August 9, 2002

Coverage initiated on ELON by Denny

When I started reading science fiction in the 60s Echelon Corporation could have been the subject of one of the stories, washing machines talking to conveyor belts plotting the overthrow of machine bondage. Today washing machines talk to conveyor belts with the help of Echelon but subject to the control of their human masters.

Business Summary *from Yahoo!*

Echelon Corporation develops, markets and supports products and services that allow everyday devices, such as light switches, washing machines, conveyor belts, thermostats, door locks, motion sensors, air conditioners, pumps and valves to be made "smart" and to communicate with one another and across the Internet. The Company's products and services are based on its LonWorks technology. The Company's products and services may be used across many industries to network together devices in homes, utilities, buildings, factories, transportation, and other systems. Echelon's products allow original equipment manufacturers (OEMs), and systems integrators to design and put into service open, interoperable distributed control networks

Financial Summary *from Yahoo!*

Echelon Corporation develops, markets and supports hardware and software products and services that enable original equipment manufacturers and systems integrators to design and implement open, interoperable, distributed control networks. For the six months ended 6/30/02, revenues totaled $58.9 million, up from $26.5 million. Net income totaled $7.8 million, up from $60 thousand. Results reflect increased product sales under ENEL programs and higher gross margins.

Look for **Open Proprietary Architecture** mentioned below

From the latest 10-K

We develop, market and support products and services that allow everyday devices -- such as light switches, washing machines, conveyor belts, thermostats, door locks, motion sensors, air conditioners, pumps, and valves -- to be made "smart" and to communicate with one another and across the Internet. Our products and services are based on our LonWorks ® technology. Our LonWorks technology is an open standard, meaning that many official standards-making bodies have published industry standards based on all or parts of our technology and that many of our technology patents are broadly licensed without royalties or license fees. Our products and services may be used across many industries to network together everyday devices in homes, utilities, buildings, factories, transportation, and other systems. Our products allow original equipment manufacturers (or "OEMs"), and systems integrators (who are specialty contractors that combine products from multiple suppliers into integrated systems), to design and put into service open, interoperable distributed control networks. A control network is a collection of everyday devices that communicate with one another to perform a control application -- from heating, lighting, security, and elevators in buildings, to the brakes in freight trains, to the equipment in sewage treatment plants, to the lights in your home. In an interoperable system, products or subsystems from multiple vendors can be integrated into a unified system without the need to develop custom hardware or software.

Control systems manage key functions in virtually all types of facilities that affect our daily lives. These functions can be as simple as turning a light on and off and as complex as operating a chemical production line. Traditionally, most commercial control systems have used closed, centrally controlled architectures, which we believe are more costly to install, less reliable, and more difficult to customize than open control networks based on our technology. Open LonWorks control networks are an alternative to the traditional approach of centralized or hard-wired control. Compared with traditional control systems, we believe that open control networks reduce life-cycle costs, are more flexible than centralized systems and permit control systems to be comprised of products and services from a variety of vendors. As a result, these open control networks can enable new applications while providing improved reliability, serviceability, and functionality.

Our LonWorks control networking technology allows intelligence and communications capabilities to be embedded into individual control devices that may be connected together through a variety of communications media, such as a twisted pair of wires or data cable, the existing power lines in a facility, or any Internet protocol-based network, such as corporate intranets or the Internet. These intelligent, networked control devices are then able to communicate with each other to perform the desired control functions. In effect, the network itself becomes the controller, eliminating the need for central controllers, significantly reducing wiring costs and enhancing the functionality and flexibility of the control system. In addition, by connecting to the Internet, L ON W ORKS networks allow devices that were once isolated by their physical location to be reached from anywhere in the world. Important data that previously could not be obtained can now be integrated into enterprise-wide information systems to lower costs and increase revenues.

Our products and services provide the infrastructure and support required to build and implement multi-vendor, open, interoperable networks of everyday devices. Our wide-ranging product offerings include transceivers, concentrator products, control modules, routers, network interfaces, development tools, and software tools and toolkits. Our objective is to establish our LonWorks technology and products as a leading solution for networking everyday devices for control applications.

We market our products and services to OEMs and systems integrators in the building, industrial, transportation, utility/home and other automation markets. We sell primarily through a direct sales force in North America and other countries where we have marketing and sales operations, and expand our direct sales efforts with distributors in Europe, Japan, South America and various Asia Pacific countries. Representative customers include ENEL S.p.A., Honeywell, Schindler Elevator, TAC AB, Siemens, Invensys Intelligent Systems, Fuji Electric, Sifang, BOC Edwards, and NTT Data.

Competition

Competition in our markets is intense and involves rapidly changing technologies, evolving industry standards, frequent new product introductions and rapid changes

in customer requirements. To maintain and improve our competitive position, we must continue to develop and introduce, on a timely and cost–effective basis, new products, features and services that keep pace with the evolving needs of our customers. The principal competitive factors that affect the markets for our control network products are the following:

- *our customer service and support;*
- *our product reputation, quality and performance; and*
- *the price and features of our products such as adaptability, scalability, the ability to integrate with other products, functionality, and ease of use.*

In each of our markets, we compete with a wide array of manufacturers, vendors, strategic alliances, systems developers and other businesses. Our competitors include some of the largest companies in the electronics industry, such as Siemens in the building and industrial automation industries, Allen-Bradley (a subsidiary of Rockwell) and Group Schneider in the industrial automation industry, and Microsoft. Many of our competitors, alone or together with their trade associations and partners, have significantly greater financial, technical, marketing, service and other resources, significantly greater name recognition and broader product offerings. As a result, these competitors may be able to devote greater resources to the development, marketing and sale of their products, and may be able to respond more quickly to changes in customer requirements or product technology. In addition, those competitors that manufacture and promote closed, proprietary control systems may enjoy a captive customer base dependent on such competitors for service, maintenance, upgrades and enhancements. Most recently, Microsoft has announced a specification that it refers to as SCP (Simple Control Protocol) that is targeted at the networking of everyday devices. Microsoft has announced its intent to focus this capability on home networking applications. Products from other companies such as emWare, Ipsil, JumpTec, Lantronix, NetSilicon and Wind River Systems could also compete with our products, especially in the utility/home market.

Many of our current and prospective competitors are dedicated to promoting closed or proprietary systems, technologies, software and network protocols or product standards that differ from, or are incompatible with ours. In some cases, companies have established associations or cooperative relationships to enhance the competitiveness and popularity of their products, or to promote these

different or incompatible technologies, protocols and standards. For example, in the building automation market, we face widespread reluctance by vendors of traditional closed or proprietary control systems, who enjoy a captive market for servicing and replacing equipment, to use our interoperable technologies. We also face strong competition by large trade associations that promote alternative technologies and standards in their native countries, such as the BatiBus Club International in France, the Konnex Association in Belgium, and the European Installation Bus Association in Germany, each of which has over 100 members and licensees. Other examples include the CEBus Industry Council, which is the proponent of an alternative protocol to our L ON W ORKS protocol for use in the utility/home automation industry, various industry groups who promote alternative open standards such as BACnet in the building market, and a group comprised of Asea Brown Boveri, ADtranz AB, Siemens, GEC Alstrom and other manufacturers that support an alternative rail transportation protocol to our L ON W ORKS protocol. Our technologies, protocols or standards may not be successful in any of our markets, and we may not be able to compete with new or enhanced products or standards introduced by existing or future competitors.

L ON W ORKS technology is open, meaning that many of our technology patents are broadly licensed without royalties or license fees. As a result, our customers are capable of developing hardware and software solutions that compete with some of our products. Because some of our customers are OEMs that develop and market their own control systems, these customers in particular could develop competing products based on our open technology. For instance, all of the network management commands required to develop software that competes with our LNS software are published. This could decrease the market for our products and increase the competition that we face.

Revenue Growth

Quarter	Revenue	Growth % Y/Y
3/31/98	7,957	
6/30/98	8,546	
9/30/98	7,123	
12/31/98	8,573	
3/31/99	8,808	10.7
6/30/99	9,782	14.5
9/30/99	9,774	37.2
12/31/99	11,402	33.0
3/31/00	11,443	29.9
6/30/00	12,651	29.3
9/30/00	12,229	25.1
12/31/00	12,976	13.8
3/31/01	12,588	10.0
6/30/01	13,917	10.0
9/30/01	17,983	47.1
12/31/01	32,101	147.4
3/31/02	27,585	119.1
6/30/02	31,318	125.0

Echelon definitively looks like a gorilla candidate. It has the open proprietary architecture. It is going after the horizontal market of command and control of devices over the Internet and not after vertical markets. And it is growing revenues at tornado pace at a time when everyone is worried about a recession.

On the other hand it has some Gargantuan competitors. ABB, for example, has revenues on the order of $40 billion a year. With Siemens we are talking about $80 or 90 billion. These competitors are 500 and a thousand times larger than Echelon. The day Bill Gates quit school to write some BASIC code IBM was one of the top 10 corporations in the world. Who would have thought that a BASIC programmer would one day make IBM cry UNCLE!

When compared to Siebel and BEA Systems, it is easy to figure out what Echelon does, it helps machines talk to machines and the potential is huge. I have at least a dozen machines on my desktop. And in my house the number of devices that would want to talk to each other is quite large, about a dozen light switches, washer, drier, freezer, light fixtures. fans, clocks, the pumps in the building, the elevators, electric doors. There are probably over a hundred gadgets at my

service in a 40 year old building. How many would you find in a new one?

Echelon Corporation is definitively one to watch.

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I've been surfing the web in search of ELON related stuff and I'm impressed!

Talk about value chain:

http://www.lonmark.org/about/memblist.cfm

There is a two day conference at Chantilly, VA on October 1-2 about intelligent cities and there is a LonWorld expo in Toronto on October 31 - November 1 that also might be of interest. Here is the link:

http://www.lonmark.org/news/calendar.htm

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Mike Buckley wrote:

> *My concern is that in Q4 and Q1, there was no free cash flow. Just the opposite, it was negative. That's alarming for a company going through a tornado. Any explanations?*

From the 10-K

We generated our first-ever quarterly operating profit in the fourth quarter of 2001 in the amount of $4.4 million. Our total revenues for 2001 grew to $76.6 million from $49.3 million in 2000, and $39.8 million in 1999. ***Our largest customer, ENEL S.p.A., the largest electric utility in Italy, accounted for***

40.5% of total revenues for 2001 and 3.1% of total revenues for 2000. *Our second largest customer, EBV, the sole independent distributor of our products in Europe, accounted for 16.9% of total revenues for 2001, 26.5% of total revenues for 2000, and 27.3% of total revenues in 1999.*

In the third quarter of 2000, we completed a transaction with ENEL whereby ENEL purchased for cash three million newly issued shares of our common stock for a purchase price of $130.7 million. In the second quarter of 2000, we entered into a research and development agreement with an affiliate of ENEL, under which we will cooperate with ENEL to integrate our LonWORKS technology into ENEL's remote metering project in Italy. We began to ship products to ENEL for use in the project in late 2000. During 2001, we increased the volume of these shipments.

Working Capital

As of December 31, 2001, we had working capital, defined as current assets less current liabilities, of $151.7 million, which was a decrease of about $12.6 million compared to working capital of $164.4 million as of December 31, 2000. This decrease was primarily attributable to increases in property and equipment and other long-term assets. Cash, cash equivalents and short-term investments decreased by $39.1 million in 2001 from 2000 due to increases in accounts receivable, property and equipment, other long-term assets, other current assets, and inventories.

As of December 31, 2001, we had cash, cash equivalents and short-term investments of $111.7 million. ***Cash used in operating activities in 2001 was primarily due to increases in accounts receivable and inventories related to the ENEL program,*** *as well as an increase in other current assets, partially offset by an increase in accounts payable.*

Interest and other income, net.

Lastly, late in the third quarter of 2001, our Board of Directors approved a stock repurchase program, under which we bought 265,000 shares of our common stock for a total price of $3.2 million. This repurchase further reduced our average invested cash balance later in the year and resulted in decreased interest income in the fourth quarter.

From the March 31, 2002 10-Q

9. Acquisition:

On January 31, 2002, the Company acquired all of the outstanding capital stock of BeAtHome.com, Inc. ("BeAtHome ® "), a Fargo, North Dakota based developer of remote management system hardware and software. The results of BeAtHome's operations, as well as a one-time charge of $400,000 related to in-process research and development ("IPR "), have been included in the consolidated condensed financial statements since that date. As a result of the acquisition, the Company expects to integrate certain components of BeAtHome's technology into its current and future product offerings. The Company believes these enhancements will allow customers to more easily aggregate and process information from remote L ON W ORKS networks, thereby increasing overall network management capabilities. In exchange for all of the outstanding capital stock of BeAtHome, the Company paid approximately $5.9 million, comprised of cash payments totaling approximately $2.0 million to BeAtHome's shareholders, the forgiveness of approximately $3.5 million in operating loans made to BeAtHome, and approximately $369,000 of third party expenses.

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Paul Philp wrote:

> *I think it might be just one very large bowling bin falling.*

You are right! Without the ENEL deal, according to the 10-K, their revenues would have dropped every quarter in 2001. But ENEL is an impressive bowling pin, a king pin!

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TMFCamX wrote:

> *Some more info:*
>
> ***Kalifornia***
> *http://boards.fool.com/Message.asp?mid=17661691*
>
> ***ELON FAQ***
> *http://boards.fool.com/Message.asp?mid=16402511*

Mike Buckley wrote:

> *The importance of a bowling pin is that it knocks down other pins as it falls.*

Your observations are very accurate indeed.

What is the ENEL pin good for? Have a look at the **Kalifornia** post on the ELON board for some interesting developments in a state that has an economy larger than most countries.

http://boards.fool.com/Message.asp?mid=17661691

ENEL has been privatized and that was probably one of the drivers of the ELON deal. In the Kalifornia post you get the feeling that Californios are waking up to the fact that price controls don't work too well and that they need a price driven alternative. For electric use to be price and demand driven you need a system like ELON can provide. For consumers to react to prices you have to let them know the price changes as they occur. That would be the information flowing to the users. Based on that information the users can change their consumption by turning things off or on. The information flowing to the utility is the user's consumption pattern which allows the utility to tailor the rate for the user.

The way this whole thing becomes a win-win deal is that the peak usage can be reduced and it is the peak power that is soo costly.

Since in the Kalifornia deal there is a state government involved, don't expect action any time soon.

I also read somewhere that interest has been expressed by a large utility in mainland China but I don't recall where I read that.

I will try to figure out which are the pins in the ENEL bowling alley. So far I have identified home use, commercial construction, industrial production, rail transportation, and electric utilities. More on this later.

Mike Buckley wrote:

> *What's the next one or two bowling pins that are likely to fall as a result of knocking down the utility bowling pin?*

One problem with the home market is that builders don't think that smart switches, dimmers to operate lights and other such stuff is cost effective. If the utility installs a smart meter and creates a connection to the world either via Internet or via the power lines with a **standards based** system like LonWorld, the infrastructure to support all the home smart gadgets is in place. This is a way of building of the **whole product.** If memory serves, the ENEL project will "wire" 27 million homes (I could have one zero too many! :-).

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dumaflotchie wrote:

> *this one needs a great deal of caution and may never get anywhere near a gorilla. Here are my concerns:*

Have you noticed that the voices of caution in this thread, you and Mike Buckley, have collected a lot more recommendations that the voices of optimism? A sure sign of the times! But maybe it's time to become a contrarian. I was late in switching from bull to bear when the bubble burst. I wonder if I'm too early in my

conversion from bear back to bull.

But, yes, caution is advised!

dumaflotchie wrote:

> *1) ELON is a micro-cap attempting to compete in a potential gorilla space that has not yet materialized.*

Yes, I mentioned that in my initial post. To quote myself:

On the other hand it has some Gargantuan competitors. ABB, for example, has revenues on the order of $40 billion a year. With Siemens we are talking about $80 or 90 billion. These competitors are 500 and a thousand times larger than Echelon. The day Bill Gates quit school to write some BASIC code IBM was one of the top 10 corporations in the world. Who would have thought that a BASIC programmer would one day make IBM cry UNCLE!

dumaflotchie wrote:

> *Look at their 10K regarding the competitors such as MSFT that just announced its version of SCP (Simple Control Protocol) that is targeted at the networking of everyday devices. Microsoft has announced its intent to focus this capability on home networking applications. That is just one mighty gorilla and it will not go quietly.*

Truthfully, MS is one of my smaller worries in this case. What does MS bring to the table besides its gorilla size and gorilla reputation? Nowhere in The Gorilla Game does it say that a gorilla in one field can, by the fact that it is a gorilla in that field, impose a gorilla status in a completely different field. What applies in this case is path dependence. Echelon has been working for over 10 years trying to make all sorts of gadgets talk a common language, LonTalk, and it is succeeding in the commercial construction area as well as rail transportation. Why would people, all of a sudden, want to switch to an MS standard? What advantage would that bring them? Does MS have the "whole product" that Echelon has built over the years?

dumaflotchie wrote:

> *2) Elon has stated that "competition in our markets is intense and involves rapidly changing technologies, evolving industry standards, frequent new product introductions and rapid changes in customer requirements". Those changing industry standards seem to imply that Elon is not establishing a standard around which others are standardizing.*

You have to understand that the SEC filing are written by lawyers trying to make sure that their principals are not sued by all their ambulance chasing colleagues. That is not to say that there is no truth in that statement but it does have to be analyzed and evaluated.

From what I have seen so far, Echelon's biggest competitors are not rivals with competing open architectures but established players with proprietary architectures. I think here we can trust history. In the desktop field, before Macintosh, every software developer had his own proprietary software architecture and DOS applications did not talk to each other. With Macintosh and later WINDOZE, most of these proprietary architectures died to be replaced by Macintosh, the chimp, and WINDOZE, the gorilla. The same thing will happen in the construction field, or maybe I should say in the control field. The bigger the network the more valuable it becomes and the relation is not linear but geometric. Users will insists on standards based systems and proprietary systems will wither in time.

The real question than is whether Echelon can grab and KEEP a gorilla position or whether some other standard will prevail. What needs to be analyzed is what Echelon's bowling alley really looks like. By this statement I'm saying that Echelon is trying to finish crossing the chasm and it is trying to establish valuable beachheads in the bowling alley.

dumaflotchie wrote:

> *In fact they "give away" any patient licenses for no royalty or license fee. "L ON W ORKS technology is open, meaning that many of our technology patents are broadly licensed without royalties or license fees. As a result, our customers are capable of developing hardware and software solutions that compete with some of our products." They*

> *got the open part but where's the proprietary?*

The proprietary is in the patents. They don't give it all away for free. For a fuller explanation I suggest you read howardroark's ELON faqs at http://boards.fool.com/Message.asp?mid=16402511

dumaflotchie wrote:

> *3) This cannot be a tornado when we are dealing with such minimal revenues. $30 million a quarter is nothing IMO and their dependency on a single customer strongly argues for a niche player rather than a gorilla candidate. In fact, their 10K so much as implies this as they describe sectors that they cannot or likely will not penetrate.*

Yes, Echelon is still in the bowling alley.

dumaflotchie wrote:

> *4) Their chart looks poor as their price remains below their 50/200d MA and close to a year low. Even if the price can fight off the trend down, there is much resistance above.*

A tornado watch is not the same as a buy order to your broker. I'm not sure why some people insist in thinking or implying that when someone has some good stuff to say about a stock he is touting it or buying it. It could be a leftover from the bubble.

dumaflotchie wrote:

> *5) Their margins are declining with their increased revenue.*

They are starting to come back from the lows during the second half of 2001

Date	Gross %
6/30/2002	52.5
3/31/2002	51.0
12/31/2001	47.4
9/30/2001	48.8

dumaflotchie wrote:

> *6) There doesn't seem to be a serious need to standardize around anyone right now...*

I think that is a matter of opinion and a big misconception. Standards is precisely what drives technology. The first step in modern mass production was taken when the parts of firearms were built to standard sizes making them interchangeable. Ford could mass manufacture cars because he could assemble them from standardized parts.

Do you remember how god stopped the building of the Tower of Babel? He made sure that people could not talk a standard language!

dumaflotchie wrote:

> *These concerns are just that.....a reason to be cautious with anointing this apparent "niche player" as anything other than that.*

I anoint not. I prepare myself should the market anoint.

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