	Title/Assignee/Primary Inventor(s)	Technology Area/ Summary	Prosecution Actions
11/322,168 (LVL3-15606) (Fag-322002)	Assignee: LVL3 Primary Inventor(s): Rich Terpstra, Jin-Gen Wang	between an origination endpoint and a destination endpoint and selects a processing server through which to setup the communication session. A path is determined by selecting an IP Media Gateway Controller (IP MGC) from a plurality of IP MGCs based on data in the request that is independent of the first geographic region.	
U.S. Patent Application No. 11/312,012	Title: System and Method for Monitoring Data in a Telecomm Network Assignee: LVL3 Primary Inventor(s): John Ward	Network Management: A system and method for generating an analysis and detection engine operable to monitor and report data in a telecommunications network includes a plurality of selectable processing modules. Each module is individually configurable to perform predetermined processing and data storage functions including specification of dimensions for which processing is to be applied, and collectively configurable in a linear communication path so as to define unique data analysis/detection flows.	Application Serial No. 11/312,012 filed (with IDS) on December 20, 2005; Notice to File Missing Parts mailed on February 4, 2006; Declaration filed in reply to mailing of NTFMP before April 4, 2006;
U.S. Patent Application No. 11/312,949	Title: System and Method for Routing Signaling Messages in a Comm Network Assignee: LVL3 Primary Inventor(s): Jin-Gen Wang	Packet-Based Routing: A system and method for routing signaling messages in a communication network includes an improved route engine having a plurality of dynamically loadable route trees encoded as standardized data files each provisioned for use according to a corresponding network service and having one or more nodes each encoded with logic to independently carry out processing for the service and return a corresponding route response.	Application Serial No. 11/312,949 filed on December 20, 2005; Notice to File Missing Parts mailed on February 4, 2006; Declaration filed in reply to mailing of NTFMP before April 4, 2006;
U.S. Patent Application No. 11/314,103	Title: Method and System for Terminating SONET/SDH Circuits in an IP Network Assignee: LVL3 Primary Inventor(s): Don Fendrick, Shane Amante, Joe Lawrence	Packet-Based Routing: A method and system for terminating SONET/SDH circuits in an IP network includes a SONET/SDH to Ethernet inter-working device/functionality implemented in a network element for mapping SONET/SDH channels into logical channels over an Ethernet connection. The SONET/SDH channels are de-encapsulated to remove Layer-2 protocols and expose IP packets. The IP packets are encapsulated with Ethernet headers and logical tags for transmission over the Ethernet connection to their final destinations via a Provider Edge (IP) router.	Application Serial No. 11/314,103 filed (with IDS) on December 21, 2005; Notice to File Missing Parts mailed on February 4, 2006; Declaration filed in reply to mailing of NTFMP before April 4, 2006;
U.S. Patent Application No. 11/323,442	Title: System and Method for Generating a Lock-Free Dual Queue Assignee: LVL3	Distributed Computing: A method of supporting condition synchronization for a shared data structure so as to provide concurrent access. A protocol is provided between a thread creating a request as part of a remove operation and a thread fulfilling a request as part of an add operation.	Application Serial No. 11/323,442 filed (with IDS) on December 30, 2005; Notice to File Missing Parts mailed on February 4, 2006; Declaration filed in reply to mailing of NTFMP before April 4, 2006;

PATENT
REEL: 028252 FRAME: 0549

Schedule II

Identification Nos.	Title/Assignee/Primary Inventor(s)	Technology Area; Summary	Prosecution Actions
	Primary Inventor(s): Bill Hopkins		
U.S. Patent Application No. 11/084,804 (Fellers-02US-B)	Title: Internet Route Deaggregation and Route Election Preferencing Assignee: WilTel (CoreEx) Primary Inventor(s): Michael Gaddis, Peter Hicks	Packet-Based Routing: A method and system for managing the routing of traffic within a network develops a topological address space map of the network to enable a "best route" selection process. The network is comprised of a backbone connected to a plurality of peering partners. Points on the network monitor traffic flows. A central facility analyzes the traffic flows and routes within the network and performs intelligent routing management. Intelligent routing management ensures that traffic is properly routed through preferred routes on the network, and avoids inefficient routing. Intelligent routing management also selects new routes to be injected into the network in order to further improve the accuracy of the address space map of the network. Intelligent routing management ensures that bandwidth is requested and delivered topologically closely to peering partner networks, and that traffic is carried by the backbone for long haul data distribution in both directions.	Divisional Application Serial No. 11/084,804 filed on March 18, 2005 (claiming benefit of application 09/594,461); IDS filed May 5, 2005; Published as Publication No. 20050201302 on September 15, 2005;
U.S. Patent Application No. 09/847,980 (Fellers-03US)	Title: Method and system for route table minimization Assignee: WilTel (CoreEx) Primary Inventor(s): Mike Brown	Packet-Based Routing: A method and system that includes an IP flow monitor in conjunction with an IP route comparator and an IP route injector to minimize the size of routing tables that need to be stored in a router of an IP network. The IP flow monitor monitors information, such as destination information that identifies and differentiates one IP flow from another. The monitored information is passed to the IP route comparator, which determines if it has stored preferred path information for the IP flow identified by the monitored information. If so, the preferred path information is passed to the IP route injector, which in turn passes it to the router in the edge network. The router updates the routing table in accordance with the new routing information. Other described embodiments include an embodiment having a cache and embodiments in which one or both of the IP route comparator and the IP route injector are local to the network (instead of being local). Still another embodiment includes a local IP route comparator that accesses preferred path information stored on a remote database.	Application Serial No. 09/847,980 filed on May 2, 2001; Published as Publication No. 20020165980 on November 2, 2002; Non-Final Office Action mailed September 22, 2004; Reply to Non-Final Office Action filed January 24, 2005; Final Office Action mailed May 3, 2005; RCE filed November 4, 2005; Notice of Allowance mailed February 8, 2006; Issue paid on May 8, 2006;
U.S. Patent No. 6,965,937 (Fellers-04US-B)	Title: Method and system for sending information on an extranet Assignee: WilTel (CoreEx)	Packet-Based Routing: Providing a single, symmetric path for forward and return traffic between two clients in a network. In this case "symmetric" means that a packet between point A and point B will take the same path on the network as a packet between point B and point A. Tunnels are created between both clients' routers and respective edge routers on the network backbone (the tunnels are created "to but not through" the backbone. The	CIP Application Serial No. 09/849,176 filed on May 4, 2001 (claiming priority to application 09/597,853 [06.20.2000] and provisional 60/202,456 [05.06.2000]); Issued on November 15, 2005 as U.S. Patent No. 6,965,937.

Identification No.	Title/Assignee/ Primary Inventor(s)	Technology Area Summary	Prosecution Actions
	Primary Inventor(s): Mike Gaddis, Mike Brown	tunnels serve a logical interfaces for sending and receiving traffic to and from other clients in the network.	
U.S. Patent Application No. 09/964,232 (Fellers-5US)	Title: Method and Apparatus for Performance Measurement of Different Network Routes between Devices Assignee: WilTel (CoreEx) Primary Inventor(s): Timothy Grib	Packet-Based Routing: Methods and apparatus are disclosed for performance measurement of different network routes between devices. Typically, a network includes multiple paths between a first device and a second device. A first performance test is conducted over a first path between the first and second devices. A second performance test is also conducted over a second path between the first and second devices. These first and the second performance tests are performed simultaneously or within a close time proximity so that comparative data can be derived. These tests may be conducted in response to client requests, which may be scheduled to limit the interference with tests conducted by the same or other client. The types of performance tests performed is extensible, and may include, inter alia, any network, transport layer or other measurements, such as, but not limited to network layer round trip latency, loss, one-way jitter, and hop count.	Application Serial No. 09/964,232 filed on September 26, 2001; Amendment and RCE filed in reply to Final Office Action on December 23, 2005; Non-Final Office Action mailed April 6, 2006;
U.S. Patent No. 7,013,322 (Fellers-10US)	Title: System and method for rewriting a media resource request and/or response between origin server and client Assignee: WilTel (iBeam) Primary Inventor(s): Nils Lahr	Content Distribution: A distributed network capable of dynamically changing media resource request metafiles as well as the responses to those media resource requests by media servers in the network, thereby providing more efficient content delivery in the network. The invention involves intercepting a media resource request metafile or a response to the media resource request by a media server in the network, and intelligently re-writing the response before sending the response to the media server or back to the requesting client, to thus improve content delivery in the network. The claims recite a scope (not limited to broadcasting) that broadly encompasses the interception of a resource request for desired content from a user, modifying (e.g., re-writing) the request and then using the re-written request to identify and deliver desired content to the end user.	Application Serial No. 09/770,645 filed on January 29, 2001 (claims priority to provisional 60/178,750 [01.28.2000]); Issued on March 14, 2006 as U.S. Patent No. 7,013,322.
U.S. Patent No. 5,029,232 (Fellers-15US)	Title: Satellite communications network Assignee: WilTel (VyVX) Primary Inventor(s): David Nall	Television Broadcast: A satellite communications network includes an encoder device with a database manager, a transmitter, a plurality of receivers each having a decoder device with an associated controller. The econder encodes a composite signal including message (audio/visual), addressing and command information and the connected database manager containing programming and data distribution information. The transmitter is connected with the encoder device that transmits the encoded signal to a satellite. The plurality of receivers receive at least a portion of the transmitted encoded signal and the addressing information in accordance	Application Serial No. 07/295,984 filed on January 12, 1989; Issued on July 2, 1991 as U.S. Patent No. 5,029,232.

PATENT
REEL: 028252 FRAME: 0551

Identification Nos.	Title/Assignee/ Primary Inventor(s)	Technology Area Summary	Prosecution Actions
		with the distribution information. A decoder device is connected with each receiver for decoding the received portion of the encoded signal. The decoding device controllers are operable to control one or more peripheral recording devices connected to the decoder for recording video information from the decoded signal in response to the command information. Acordingly, the satellite communications system an automatic system for downlinking and recording programming during low usage times for subscribing television stations.	
U.S. Patent No. 6,415,289 (Fellers-16US)	Title: Network information control method utilizing a common command format and a centralized storage management system Assignee: WilTel Primary Inventor(s): Mike Williams, Keith Holmes	Client-Server Network: Manipulating and controlling information within a large scale network using a common command format and centralized storage management across the network. Client sends a request to a server to manipulate an item of content. The server replies with an index to a server machine, which transmits signals to a database server, an application server and/or storage device to cause the manipulation to occur without polling any of these devices.	Continuation Application Serial No. 09/272,933 filed on March 18, 1999 (claiming priority to application 09/044,739 [03.19.1998]); Issued on July 2, 2002 as U.S. Patent No. 6,415,289.
U.S. Patent Application No. 10/769,465 (Fellers-17US)	Title: Method for the Transmission and Distribution of Digital Television Signals Assignee: WilTel (VyVX) Primary Inventor(s): Scott Beaudoin, Mike Brown, Scott Jones	Content Distribution: HD Television: A system for the end-to-end delivery of digital television signals. A digital television signal is received from production equipment, typically in HD format, then transmitted to a venue point-of-presence and converted for transmission via local loop. The signal is transmitted to a fiber network point of presence/video service edge and subsequently packetized into TCP/IP packets at a video gateway, where the signal routed to one or more destination addresses via the fiber network. Once received at one or more video service edge destinations, the signal is converted to a digital television format (typically SDI) and either (1) transmitted via a second local loop for delivery to a customer site and subsequent conversion to an HD signal or (2) converted directly to a HD signal at the receiving video service edge.	Application Serial No. 10/769,465 filed on January 30, 2004; IDS filed October 25, 2004; Supplemental IDS filed April 15, 2005; Published as Publication No. 20050169314 on August 4, 2005;

Verizon-Level 3 Patent Properties

[[2615693]]

Title	Serial No.	Jurisdiction	STATUS	Issued Patent #
A PASSIVE SYSTEM AND METHOD FOR MEASURING THE SUBJECTIVE QUALITY OF REAL-TIME MEDIA STREAMS IN A PACKET-SWITCHING NETWORK	09/822,043	U.S.	Allowed	
PASSIVE SYSTEM AND METHOD FOR MEASURING AND MONITORING THE QUALITY OF SERVICE IN A COMMUNICATIONS NETWORK	10/639,395	U.S.	Pending	
DISTRIBUTED SECURITY PROCEDURE FOR INTELLIGENT NETWORKS	07/288,779	U.S.	Issued	4,919,545
DATA COMMUNICATION SYSTEM	07/459,178	U.S.	Issued	5,268,931
SYSTEM FOR INTERCONNECTING PACKET-SWITCHED AND CIRCUIT-SWITCHED VOICE COMMUNICATIONS	10/462,396	U.S.	Issued	6,931,001
SYSTEM FOR INTERCONNECTING PACKET-SWITCHED AND CIRCUIT-SWITCHED VOICE COMMUNICATIONS	08/796,156	U.S.	Issued	6,600,733
SYSTEMS AND METHODS FOR INTERNETWORKING DATA NETWORKS HAVING MOBILITY MANAGEMENT FUNCTIONS	08/820,869	U.S.	Issued	6,496,704
SYSTEM FOR TRANSMITING NETWORK-RELATED INFORMATION WHERE REQUESTED NETWORK INFORMATION IS SEPARATELY TRANSMITTED AS DEFINITIONS AND DISPLAY INFORMATION	08/800,907	U.S.	Issued	6,049,831
METHODS AND APPARATUS FOR INTEGRATING SERVICES FOR ACCESSING THE WORLD WIDE WEB	09/460,455	U.S.	Pending	
SPEAKER IDENTIFIER FOR MULTI-PARTY CONFERENCE	09/178,271	U.S.	Issued	6,457,043
MULTI-LINE TELEPHONY VIA A COMPUTER NETWORK	09/177,700	U.S.	Allowed	
MULTI-LINE TELEPHONY VIA NETWORK GATEWAYS	09/177,712	U.S.	Issued	6,707,797

PATENT
REEL: 028252 FRAME: 0553

METHOD AND SYSTEM FOR MONITORING BROADBAND QUALITY OF SERVICES	09/092,605	U.S.	Issued	6,097,699
METHOD AND APPARATUS FOR DIGITAL SUBSCRIBER LOOP QUALIFICATION	09/086,386	U.S.	Issued	6,292,539
METHOD AND SYSTEM FOR TESTING A NETWORK ELEMENT WITHIN A TELECOMMUNICATIONS NETWORK	09/150,106	U.S.	Issued	6,493,425
METHOD AND APPARATUS FOR PROVIDING WEB-BASED ASSISTANCE TO CUSTOMERS AND SERVICE REPRESENTATIVES	09/245,776	U.S.	Issued	6,901,397
METHOD AND SYSTEM FOR MONITORING AND DYNAMICALLY REPORTING A STATUS OF A REMOTE SERVER	09/275,636	U.S.	Issued	6,505,248
METHOD AND SYSTEM FOR BURST CONGESTION CONTROL IN AN INTERNET PROTOCOL NETWORK	09/141,941	U.S.	Issued	6,405,257
METHOD AND SYSTEM FOR BURST CONGESTION CONTROL IN AN INTERNET PROTOCOL NETWORK	09/999,348	U.S.	Issued	6,874,032
METHOD AND SYSTEM FOR BURST CONGESTION CONTROL IN AN ATM NETWORK	09/232,069	U.S.	Issued	6,754,177
METHOD AND APPARATUS FOR ESTIMATING SOURCE-DESTINATION TRAFFIC IN A PACKET-SWITCHED COMMUNICATIONS NETWORK	09/124,196	U.S.	Issued	6,061,331
BROADBAND ARCHITECTURE USING EXISTING TWISTED PAIR	09/330,427	U.S.	Issued	6,445,712
GENERIC APPROACH TO GENERATING PERMUTATIONS FOR ALL-TO-ALL PERSONALIZED EXCHANGE FOR SELF-ROUTING MULTISTAGE INTERCONNECTION NETWORKS	09/251,676	U.S.	Issued	6,456,838
SYSTEMS AND METHODS IMPLEMENTING INTERNET SCREEN DIALING FOR CIRCUIT SWITCHED TELEPHONES	09/694,593	U.S.	Issued	7,002,950

PATENT
REEL: 028252 FRAME: 0554

SYSTEMS AND METHODS FOR TWO-WAY MESSAGING USING A PAGER	09/422,306	U.S.	Issued	6,690,262
METHOD AND APPARATUS FOR ESTIMATING THE CALL GRADE OF SERVICE AND OFFERED TRAFFIC FOR VOICE OVER INTERNET PROTOCOL CALLS AT A PSTN-IP NETWORK GATEWAY (AKA GOS)	09/707,726	U.S.	Issued	7,054,308
SECURE GATEWAY HAVING ROUTING FEATURE	09/471,645	U.S.	Issued	6,510,464
SECURE GATEWAY HAVING USER IDENTIFICATION AND PASSWORD AUTHENTICATION	09/471,901	U.S.	Issued	6,324,648
SYSTEMS AND METHODS FOR SECURING EXTRANET TRANSACTIONS (AKA THE VAULT)	09/426,442	U.S.	Pending	
SYSTEMS AND METHODS FOR TRANSPORTING ASSOCIATED DATA SIGNALS OVER A NETWORK	09/438,914	U.S.	Issued	6,577,595
PORTAL SWITCH FOR ELECTRONIC COMMERCE	09/524,112	U.S.	Issued	6,907,401
PAGE AGGREGATION FOR WEB SITES	10/785,729	U.S.	Published	
PAGE AGGREGATION FOR WEB SITES	09/364,782	U.S.	Issued	6,718,363
OPTIMAL ALL-TO-ALL PERSONALIZED EXCHANGE IN OPTICAL MULTISTAGE NETWORKS	09/400,004	U.S.	Issued	6,567,858
GRAPHICAL USER INTERFACE AND METHOD FOR CUSTOMER CENTRIC NETWORK MANAGEMENT	09/ 539,972	U.S.	Pending	

PATENT
REEL: 028252 FRAME: 0555

METHODS AND SYSTEMS FOR SELECTION OF MULTIMEDIA PRESENTATIONS (AKA SYNCHRONIZED SPATIAL-TEMPORAL BROWSING OF IMAGES FOR SELECTION ON INDEXED TEMPORAL MULTIMEDIA TITLES)	09/560,006	U.S.	Pending	
METHODS AND SYSTEMS FOR THE ESTIMATION OF THE INJECTION POINT OF FOREIGN SIGNALS IN A NETWORK	09/822,085	U.S.	Issued	6,925,399
SYSTEM AND METHOD FOR PERFORMING A SECURE CREDIT TRANSACTION	09/597,492	U.S.	Pending	
HYPERVIDEO INFORMATION RETRIEVAL USINGMULTIMEDIA	09/431,292	U.S.	Issued	6,490,580
HYPER VIDEO: INFORMATION RETRIEVAL USING MULTIMEDIA	10/264,112	U.S.	Issued	7,039,633
HYPERVIDEO: INFORMATION RETRIEVAL USING REALTIME BUFFERS	09/431,293	U.S.	Issued	6,493,707
HYPER VIDEO: INFORMATION RETRIEVAL USING REALTIME BUFFERS	10/264,117	U.S.	Issued	6,965,890
FLEXIBLE WEB-BASED INTERFACE FOR WORKFLOW MANAGEMENT SYSTEMS	09/704,916	U.S.	Issued	7,027,997
METHOD AND APPARATUS FOR CALCULATING THE NUMBER OF VERY HIGH SPEED DIGITAL SUBSCRIBER LINE NODES	09/604,230	U.S.	Issued	6,768,777
METHOD AND APPARATUS FOR REMOTE IDENTIFICATION OF TRANSMISSION CHANNEL INTERFERENCE	09/595,942	U.S.	Issued	6,831,945
??????	09/426,442	U.S.	Pending	
??????	09/560,006	U.S.	Pending	
??????	08/800,907	U.S.	Issued	6,049,831
??????	09/460,455	U.S.	Pending	

PATENT
REEL: 028252 FRAME: 0556

Schedule II

METHOD AND APPARATUS FOR ESTIMATING THE CALL GRADE OF SERVICE AND OFFERED TRAFFIC FOR VOICE OVER INTERNET PROTOCOL CALLS AT A PSTN-IP NET WORK GATEWAY	09/707,726	U.S.	Allowed	
Process to Eliminate Unwanted Email Messages & Unsolicited Phone Calls	09/871,024	U.S.	Issued	6,853,717

Verizon-Level 3-BBN Properties

Title	Serial No.	Jurisdiction	STATUS	Issued Patent #
ROUTING T-37 EMAIL OVER AN H323 (VOIP) NETWORK	09/638,166	USA	Patent	6,735,617
ROUTING T-37 EMAIL OVER AN H323 (VOIP) NETWORK	10/748,859	USA	Pending	
SYSTEMS AND METHODS FOR TRANSMITTING MESSAGES TO PREDEFINED GROUPS (AKA IPT MESSENGERBOT)	09/643,974	USA	Patent	6,442,250
METHODS AND SYSTEMS FOR SUPPLYING ENCRYPTION KEYS	09/585,933	USA	Patent	6,980,659
SYSTEMS AND METHODS FOR REDUCING THE OCCURRENCE OF ANNOYING VOICE CALLS	09/575,102	USA	Patent	6,650,742
VIRTUAL CIRCUIT MANAGEMENT FOR MULTI-POINT DELIVERY IN A NETWORK	08/940,666	USA	Patent	6,185,210
QUALITY OF SERVICE MANAGEMENT FOR AGGREGATED FLOWS IN A NETWORK SYSTEM	08/940,668	USA	Patent	6,147,970
VOICE ACTIVATED WEB BROWSER	09/971,606	USA	Patent	6,311,182
VOICE ACTIVATED WEB BROWSER	09/942,276	USA	Patent	6,618,726
SYSTEMS AND METHODS FOR PROVIDING USER ASSISTANCE IN RETRIEVING DATA FROM A RELATIONAL DATABASE	09/028,821	USA	Patent	6,023,697
METHOD AND APPARATUS FOR BALANCING THE PROCESS LOAD ON NETWORK SERVERS ACCORDING TO NETWORK AND SERVER BASED POLICIES (AKA HOPSCOTCH)	08/965,848	USA	Patent	6,185,619
DISTRIBUTED COMPUTING SYSTEM AND METHOD FOR DISTRIBUTING	09/714,150	USA	Pending	

Schedule II

USER REQUESTS TO REPLICATED NETWORK SERVERS (AKA HOPSCOTCH)				
METHOD AND APPARATUS FOR STRIPPING PACKETS OVER PARALLEL COMMUNICATION LINKS	09/176,420	USA	Patent	6,370,579
METHOD AND APPARATUS FOR STRIPPING PACKETS OVER PARALLEL COMMUNICATION LINKS	10/096,193	USA	Appeal	
METHOD AND APPARATUS FOR MULTIPLEXING BYTES OVER PARALLEL COMMUNICATION LINKS USING DATA SLICES	09/026,269	USA	Patent	6,160,819
SYSTEM AND METHOD FOR SCHEDULING THE TRANSMISSION OF PACKET OBJECTS HAVING QUALITY OF SERVICE REQUIREMENTS	09/170,275	USA	Patent	6,490,629
METHOD OF MULTIPLEX/DEMULTIPLEX PROCESSING OF INFORMATION AND EQUIPMENT FOR PERFORMING THE METHOD	07/094,453	USA	Patent	4,866,711
FRAMEWORK FOR PROVIDING QUALITY OF SERVICE REQUIREMENTS IN A DISTRIBUTED OBJECT-ORIENTED COMPUTER SYSTEM	09/220,511	USA	Patent	6,691,148
METHOD AND SYSTEM FOR PERFORMING FRAME RECOVERY IN A NETWORK (AKA SONET)	09/448,794	USA	Patent	6,804,316
SYSTEM AND METHOD FOR SCHEDULING AND RESCHEDULING THE TRANSMISSION OF CELL OBJECTS OF DIFFERENT TRAFFIC TYPES	09/170,609	USA	Patent	6,526,026
SYSTEM AND METHOD FOR PROCESSING AND COLLECTING DATA FROM A CALL DIRECTED TO A CALL CENTER	09/383,056	USA	Patent	6,700,972

INTERNET SERVICE DELIVERY VIA SERVER PUSHED PERSONALIZED ADVERTIZING DASHBOARD	09/422,540	USA	Patent	6,567,854
MULTISERVICE NETWORK	09/452,915	USA	Pending	
ALLOCATION OF CHANNEL CAPACITY IN MULTISERVICE NETWORKS	10/158,771	USA	Pending	
TECHNIQUES FOR PROVIDING CALLER NAME ANNOUNCEMENT	09/362,081	USA	Patent	6,603,848
METHOD AND SYSTEM FOR CAPTURING TELEPHONE CALLS	09/441,812	USA	Patent	6,493,431
SYSTEMS AND METHODS FOR STANDARDIZING NETWORK DEVICES	09/535,602	USA	Patent	6,760,761
CONNECTIVITY SERVICE-LEVEL GUARANTEE MONITORING AND CLAIM VALIDATION SYSTEMS AND METHODS	09/450,601	USA	Patent	6,745,242
CONNECTIVITY SERVICE-LEVEL GUARANTEE MONITORING AND CLAIM VALIDATION SYSTEMS AND METHODS	10/279,680	USA	Pending	
PACKET LOSS SERVICE-LEVEL GUARANTEE MONITORING AND CLAIM VALIDATION SYSTEMS AND METHODS	09/450,549	USA	Patent	6,795,400
SYSTEM AND METHOD FOR IMPROVING TRAFFIC ANALYSIS AND NETWORK MODELING	09/533,148	USA	Patent	7,035,934
ADVERTIZING-SUBSIDIZED PC-TELEPHONY	09/559,135	USA	Patent	6,493,437
SYSTEMS AND METHODS IMPLEMENTING INTERNET SCREEN DIALING FOR CIRCUIT SWITCHED TELEPHONES	09/620,484	USA	Pending	
METHOD AND APPARATUS FOR AN INTRUDER DETECTION REPORTING AND RESPONSE SYSTEM	09/348,377	USA	Patent	6,910,135

PATENT
REEL: 028252 FRAME: 0560

INTRUSION AND MISUSE DETERRENCE SYSTEM (AKA NETFACADE, IMDS)	09/548,547	USA	Pending	
INTRUSION AND MISUSE DETERRENCE SYSTEM EMPLOYING A VIRTUAL NETWORK (AKA NETFACADE, IMDS)	10/978,765	USA	Pending	
SYSTEMS AND METHODS THAT PROTECT AGAINST DENIAL OF SERVICE ATTACKS	09/532,255	USA	Appeal	
METHOD AND APPARATUS FOR DYNAMIC MAPPING (AKA DYNAT)	09/594,100	USA	Pending	
SYSTEMS AND METHODS FOR VISUALIZING A COMMUNICATION NETWORK (AKA VIZTOOLS)	09/489,517	USA	Patent	6,909,696
SYSTEMS AND METHODS FOR VISUALIZING A COMMUNICATION NETWORK (AKA VIZTOOLS)	11/126,881	USA	Pending	
SYSTEMS AND METHODS FOR ENCRYPTION KEY ARCHIVAL AND AUDITING IN A QUANTUM-CRYPTOGRAPHIC COMMUNICATIONS NETWORK	09/612,133	USA	Patent	6,895,091
METHOD AND APPARATUS FOR SUPPORTING AUTHORITIES IN PUBLIC KEY INFRASTRUCTURE	09/591,761	USA	Patent	6,671,804
METHOD AND APPARATUS FOR THE GENERATIONAND DISTRIBUTION OF RANDOM BITS	09/634,416	USA	Pending	
SYSTEMS AND METHODS FOR SECURING EXTRANET TRANSACTIONS	09/426,052	USA	Patent	6,799,177
	09/426,052	USA	Issued	6,799,177

Schedule II

BBN-Level 3 Properties

Title	Serial No.	Jurisdiction	STATUS	Issued Patent #
SYSTEM AND METHOD FOR GENETIC ALGORITHM SCHEDULING SYSTEMS	08/838,914	U.S.	Issued	5,848,403
EMBEDDED SIGNALING	07/808,913	U.S.	Issued	5,319,735
WIRELESS DATA COMMUNICATIONS SYSTEM	08/909,266	U.S.	Issued	6,104,708
DATA COMMUNICATIONS SYSTEM AND HYBRID TIME-CODE MULTIPLEXING METHOD	09/261,971	U.S.	Issued	6,590,889
DATA PACKET ROUTER	08/928,712	U.S.	Issued	6,160,811
FLOATING POINT PROCESSOR EMPLOYING COUNTER CONTROLLED SHIFTING	07/296,617	U.S.	Issued	4,943,941
MULTI-TENANT UNIT	08/853,862	U.S.	Issued	6,144,638
MEMORY ACCESSING SWITCH NETWORK	07/277,993	U.S.	Issued	5,041,971
METHOD OF COUPLING A DATA TRANSMITTER UNIT TO A SIGNAL LINE AND APPARATUS FOR PERFORMING THE INVENTION	07/453,107	U.S.	Issued	5,155,727
INFORMATION RETRIEVAL SYSTEM	09/127,685	U.S.	Issued	6,405,188
AN IMPROVED INFORMATION RETRIEVAL SYSTEM	10/095,821	U.S.	Allowed	
SYSTEM AND METHOD FOR ANALYZING GENERIC ALGORITHMS	09/434,642	U.S.	Issued	6,633,854
FRAMEWORK FOR PROVIDING QUALITY OF SERVICE REQUIREMENTS IN A DISTRIBUTED OBJECT-ORIENTED COMPUTER SYSTEM	09/220,716	U.S.	Issued	6,480,879
FRAMEWORK FOR PROVIDING QUALITY OF SERVICE REQUIREMENTS IN A DISTRIBUTED OBJECT-ORIENTED COMPUTER SYSTEM	09/220,530	U.S.	Issued	6,629,126
SYSTEM AND METHOD FOR AUTOMATICALLY OPTIMIZING SOFTWARE PERFORMANCE	09/209,152	U.S.	Issued	6,347,366
FACT RECOGNITION SYSTEM	09/300,922	U.S.	Issued	6,609,087
FACT RECOGNITION SYSTEM	10/407,765	U.S.	Pending	
CELL DISCARD SCHEME FOR IP TRAFFIC OVER A	09/220,613	U.S.	Issued	6,567,378

CELL RELAY INFRASTRUCTURE				
SYSTEM AND METHOD FOR FACILITATING COMMUNICATION BETWEEN DISSIMILAR RADIO VOICE DEVICES (aka DRVC)	09/504,974	U.S.	Issued	6,693,899
SYSTEM AND METHOD FOR AUTOMATICALLY OPTIMIZING HETEROGENEOUS MULTIPROCESSOR SOFTWARE PERFORMANCE	09/421,714	U.S.	Issued	6,539,542
SELF-VERIFYING REFERENCES FOR INTERNET DOCUMENTS	09/430,833	U.S.	Pending	
DOMAIN-INDEPENDENT RECONFIGURABLE SCHEDULER	09/502,476	U.S.	Issued	6,769,112
METHOD AND APPARATUS FOR SCORE NORMALIZATION FOR INFORMATION RETRIEVAL APPLICATIONS	09/654,365	U.S.	Issued	6,651,057
METHOD AND APPARATUS FOR SCORE NORMALIZATION FOR INFORMATION RETRIEVAL APPLICATIONS	10/665,056	U.S.	Allowed	
A SYSTEM AND METHOD CONSERVING ENERGY IN WIRELESS DEVICES	09/586,876	U.S.	Issued	6,859,135
SYSTEMS AND METHODS FOR PROVIDING CUSTOMIZABLE GEO-LOCATION TRACKING SERVICES	09/586,457	U.S.	Issued	6,509,830
MESSAGE ROUTING COORDINATION IN COMMUNICATION SYSTEMS	09/503,143	U.S.	Issued	6,775,709
METHOD AND APPARATUS FOR DETECTING UNRELIABLE OR COMPROMISED ROUTER/SWITCHES IN LINK STATE ROUTING	09/533,467	U.S.	Issued	7,035,223
SYSTEMS AND METHODS FOR PREDICTIVE ROUTING	09/630,304	U.S.	Issued	6,850,524
SYSTEMS AND METHODS FOR IMPLEMENTING SECOND-LINK ROUTING IN PACKET SWITCHED NETWORKS	09/726,056	U.S.	Allowed	
ARCHITECTURE AND MECHANISM FOR FORWARDING LAYER INTERFACING FOR NETWORKS	09/748,621	U.S.	Allowed	
EXTENDABLE TOOL FOR USE MARKING	09/544,628	U.S.	Issued	6,442,856

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ANGULAR LINES				
METHOD AND APPARATUS FOR FILTERING ELECTRONIC COMMUNICATIONS RECEIVED OVER A NETWORK (aka SPAMinator)	09/697,095	U.S.	Pending	
SYSTEM FOR DETECTING SPURIOUS NETWORK TRAFFIC	09/633,719	U.S.	Issued	6,944,127
SYSTEM AND METHOD FOR LOGGING COMPUTER EVENT DATA AND PHYSICAL COMPONENTS OF A COMPLEX DISTRIBUTED SYSTEM	09/711,822	U.S.	Issued	6,789,182
SYSTEMS AND METHODS FOR IMPEDING TRAFFIC ANALYSIS NETWORKS	09/626,303	U.S.	Pending	
Data Communications System and Hybrid Time-Code Multiplexing	09/261,971	U.S.	Issued	6,590,889
Extendable Tool for Use Marking Angular Lines	09/544,628	U.S.	Issued	6,442,856
Method and Apparatus for Score Normalization for Information Retrieval Applications	10/665,056	U.S.	Allowed	

<u>SCHEDULE III</u>

<u>Trademarks</u>

Trademark	Type of Mark	Status	Application Serial Number	Trademark Registration Number	Original Owner	Actions Due	Jurisdiction	Service Area
( ) Hollow		Pending	76/330,609		Level 3		United States	
( ) Hollow		Registered	76/975,457		Level 3		United States	
(3)Center		Registered	76/144,331	2737623	Level 3		United States	
(3)Connect		Registered	76/130,740	2595630	Level 3		United States	
(3)Crossroads		Registered	76/130,739	2487459	Level 3		United States	
(3)Enabled		Pending	78/308,121		Level 3		United States	
(3)Flex		Pending	78/295,508		Level 3		United States	
(3)Hub		published	78/314,189		Level 3		United States	
(3)iTest		pending	78496404		Level 3		United States	
(3)Link		Registered	76/173,196	2605342	Level 3		United States	
(3)Packet		Registered	76/401,953	2683432	Level 3		United States	
(3)Plus		Pending	78/308,975		Level 3		United States	
(3)Tone		Pending	78/295,481		Level 3		United States	
(3)Tone		Pending	78/355,098		Level 3		United States	
(3)Voice		Registered	75/853,560	2559680	Level 3		United States	(3)Voice
(3)VOIP		Pending	78/284,533		Level 3		United States	(3)VOIP
(3)VOIP Enhanced		Pending	78/284,586		Level 3		United States	(3)VOIP Enhanced
(3)VOIP Marketplace		Pending	78/284,600		Level 3		United States	(3)VOIP Marketplace

Scheule III

Trademark	Type of Mark	Status	Application Serial Number	Trademark Registration Number	Original Owner	Actions Due	Jurisdiction	Service Area
(3)VOIP Toll Free		Published 3/1/2005	78/284,618		Level 3		United States	(3)VOIP Toll Free
(3)Works		Registered	76/194,280	2655716	Level 3		United States	(3)Works
3D brackets		pending	78494782		Level 3		United States	3D brackets
3D Brackets		pending	78494783		Level 3		United States	3D Brackets
Beyond Bandwidth		Registered	75/686,451	2430425	Level 3		United States	Beyond Bandwidth
Bizconnect		Registered	75/778,014	2466515	Genuity		United States	Bizconnect
Black Rocket		Registered	76/122,806	2648154	Genuity		United States	Black Rocket
Black Rocket		Registered	76/135,219	2623270	Genuity		United States	Black Rocket
Buy.Manage.Simplify.		Registered	76473973	2862101	Level 3		United States	Buy.Manage.Simplify.
Dialinx		Registered	75/264,694	2137432	Genuity		United States	Dialinx
Domain Name Disputes					Level 3		United States	Domain Name Disputes
eRAS		Pending	78/258,402		Level 3		United States	eRAS
Extending Your Business, Not Your Expenses		Published October 6, 2004	78/357,445		Level 3		United States	Extending Your Business, Not Your Expenses
Genuity		Registered	75/081,054	2237047	Genuity		United States	Genuity
Genuity		Registered	75/098,995	2237069	Genuity		United States	Genuity
Genuity Championship		Registered	76/162,814	2589767	Genuity		United States	Genuity Championship
Hopscotch		Registered	75/209,713	2534362	Genuity		United States	Hopscotch
iSpark		Registered	75/693,419	2439312	Level 3		United States	iSpark
Level (3)		Published 2/1/2005	78312696		Level 3		United States	Level (3)
Level (3) Communications		Registered	75/981,405	2541500	Level 3		United States	Level (3) Communications

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Trademark	Type of Mark	Status	Application Serial Number	Trademark Registration Number	Original Owner	Actions Due	Jurisdiction	Service Area
Level 3		Registered	75/401,075	2400493	Level 3		United States	Level 3
Level 3 Communications		Registered	75/395,922	2598222	Level 3		United States	Level 3 Communications
Level 3 Communications		Registered	75/981,322	2534807	Level 3		United States	Level 3 Communications
Level(3)		Pending	78/312,696		Level 3		United States	Level(3)
Level(3)		Published 4/1/2005	78/312,701		Level 3		United States	Level(3)
Level(3)Commerce		Registered	76/401,952	2734239	Level 3		United States	Level(3)Commerce
Level(3)Converge		Pending	78519664		Level 3		United States	Level(3)Converge
Level(3)Enabled		Pending	78/311,389		Level 3		United States	Level(3)Enabled
Level(3)Enabled		Published 4/1/2005	78/308,108		Level 3		United States	Level(3)Enabled
Level(3)Enhanced Services		Pending	78/311,505		Level 3		United States	Level(3)Enhanced Services
Level(3)Enhanced Services		Pending	78/355,180		Level 3		United States	Level(3)Enhanced Services
MediaPlane		Pending	78/519,157		Level 3		United States	MediaPlane
Network Partner You Can Rely On		Registered	76/441,420		Level 3		United States	Network Partner You Can Rely On
ONMAP		Pending	78400362		Level 3		United States	ONMAP
ONTAP		Registered	76/254,466		Level 3		United States	ONTAP
Peace of Mind Is Priceless		Pending	78/282,599		Level 3		United States	Peace of Mind Is Priceless
PLUS HARDWARE		Pending	78401210		Level 3		United States	PLUS HARDWARE
SECURE MESSAGING IS		Pending	78490577		Level 3		United States	SECURE MESSAGING IS

**PATENT
REEL: 028252 FRAME: 0567**

Scheule III

Trademark	Type of Mark	Status	Application Serial Number	Trademark Registration Number	Original Owner	Actions Due	Jurisdiction	Service Area
PEACE OF MIND								PEACE OF MIND
Site Patrol		Registered	76/195,693	2655721	Genuity		United States	Site Patrol
The Network for Today and Tomorrow		Registered	76/254,514	2618945	Level 3		United States	The Network for Today and Tomorrow
The Voice Partner You Can Rely On		Published 1/25/2005	78/321,570		Level 3		United States	The Voice Partner You Can Rely On
Totally Metro		Pending	78/362,982		Level 3		United States	Totally Metro
Trademarks - General					Level 3		United States	Trademarks - General
VoIP		Pending	78/390,031		Level 3		United States	VoIP
VPN Advantage		Registered	75/594,353	2491138	Genuity		United States	VPN Advantage
We Get the Internet Working for You		Registered	75/051,935	2135228	Genuity		United States	We Get the Internet Working for You
Progress Telecom	Common law mark				Progress		United States	
◆ICG Communications	Stylized mark	Registered	75653915	2326233	ICG		United States	