

LEVEL 3 COMMUNICATIONS INC

FORM 8-K

(Current report filing)

Filed 02/24/99 for the Period Ending 02/22/99

Address	1025 ELDORADO BOULEVARD BLDG 2000 BROOMFIELD, CO 80021
Telephone	7208881000
CIK	0000794323
Symbol	LVLT
SIC Code	4813 - Telephone Communications, Except Radiotelephone
Industry	Communications Services
Sector	Services
Fiscal Year	12/31

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FORM 8-K

(Unscheduled Material Events)

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SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report(Date of earliest event reported): February 2, 1999

Level 3 Communications, Inc.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

47-0210602
(I.R.S. Employer
Identification No.)

3555 Farnam Street, Omaha, Nebraska 68131 (Address of principal executive
offices) (Zip code)

402-536-3677
(Registrant's telephone number including area code)

Not applicable
(Former name and former address, if changed since last report)

Item 5. Other Events.

On February 2, 1999, the registrant held a conference entitled "Silicon Economics: The New Math of Communications." Attached to this filing as Exhibit 99.1 are excerpts adapted from the slides presented at that conference. Exhibit 99.1 is hereby incorporated herein by reference as if set forth in full herein.

Item 7. Financial Statements and Exhibits.

(a) Financial statements of businesses acquired

None

(b) Pro forma financial information

None

(c) Exhibits

99.1 Excerpts adapted from the slides presented at the registrant's February 2, 1999 conference entitled "Silicon Economics: The New Math of Communications."

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Level 3 Communications, Inc.

February 23, 1999
Date

By: /s/ Neil J. Eckstein
Neil J. Eckstein, Vice President

Exhibit 99.1

The presentations made at the Level 3 Communications First Annual Investor and Analyst Conference - Silicon Economics: The New Math of Communications, both oral and written, contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, among others, statements concerning: anticipated trends in the market for communications services; the elasticity of demand for communications services; the anticipated reduction in the cost to provide communications over an IP technology based network; the anticipated price-performance of IP technology based products and services; the sources of demand for communications services; estimates of completion dates, future revenues, gross margin percentages, expenses, capital requirements and levels of capital expenditures, expectations as to funding the company's capital requirements; and other statements of expectations, beliefs, future plans and strategies, anticipated developments and other matters that are not historical facts.

The forward-looking statements are based on management's beliefs as well as on a number of assumptions concerning future events. Participants at the conference and readers of these materials are cautioned not to put undue reliance on these forward looking statements, which are not a guarantee of performance and are subject to a number of uncertainties and other factors, many of which are outside the company's control, that could cause actual events or results to differ materially from those expressed or implied by the statements. The most important factors that could prevent the company from achieving its stated goals include, but are not limited to, failure by the company to: achieve and sustain profitability based on the creation and implementation of the Level 3 Network; overcome significant early operating losses; produce sufficient capital to fund the company's business plan; develop financial and management controls, as well as additional controls of operating expenses as well as other costs; attract and retain qualified management and other personnel; install on a timely basis the switches/routers, fiber optic cable and associated electronics required for successful implementation of the company's business plan; and develop and implement effective internal processes and systems for processing customer orders and provisioning. For a discussion of certain of these factors, please see the Company's Current Report on Form 8-K/A filed with the Securities and Exchange Commission on February 17, 1999.

* * *

The materials presented at the Level 3 Communications First Annual Investor and Analyst Conference - Silicon Economics: The New Math of Communications, including materials contained in the following presentation, are copyrighted by Level 3 Communications, Inc.

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Agenda

Introduction Crowe

The Communications Marketplace

- Market Trends Crowe
- Technical Trends Vidal
- Regulatory Analysis Gips
- The NextGen Service Provider Crowe

Internet Protocol Voice Crowe/Elliott

The Level 3 Approach

- Services and Sales Channels O'Hara
- The Level 3 Network Caruso
- International Strategy Williams
- Business Support Systems Jones
- Our People O'Hara
- Financial Analysis Bradbury

Summary Crowe

Market Trends

Jim Crowe
President
and
Chief Executive Officer

After Decades of Regulated Pricing, Silicon Economics is Coming to Communications

Silicon Economics

[Graphic: Intersecting supply and demand curve].

Rapid Decrease in Price and Increase in Demand For Price Elastic Products and Services

Price Elasticity of Demand

If price drops 1%, what happens to demand?

Demand Increase	Price Elasticity
Less than 1%	Inelastic
1%	Unitary
More than 1%	Elastic

The Virtuous Cycle of Silicon Economics

[Graphic: circle graphic showing decreasing unit price on left and increasing unit demand on right].

- * Unit costs and prices drop

- * Unit demand increases more rapidly than unit price

IP Technology Enables Rapid Cost and Price Reductions

- * Traditional telephone technology is centrally planned and improves slowly
- * IP technology is market based and improves rapidly

IP Standards Development is Market Based and Rapid

Market Based
IP Technology

Led by hardware, software and service providers

Product success determines standards

Unpredictable and rapid

Centrally Planned Telephone Technology

Led by national and international standards bodies

Standards determine product development

Predictable and slow

Today, IP Technology is More Cost Effective Than Traditional Telephone Technology

[Graphic: bar graph showing that Cost per CD Rom of information from New York to Los Angeles, based upon assumptions stated below, is \$1.98 for ISP and \$27.08 for PSTN. Graph also shows that transmission costs are constant between examples].

Assumptions	
Switched access	\$.005/min
Long distance	\$.01/min
45Mb Internet port	\$19,000/mo
DS-3 dedicated line	\$1,000/mo
Packet overhead	10%

Over Time, IP Price-Performance Will Improve Rapidly

- * IP is now a worldwide set of standards supported by hardware, software and service providers
- * Because they are market based, thousands of entrepreneurs are working to improve IP standards
 - Security
 - Quality of Service
 - Latency (delay through network)
- * Because it is market based, IP technology is improving much faster than closed, proprietary telephone technology

IP Technology Costs And Prices Are Based On Silicon Economics

[Graphic showing slopes of price performance of Frame relay, ATM switching, Routers and Circuit switching (Performance/cost (bps per \$)) over time. Source is "Why Circuit Switching is Doomed" by Peter J. Sevcik, Business Communications Review, Sept. 1997.]

Platform	Time to Double Performance/Cost
Frame	10
Router	20
ATM	40
Circuit	80
Transmission	10

Future Sources of Communication Service Demand

[Graphic illustrating increased demand over time]

* Electronic commerce

* Software distribution

* Music distribution

* Video on demand

* Video conferencing

* Telepresence

Communications Approaching The Quality Of Physical Presence (Telepresence) Is Illustrative of Future Bandwidth Demand

[Graphic: Human head with semi-circle shown 1 foot away from face].

Assumptions

1 half sphere/ per eye

24 bit color

30 frames per sec.

2400 dots per inch

10.4 billion pixels

One telepresence session requires 15 terabits/second (uncompressed)

Market Based Standards And Rapid Price-Performance Improvement Will Disrupt The Communications Industry

- * Similar to mainframe replacement by client server computing
- * Centralized circuit switched networks replaced by distributed softswitched networks
- * Vertical integration replaced by horizontal integration

Silicon Economics Disrupted The Communications Industry

Mainframe Market
(Vertical Integration)

Applications
Operating Systems
Memory Processor Storage Physical Hardware

Microprocessor Market
(Horizontal Integration)

Applications Applications Applications Operating System(s)
Memory Microprocessor Storage Physical Hardware Physical Hardware Physical Hardware

Silicon Economics Will Disrupt The Computer Industry

Traditional Communications
(Vertical Integration)

Applications
Switching/Routing
Transmission
Marketing & Sales [covering all three of the above]

NextGen Communications
(Horizontal Integration)

Applications Applications Marketing & Sales Switching/Routing Marketing & Sales
Transmission Marketing and Sales

The Voice/Multimedia Revenue Gap

(\$ millions)
Today's IP Market

Data Services	37,092
Internet Access	15,471
IP Telephony	1,890
IP VPN	419
Total	54,872

Today's Voice Market

Switched Telephony	462,763
Fax	64,775
Total	527,538

Today's IP Market / Today's Voice Market = 9.4%

Source: International Data Corp. 1998

Summary

- * IP technology is based on market based standards
- * Market based standards and industry disruption mean rapidly dropped unit cost and pricing
- * Communications demand is price elastic
- * Voice will dominate revenues in the near term
- * IP based multimedia will dominate longer term

Technical Trends

Ron Vidal
Senior Vice President
New Ventures

Some Key Attributes of Carrier Class Networks

[Graphic: Globe showing a telecommunications network]

- * Information routing and addressing
- * Quality of service capability
- * Information aggregation (Multiplexing)
- * Low transport error rate
- * Fault tolerance
- * High capacity

Level 3's Network Uses 4 Layers

Network Layer -----	Primary Attribute -----
IP	Addressing
ATM	QOS
SONET	Multiplexing Low Error Rate Fault Tolerance
WDM	High Capacity
Fiber	Physical Medium

4 Layer Networks Have Overlapping Functionality

[Graphic: showing that Addressing is present in IP and ATM; QOS is present in ATM; Multiplexing is present in IP, ATM, SONET and WDM; Low Error Rate is present in IP, ATM, SONET; Fault Tolerance is present in SONET; High Capacity is present in SONET and WDM].

Network Layers Have Different Price-Performance Characteristics

[Graphic: Showing Improvement Rate per Year % and Time to Double Performance per Dollar (mo), respectively, for the following: IP at 52 and 20; ATM at 23 and 40; WDM at 32 and 30 and SONET at 130 and 10].

Source: Level 3 Estimates

"Why Circuit Switching is Doomed" Peter J. Sevcik, Business Communications Review, Sept. 1997

Over Time, Functionality Will Migrate To Elements With More Rapid Price-Performance Improvement

[Graphic: Picture at left showing from top to bottom IP, ATM, SONET, WDM and Fiber with arrow to picture at right showing from top to bottom IP, Thin Sonet, WDM and Fiber].

Optical Fiber Is Now A Rapidly Changing Capital Cost Element

[Graphic: Showing IP, ATM, SONET and WDM as variable and Fiber and Conduit as fixed for a Legacy Network and IP, ATM, SONET, WDM and Fiber as variable and Conduit as fixed for a NextGen Network].

Historically, Transport Costs Have Rapidly Decreased

[Graphic: Showing Cost per Gb-mi per sec in dollars decreasing from 1990 to 2000 as SMF, NZDSF and LEAF were introduced].

Source: Level 3 Engineering

Multiple Conduits Are Required To Leverage Technical Improvements

[Graphic: Showing 10 conduits with optical fiber in only one conduit]

- * Pull new fiber when unit cost is lower
- * Move traffic when O&M cost in oldest fiber exceeds Capex + O&M in newest fiber
- * Current estimates require 4 to 5 conduits

Flexible Amplifier/Regenerator Spacings Are Required to Leverage Technical Improvements

[Graphic: Showing amplifier/regenerator spacings along network connecting Austin, Dallas and Houston].

- * Optical signals require periodic amplification and regeneration
- * Initial amplifier and regenerator costs for a 16,000 mile network are approximately \$200 million and will be recurring
- * New fiber generations substantially increase amplifier and regenerator spacing

In Addition, Other Operational Elements Must Be Upgradeable To Leverage Technical Improvements

- * Right of way acquisition plans

- * Real estate acquisition plans

- * Business support systems

- * Equipment purchasing and logistics

Summary

- * Rates of technical improvement are rapid and accelerating
- * Market based standards mean improvements may be unpredictable
- * In NextGen networks, all variable cost elements including fiber must be rapidly upgradeable
- * Level 3's network is designed to accommodate these principles

Regulatory Analysis

Don Gips
Senior Vice President
Corporate Development

Key Issues For A NextGen Service Provider

[Graphic: Artist's rendition of government building].

- * Regulatory treatment of converged industry

- * The local loop bottleneck

- * The universal service dilemma

Convergence Requires A New Regulatory Approach

[Graphic: Artist's depiction of Video, Telephony and Internet converging in NextGen Networks].

- * Digital technology has eliminated differences between telephone and enhanced (computer based) service
 - DSL and telephone services sharing local loop
- * Regulation based on geography is failing
- * The Internet is speeding convergence
- * Today's regulatory regime does not work for converged industry

The Local Loop Bottleneck

[Graphic: Three columns - first showing Long Distance Switching & Trunking, with the attributes of Equal Access, which was competitive in 1980's; the second showing Local Switching & Trunking, with the attributes of Interconnection, Colocation, Local Number Portability, which is competitive in 1990's and the third showing Local Loop, with the attributes of Separate from ILEC networks, Non discriminatory access for all competitions, Widely available alternatives and a question as to its competitiveness].

The Local Loop Bottleneck Implications

[Graphics: Artist's rendition of Level 3 connection to customer location and Artist's rendition of Level 3 connection to a Central Office with access to customer through Central Office].

- * LEC incentives to unbundle will be further reduced after LD entry

- * Combination of technical innovation and political pressure for residential broadband access will force reform over time

- * Level 3 approach is to leverage efforts of others -- Sell directly to large customers over broadband facilities -- Wholesale services to others to address medium/small businesses and residential customers -- When scalable solution emerges, move quickly to implement

The Universal Service Dilemma Subsidy Flow

[Graphic: Showing four quadrants labeled Long Distance and Local on left and Suburban Rural and Inner City on top with three arrows pointing to Local, Suburban Rural quadrant].

- * Developed in early 1900's to subsidize universal service

- * U.S. social and economic patterns have reversed

The Access Charge Dilemma

[Graphic: Artist's rendition of government building crumbling]

* Access charges arbitrage is collapsing the old framework n IP technology will accelerate trend

* Actual ratio of universal service subsidy versus LEC handout is unknown --

* Estimates range from 20% to 70%

Universal Service Subsidies Key Principles

- * Must be technology and revenue unit neutral (i.e., no per minute charge)
- * Must be competitively neutral
- * Must be targeted at universal service as defined by policy makers
- * Must be visible subsidy for targeted users
- * Where practical, universal service provider should be competitively determined

Our Vision for Regulatory Treatment Of A Converged Industry

Key Principles

- * Eliminate distinctions between services
- * Key distinction is service provider versus customer - Service provider has access to network control systems and databases
- * Service providers contribute to reformed universal service fund - On competitively neutral basis - Used for subsidies to targeted customers

Our Vision for Regulatory Treatment Of A Converged Industry

Key Principles

(cont.)

- * Service providers subject to mandated interconnection - With technical quality equal to their own internal network - If service is competitive, rates are market based - If services are monopoly, rates are cost based
- * Self-regulating entities need to be developed similar to NASD or FASB

The NextGen Service Provider

Jim Crowe
President
and
Chief Executive Officer

The NextGen Service Provider Must Leverage

[Graphic: Showing intersection of price and demand curves]

- * Shortened useful lives of assets
- * Higher absolute capital requirements
- * Rapidly decreasing unit costs and prices
- * Rapidly increasing unit demand
- * Higher cash flows and profits

NextGen Service Providers Must Develop New Tools To Manage The New Financial Model

[Graphic: Bar graph showing Capacity Utilization percentage of a Telephone Network as less than 20%. Source North River Ventures].

* High capacity utilization at low cost is key

* Requires development of new financial models

Using Historical Data to Predict Demand Underestimates Demand Created by New Applications

[Graphic: Showing Gb/s over time increasing, with actual demand greater than annual projection].

Source: Industry Data

Microprocessors Illustrate Demand Driven By Technology and New Applications

[Graphic: Graph showing cost and price per MIPS decreasing over time and a corresponding increase in the demand for MIPS over the period].

- * Technology and manufacturing scale is rapidly lowering unit cost and price

- * New applications are rapidly increasing demand

Selected Price Elasticities

[Graphic: Showing that Arc Elasticity of Demand is greatest for Backbone routers, followed by microprocessors, electricity, computer hard drives and US Long Distance].

Source: Steve Lanning, Bell Laboratories, Lucent Technologies

Silicon Economics Model

[Graphic: Showing price elasticity on vertical axis, and price-performance improvement on horizontal axis with bandwidth in the upper right quadrant of highest price elasticity and price performance improvement].

NextGen Service Provider Financial Model

- * Rapidly rising revenue
 - Price elasticity
 - New applications
- * Lower operating expenses
 - Scalable systems
 - Web enabled sales
- * Capital expenditures
 - Higher absolute CapEx
 - Lower per unit CapEx
- * Higher cashflows and profits

The NextGen Service Provider
Simplified DCF Model

Input	Assumptions
-----	-----
Initial Operating Expense as % of Revenue	70%
Annual OE Productivity Improvement	10%
Initial Capital Expense per \$1 of Revenue	\$1.50
Annual CapEx Price-Performance Improvement	60%
Price Elasticity	2.0
Discount Rate	14%

Note: Price reduction per year set to optimize NPV

Simplified DCF Model Selected Annual Performance Metrics

[Graphic: charting revenue, cash flow, operating expense and capital expense.]

Summary

- * To benefit from silicon economics, a service provider must rapidly decrease unit cost and unit price and increase unit demand
- * Financial implications include shortened asset lives and higher capital requirements
- * Benefits include rapid market share increase and higher cashflow and profit

Internet Protocol Voice

Jim Crowe
President
and
Chief Executive Officer

Internet Protocol Voice

[Graphic: Artist's rendition of telephone]

- * Voice quality indistinguishable from the telephone network
- * Call setup times indistinguishable from the telephone network
- * No additional customer equipment required
- * No change in user behavior patterns required
- * Leverages silicon economics

Key Concepts Major Communication Networks

[Graphic: Artist's rendition of telephone network]

Key Concepts Digital Circuit Switch

[Graphic: Artist's rendition of digital circuit switch]

- * Integrated functionality
- * Proprietary code
- * Proprietary service development

Key Concepts SS7 Enabled Softswitch

[Graphic: Artist's rendition of SS7 Enabled Softswitch]

- * Distributed functionality
- * Open platforms
- * Open interfaces enable new services
- * Overflow to PSTN when quality is unacceptable

Capital Cost Comparison
Cost Per Ports For 32,256 Ports
(U.S. Dollars)

Softswitch

Call Control Server	27.72
Route Server	2.78
SS-7 Gateway	.10
DSO Cross Connect	23.25
Total	53.91

Circuit Switch

Single Integrated Purchase

Total 95.00

Source: Level 3 Estimates

Capital Cost Comparison

Time to Double

Performance Per Dollar (mo)

Circuit Switch 80

Softswitch 20

- * Currently a distributed softswitch costs 40% to 45% less than an equivalent circuit switch
- * Given relative price-performance improvement rates, softswitches will be much less expensive over time
- * Distributed components with open interfaces will spur development of new applications

Internet Protocol Voice Demonstration

Ike Elliott Senior Director, Voice and Access Network Engineering

Voice Quality Factors Public Telephone Quality

Latency (delay two-way). Less than 250 msec Call setup delay 1 to 3 seconds Signal loss. Less than 0.5 dB Packet loss. 1 in 10,000 Speech Quality Less than 2.0 ITU PSQM Score

Actual Quality Measurements		
	Softswitch(1)	Circuit Switched
	-----	-----
Latency (delay two-way)	200 ms	120 ms
Call setup delay	3 seconds	2 seconds
Signal loss	~ 0 dB	~ 0 dB
Packet loss	1 in 1,000,000	N/A
Speech Quality	1.1 PSQM	1.1 PSQM

(1) Based on Level 3 internal tests

Demonstration Diagram

[Graphic: Artist's rendition of IP Voice demonstration conducted. The rendition compares the path of a call between Denver, CO and New York, NY over the circuit switched network with the path of a call between Denver, CO and New York, NY over a softswitched network].

Services & Sales Channels

Kevin O'Hara
Executive Vice President
and
Chief Operating Officer

Level 3 Provides A Comprehensive Range of Services

- * Private Line
- * Colocation Services
- * Internet Access
- * Managed Modem
- * Voice Service Commercial Testing 1Q1999
- * Special Services

To All Customer Segments

[Graphic: Artist's illustration of Level 3's sales channels]

- * Direct sales to larger businesses
- * Indirect sales to general businesses and residential customers

Private Line

[Graphic: Bar graph showing CAGR of 6.4% for Global Market Size for the years 1998 through 2001. Source: International Data Corp. 1998].

* Dedicated, non switched circuit

* Carries voice, data or video

* U.S. CAGR 13.6%

Private Line

[Graphic: Artist's rendition of Level 3 local network]

Target Customers

- * Carriers
- * Resellers
- * Internet Service Providers
- * Large Businesses

Private Line Level 3 Competitive Advantages

[Graphic: Artist's rendition of Level 3 local network]

- * Managed local, national and international service over Level 3's network

- * Upgradeable network assures long term price superiority

- * State of the art reliability and quality

- * Web enabled support

Colocation Services

[Graphic: Bar graph showing CAGR of 100% for Global Market Size for the years 1998 through 2001. Source: International Data Corp. 1999]

- * Secure, monitored technical space with broadband connectivity to Level 3 network

- * Today's market is supply limited

- * Strategic fit with network services

Colocation Services

[Graphic: Photograph of Level 3 colocation equipment]

Target Customers

- * Portals
- * Content Providers
- * Web Hosting Services
- * Internet Service Providers
- * Carriers
- * Resellers

Colocation Services Competitive Advantages

[Graphic: Photograph of Level 3 colocation equipment]

- * Over 1.25 million square feet of gateway space

- * Current presence in 15 U.S. cities and London

- * High quality, secure space monitored 24 X 7

- * Broadband connectivity

Internet Access

[Graphic: Bar graph showing CAGR of 20% for Global Market Size for the years 1998 through 2001. Source: International Data Corp. 1998]

* Dedicated and dialup access to Internet

* Dialup access from 2000+ POPs worldwide

Internet Access

[Graphic: Artist's rendition of computer workstation]

Target Customers

- * Large businesses
- * Resellers of Level 3 services
- * Content providers

Internet Access Level 3 Competitive Advantages

[Graphic: Artist's rendition of computer workstation]

- * Provided over Level 3 facilities
- * High capacity, dual OC-3 network
- * Multiple, high speed interconnections with major ISPs
- * Guaranteed service availability
- * 40msec average one way delay between U.S. nodes

Managed Modem Service

[Graphic: Bar graph showing CAGR of 23.7% for Global Market Size for the years 1998 through 2001. Source: International Data Corp. 1998].

- * Allows ISPs to outsource capital intensive modem infrastructure

- * Unique Level 3 service based on softswitch technology

Managed Modem

[Graphic: Photograph of Level 3 managed modem equipment]

Target Customers

* Internet Service Providers

Managed Modem Level 3 Competitive Advantages

[Graphic: Photograph of Level 3 managed modem equipment]

- * Unique Level 3 softswitch based service
- * High quality and availability services
- * Substantial savings versus alternatives
- * Softswitch architecture means rapid, long term price reductions

Voice And Fax Services

[Graphic: Bar graph showing CAGR of 6% for Global Market Size for the years 1998 through 2001. Source: International Data Corp. 1998].

- * Local, long distance and international voice services

- * PSTN quality service

- * Unique Level 3 service based on softswitch technology

Voice And Fax Services

[Graphic: Artist's rendition of telephone]

Target Customers

- * Large Businesses

- * Agents

- * Resellers

- * ISPs

Voice And Fax Services Level 3 Competitive Advantages

[Graphic: Artist's rendition of telephone]

- * Unique Level 3 service based on softswitch technology
- * PSTN quality service
- * Substantial initial cost savings
- * Softswitch technology means rapid, long term price reduction

Special Services

Services

Empty Conduits
Dark Fiber
Wavelengths
Very High Speed SONET

Target Customers

Carriers

ISPs

Web Hosting Services
Very Large Businesses

Special Services Level 3 Competitive Advantages

- * Low cost provider of conduit

- * Level 3's strategy ensures continued low cost over time

- Continuously upgradeable network
- Leverages rapid technology price-performance improvements
- Success based capital expenditures keep financial costs low

Service Availability

Service	Availability
-----	-----
Private Line.	Available
Colocation Services	Available
Internet Access	Available
Managed Modem	Available
LD Voice Services	Commercial Testing 1Q1999
Local Voice Services.	Commercial Testing 1Q2000
Special Services.	Available

Level 3 Products and Services Summary

- * Comprehensive service offerings

- International scope

- * Unique services target large markets

- Softswitch based technology

- Leverages silicon economics

- * Sales channels address full range of customers

- Direct sales to larger businesses

- Indirect sales to medium/small businesses and residential users

The Level 3 Network

Dan Caruso
Senior Vice President
Operations

The Level 3 U.S. Network

[Graphic: Artist's map showing Level 3 intercity network when fully constructed].

- * Gateway sites

- * Local fiber networks

- * Intercity network

- * IP backbone

The Level 3 U.S. Network Typical Gateway

[Graphic: Artist's rendition of layout of typical Level 3 Gateway facility].

- * 20,000 sq. ft. to 80,000 sq. ft.

- * Dual, fault tolerant Level 3 network connections

- * Interconnected with minimum 2 other local networks

- * Minimum 8 hours backup power

- * Uninterruptable power supply

Representative Gateway Sites

[Graphic: Four photographs showing equipment in Level 3 Gateways facilities in Los Angeles, Washington, D.C., Chicago and New York]

* 825,000 sq. ft. completed

* Approximately 1,250,000 sq. ft. under lease

Planned Gateways

[Graphic: Artist's map of United States with locations of cities where Level 3 has installed or plans to install networks through the fourth quarter of 2001].

Typical City Network

[Graphic: Artist's rendition of typical, simple Level 3 local network]

- * Upgradeable multiple conduit system
- * Fault tolerant SONET rings
- * IP optimized
- * Leased facilities enable sales upon gateway completion

Planned City Networks

[Graphic: Artist's map of United States with locations of cities where Level 3 plans to install local city networks through the fourth quarter of 2001].

U.S. Intercity Network

[Graphic: Artist's rendition of cross-section showing installation of 10 conduits, one of which contains fiber optic cable].

- * 16,000 route miles

- * Upgradeable 10 to 12 conduit system

- * Connects more than 150 cities

- * Leased facilities enable sales upon gateway completion

U.S. Intercity Network 93% ROW Acquired

[Graphic: Artist's map of United States with Level 3 intercity network. Several portions show sections where Right of Way negotiations are pending].

U.S. Intercity Network Construction Status

[Graphic: Artist's map of United States with anticipated completion dates for Level 3 intercity network through the first quarter of 2001].

Level 3 IP Backbone

[Graphic: Artist's map of United States with logical depiction of Level 3 IP Backbone]

* In service IP backbone connects 15 cities on leased network

* Additional cities added as Level 3 network is completed

Summary

- * Substantial implementation progress made
- * On track to achieve major milestones
- * Continued focus on execution

International Strategy

Colin Williams

Chief Executive Officer
Level 3 International

International Strategy

[Graphic: Artist's rendition of flags of United Kingdom, Germany, Italy, France, Japan and Australia]

- * Leverage silicon economics
- * Avoid alliances which negatively affect speed to market
- * Build upgradeable network
- * Provide advanced end to end service between global financial centers
- * Address needs of communications intensive multinational corporation

Western Europe
(U.S. \$ billions)

[Graphic: Artist's map of Europe]

Market Size	

Germany	49.8
United Kingdom	28.6
France	27.3
Italy	23.0
Other Europe	63.5
Total	192.2

Source: ITU, 1997 Yearbook of Statistics; Telecommunications Services, Total Telecom Services Revenues

Western Europe Market Status

[Graphic: Artist's rendition of flags of United Kingdom, Germany, France and Italy]

- * National carriers provide local, long distance and international
- * Response to competition is predatory pricing of local monopoly services
- * European Union / euro expanding cross border opportunities
- * Regulatory barriers disappearing
- * Broadband transport pricing very high

EU Private Line Pricing

[Graphic: Artist's rendition of flag of each nation next to information below for that country].

Price ratio per Kbps

U.S.	1.0
Netherlands	11.5
Belgium	13.5
United Kingdom	14.7
France	16.0
Germany	18.0
Italy	36.0

Source: Tariffica " Leased Line Market in Europe" 1998 (Incumbent Pricing)

Asia
(\$ billions)

[Graphic: Artist's map of the Pacific Rim]

		Market Size

Japan	93.6	
China	16.9	
Korea	14.9	
Australia	13.4	
Hong Kong	6.4	
Taiwan	5.9	
Singapore	2.8	
Other	12.9	
Total	166.8	

Source: ITU, Asia Pacific Telecommunications Indicators, 1997

Asia Market Status

[Graphic: Artist's rendition of flags of Japan, Australia and Singapore].

- * Reform occurring more quickly than anticipated
 - Inter-region competition
 - Impact of Internet
- * Reform still lags U.S. and EU
- * Market success may require partnerships or JV's
- * Current economic weakness represents historic opportunity

The Level 3 International Approach

[Graphic: Artist's world globe showing a telecommunications network]

- * Initiate private line, IP and voice services over submarine and leased facilities
- * Build IP and telephony colocation facilities in major cities
- * Build metro and Pan European fiber networks
- * Develop common EU/U.S./Asia product set, processes and business support systems

International Network Development

- * Trans-oceanic capacity agreements

- * National and international infrastructure licenses and public voice telephony licenses - Granted in UK, Netherlands, Sweden, France, Germany, Switzerland and Belgium

- * City Gateways ready for service - London 75,000 square feet gateway facilities - Mid year for Frankfurt, Amsterdam and Paris

- * Deployment underway on Pan European network

1999 European Networks In Service

[Graphic: Artist's map of northern Europe highlighting location of London, Amsterdam, Brussels, Frankfurt and Paris].

London Gateway Facility

[Graphic: Photograph of London Gateway technical space]

* London gateway facility in service

* Private line, Internet access and colocation services now offered

Pan European Network

[Graphic: Artist's rendition of proposed Level 3 Pan European network, noting that the projected completion date for one ring is the third quarter of 2000 and that the other two rings are in the planning stages].

Summary

* Regulatory reform and technical innovation have created an historical opportunity

* Level 3 business plan - Leverages silicon economics - Emphasizes cross border, advanced applications - Builds common EU/U.S./Asia business platform

* Level 3 is rapidly implementing this plan

Business Support Systems

Mike Jones

Senior Vice President
and
Chief Information Officer

Business Support Systems Our Objectives

- * Maximize Level 3 value by applying information technology
- * Build a continuously upgradeable IT infrastructure
- * Enable superior Level 3 services
- * Maximize customer self service using web enabled processes

Key Concepts

- * Use web browser to perform business transactions, access decision support information and knowledge assets
- * Maximize use of commercial off the shelf (COTS) software
- * Leverage enterprise resource planning (ERP) suites
- * Leverage advances in enterprise application integration (EAI) software
- * Emphasize data warehousing with high scalability and integrity

Simplified Architecture

[Graphic: Showing architecture of Level 3 business support systems]

Enterprise Application Integration Software

[Graphic: Showing architecture of enterprise applications]

- * Vendor provides connectors for COTS applications
- * Integration layer communicates with applications and databases
- * Applications share common databases
- * Enables cost effective application upgrades and substitutions

Current Vendors/Applications

Browsers

Microsoft Internet Explorer

Netscape Navigator

Online and Warehouse Data

Erwin

Brio

Ab Initio

Oracle

ERP

Oracle

Clarify

EAI

Vitria

Active

COTS

Kenan

Hewlett Packard

Small World

ACE*COMM

Bellcore

Current Status Corporate Systems

[Graphic: Artist's renditions of calculator and computer workstation]

* ERP systems operational

- Finance and accounting
- Asset management
- Human resources
- Payroll

* Common Communications System operational

- Microsoft Office
- Intranet
- Web based internal applications

Current Status Customer Facing Applications

[Graphic: Artist's rendition of computer workstation]

- * Customer care to support current services

- * Billing to support current services

- * Network monitoring by customers (beta testing)

- * Web enhanced purchasing by customers

Current Status Network Facing Applications

[Graphic: Artist's rendition of world globe and communications network]

- * Network provisioning

- * Network inventory

- * Network monitoring

- * IP backbone services

- RADIUS server

- DNS server

- Routing registry

- * Integration of operations applications

Status Summary

[Graphic: Artist's rendition of release list showing checkmarks]

- * Management and production team in place

- * 170 Level 3 and 400 contract personnel in place

- * Production platform in place

- Data center

- 2000 user network

- * Predictable, reliable development processes in place

- Release schedule supports Level 3 plan

- First 3 releases delivered

- 4th release on schedule

Future Plans

[Graphic: Artist's rendition of Gnatt chart for the years 1998 through 2000].

- * Improve "hands free" workflow process
- * Expand web enabled commerce platforms to voice services 2Q 1999
- * Web based access to business support systems by agents, resellers and wholesale customers
- * Improve data warehousing process
- * Enhance knowledge management architecture

Our People

Kevin O'Hara

Executive Vice President
and
Chief Operating Officer

Level 3's first priority is to attract and keep the best people in the communications industry

The NextGen Service Provider Versus The Traditional Carrier

NextGen Service Providers

Entrepreneurial
Flexible, team oriented
Very rapid business cycle
Scalable thru information technology Emphasizes use of partners and market based solutions

Traditional Carriers

Utility mentality
Highly structured workplace
Slow business cycle
Scalable thru rigid processes
Centrally planned, with custom systems

Level 3's People

[Graphic: Photograph of three person work group]

- * Entrepreneurial
- * Results oriented
- * Prefer success based compensation to entitlements
- * High degree of technical expertise
- * Take responsibility for continuous learning

Think Like Owners

Level 3's Approach

[Graphic: Map of Denver metropolitan area]

- * Locate in the right place

- * Provide the right work environment

- * Compensate in the right way

Compensation Plan

Salary:	90% - 95% of competition
Bonus:	Up to 110% of competition for targeted performance
Benefits:	Competitive and "market smart"
Long Term:	Ownership oriented

- Shareworks
- Outperform Stock Options

Long Term Incentives

Shareworks Stock Grant	All employees Up to 3% annual compensation
Shareworks Match	All employees Up to 7% annual compensation
Outperform Stock Options	Granted to upper 60% of team Innovative value formula

Outperform Stock Option

[Graphic: Chart showing maximum multiplier of 8 times at 11% outperformance]

- * Grants equal in initial value to competitors' grants of standard options
- * Four year life
- * Granted on rolling quarterly basis
- * Value at exercise equal to market price minus strike price, times multiplier

Few Companies Consistently Outperform The S&P 500

[Graphic: Bell curve showing percentage of number of companies that outperform the S&P 500]

Outperform Stock Options

[Graphic: Artist's rendition of stock certificate]

- * Aligns management team and stockholder interest

- * Properly balances management team and stockholder rewards - Stockholders receive S&P 500 return before management participates - At maximum outperformance, stockholders receive 75% of extra value creation

- * Attracts and retains success oriented entrepreneurs

The Level 3 Plan Is Working

- * Hired executive team with proven record
- * Hired 1,350 experienced people
- * Receiving average of 500 resumes per week
- * Current data base of 14,000 applicants

Financial Analysis

Doug Bradbury
Executive Vice President
and
Chief Financial Officer

Overview

- * Strategic financial approach
- * Business plan implementation
- * Financial drivers
- * Summary

Strategic Financial Approach

- * Level 3's strategy is to minimize financial risk
 - Conservative use of debt
 - Prefunding of business plan

- * Preserving access to capital is key goal

Capital Acquisition Plan Guidelines

- * Diversify funding sources
- * Maintain timing flexibility
- * Equity is appropriate for up front expenditures
- * Debt is appropriate for success based spending
- * Substantially prefund logical business phases
- * Continue to improve credit quality

Business Plan Is Logically Phased

- * Business Plan requires \$8 to \$10 billion
- * Plan divided into 5 phases
- * Phases designed to service debt without additional capital

Prefunding Each Phase Minimizes Risk

[Graphic: Artist's rendition of intercity networks in United States and Europe joined by trans-oceanic links]

- * Prefunding minimizes both financial and operating risk
- * Available liquidity substantially prefunds Phase 1 and 2
- * Phase 1 and 2 result in substantial U.S. and European presence

Success Based Capital Spending Enhances Value

- * Capital spending directly associated with incremental cash flow

- * Electronics installed after customer order

- * Success in executing strategy

- Increases ROI

- Decreases risk

- * Efficient network utilization

- * Benefit from silicon economics

Phases 1 and 2 Substantially Prefunded in Accordance with Capital Acquisition plan

[Graphic: Two pie charts - one for capital expenditures showing that 54% are Up Front and 46% are Success Based, and one for capital structure showing Equity at 55% and Debt at 45% (a note indicates that pro forma equity incorporates sale of Cable Michigan and market value of RCN and Commonwealth Telephone)].

Key Financial Drivers Revenue

Key Drivers

- * Number of markets
- * Array of products
- * Number of sales reps per market
- * Indirect sales expected to be 70% of revenue
- * Capacity and dark fiber sales

Key Financial Drivers Network Expense

Key Drivers

- * Startup expenses
- * Migration of traffic from leased to owned facilities
- * Direct vs. indirect sales ratio

Key Drivers

- * Startup and growth related expenses
- * Variable expenses dominate over time
- * Operating expense efficiency
 - Web enabled customer service and provisioning
 - Indirect sales channels

Key Financial Drivers CapEx

Key Drivers

* Scope and pace of network construction

* Up front to success based capital ratio

* Average depreciable life of approximately 5 to 7yrs

CapEx Becomes More Variable Over Time

[Graphic: Graph of \$ incremental revenue per \$ of Capital Expenditures over time]

Financial Summary
(figures as of Sept. 30, 1998)

- * Financial strength to execute plan
- \$4.2 billion in available liquidity
- Debt / book capitalization of 55%
- Debt / market capitalization of 17%
- \$1.1 billion of equity holdings in RCN and Commonwealth Telephone

Summary and Conclusions

- * A fundamental shift in technology has created a unique opportunity
- * New companies with technical, financial and management strength can create substantial value
- * Level 3 is well positioned to capitalize on this opportunity

End of Filing

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