I.C.F.

NEWSLETTER

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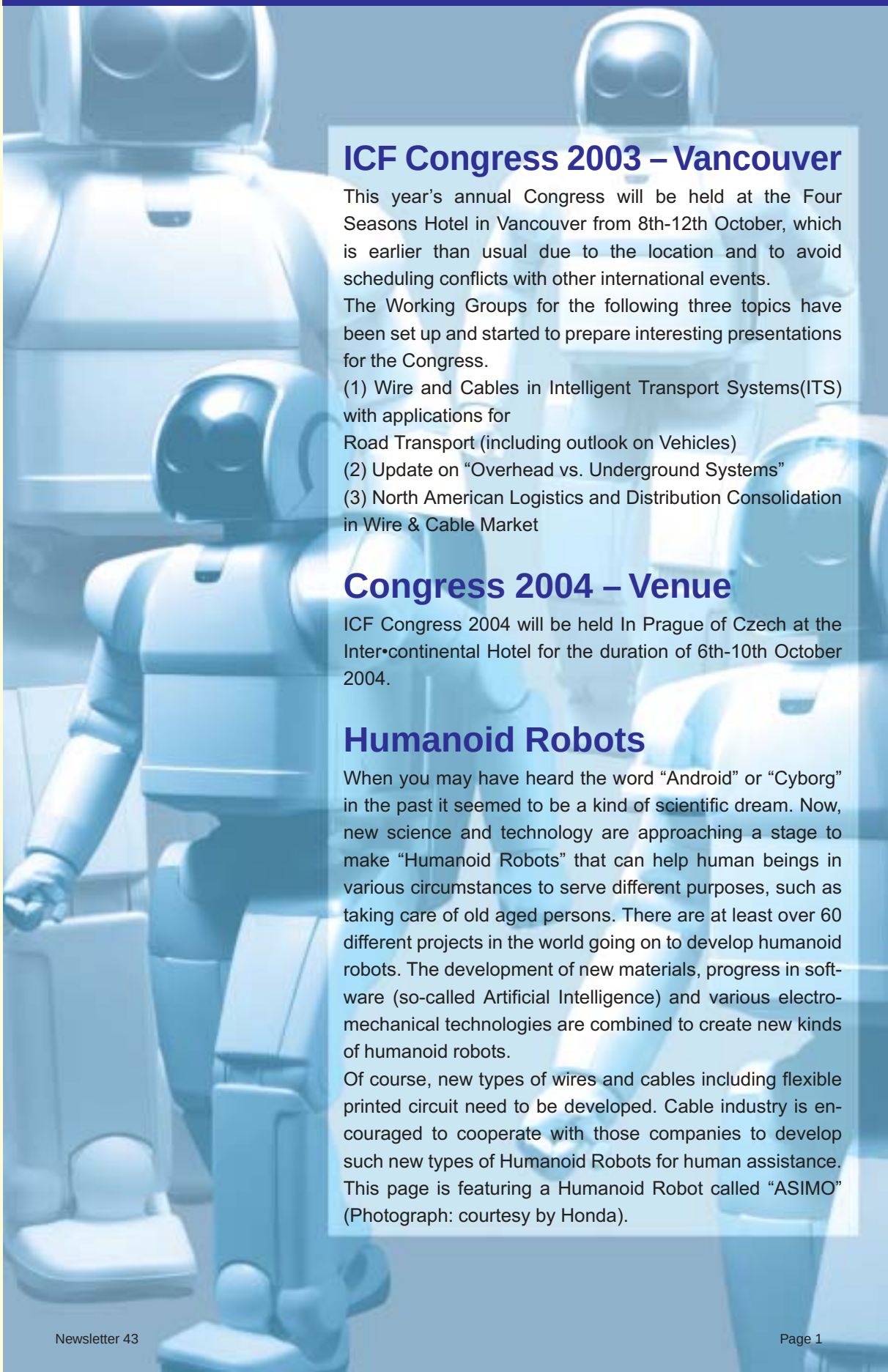


ICF Congress 2003 – Vancouver

This year's annual Congress will be held at the Four Seasons Hotel in Vancouver from 8th-12th October, which is earlier than usual due to the location and to avoid scheduling conflicts with other international events.
The Working Groups for the following three topics have been set up and started to prepare interesting presentations for the Congress.
(1) Wire and Cables in Intelligent Transport Systems(ITS) with applications for
Road Transport (including outlook on Vehicles)
(2) Update on "Overhead vs. Underground Systems"
(3) North American Logistics and Distribution Consolidation in Wire & Cable Market

Congress 2004 – Venue

ICF Congress 2004 will be held In Prague of Czech at the Inter•continental Hotel for the duration of 6th-10th October 2004.

Humanoid Robots

When you may have heard the word "Android" or "Cyborg" in the past it seemed to be a kind of scientific dream. Now, new science and technology are approaching a stage to make "Humanoid Robots" that can help human beings in various circumstances to serve different purposes, such as taking care of old aged persons. There are at least over 60 different projects in the world going on to develop humanoid robots. The development of new materials, progress in software (so-called Artificial Intelligence) and various electro-mechanical technologies are combined to create new kinds of humanoid robots.
Of course, new types of wires and cables including flexible printed circuit need to be developed. Cable industry is encouraged to cooperate with those companies to develop such new types of Humanoid Robots for human assistance.
This page is featuring a Humanoid Robot called "ASIMO" (Photograph: courtesy by Honda).

Power Line Communications: The Impact of an Emerging Technology

With its development over the past five years as a broadband access and data-networking medium, Power Line Communications (PLC) has arrived as a contender in the telecom market. The technology uses the electric utilities' low voltage network to bypass the local telecom operators' near monopoly over telecom subscriber access without incurring the huge infrastructure costs of CATV. Inside the customer premise, PLC again utilises the existing energy network, providing connection points for data equipment at each electrical socket. Despite its apparent simplicity, interest by the utilities in PLC so far has been guarded. This may seem surprising, given the need to develop new revenue streams as traditional business in selling units of electricity is becoming less profitable in a deregulated energy market. In this article we look at the nature of PLC, its performance to date, its potential and the implications for the cable industry.

What is Power Line Communications?

Power Line Communications, as it is usually defined, encompasses a range of line equipment running from the final step-down transformer through the low voltage utility network and premise wiring to electrical socket outlets in consumer premises. The electricity utility involvement is technically constrained by the fact that data signals cannot pass through a transformer, although solutions are offered whereby PLC equipment is used to bypass the low voltage transformer to continue the data connection into the medium voltage utility network. Bar this exception, PLC "outdoor master" units are located on the consumer side of the final step-down transformer. The function of the outdoor master is to convert digital telecom system signals into radio frequency signals that ride on top of the energy current in the low voltage distribution network (and vice versa). Depending on distance and local conditions, the outside master is connected to the main telecom network via fibre, copper or wireless links.

An "access point" unit at the customer premise entrance connects indoor and outdoor systems. Outwardly, this unit performs as an adaptor, while inwardly it serves as an administrator for the networking system. "Indoor adapters" separate data and power at the socket and forward data to individual applications. Ancillary equipment groups include "repeaters", required for signal enhancement where distances are great or signal degradation severe and "couplers", used to connect independent circuits or to bypass transformers. In total, a full PLC system allows two-way voice and data traffic within customer premises and between customer premise equipment and the external telecom network.

With transmission speeds in excess 1 mbps (million bits per second), modern PLC offers an access technology for broadband services, including internet connection, VoIP (voice over internet protocol), and video on demand as well as simple telephony. Less demanding meter reading, energy management and home automation can also be provided. As well as creating a means of data access into the premise, PLC has become a premise data networking technology as suitable equipment has come onto the market from late in 2001 onwards.

The bandwidth offered by PLC is comparable to that of cable modem or DSL. PLC is similar to cable modem in that customers share bandwidth with others in the same system, in this case defined as the group of subscribers connected to the same utility transformer. At present, PLC speeds of 2.5-3.5 mbps at the customer premise are a commercial reality, with product offerings up to 10 mbps; 20 mbps is a medium term industry target and 200 mbps is envisaged as the technical limit.

In 2002, Sumitomo Electric launched a 45 mbps PLC modem. The product uses orthogonal frequency division multiplexing (OFDM) OFDM is a spectrum efficient modulation technique that enables transmission of very high data rates in frequency selective channels. Although only recently developed commercially, OFDM is quickly establishing itself as the leading technology for high bandwidth communication, in DSL and wireless as well as power line. For PLC, OFDM offers the crucial advantage that it is "frequency selective", allowing information to be freely allocated between frequencies and thus greatly reducing the risk of signal distortion in the contaminated electrical network environment.

OFDM technology was embraced by the HomePlug alliance, formed in 2000. HomePlug is a grouping of around ninety major electronics companies combining to create an industry standard for the networking of electrical and electronic equipment by PLC. Although the initial standard, developed mid-2001 was designed to allow data transfer at 14 mbps, the ceiling is likely to be raised. The important

point is that the formation of a common standard denotes the acceptance of PLC has a technology that needs to be accommodated, alongside fixed telecom/data wiring and wireless, in the emerging home networking market. To this extent, Power Line Communications has come of age.

An Historical Perspective

Narrowband Power Line Communication has been around since the 1940s. With low transmission speeds, the basic technology has been used to enable simple metering services and street light switching. In terms of customer numbers, narrowband PLC remains much more prevalent than its broadband cousin.

One of the first utilities to develop PLC was Iberdrola in northern Spain, where metering services are operated on a 19.2 kbps (thousand bits per second) system. ENEL of Italy has extensively developed narrowband telemetering, with 27 million homes connected. Many other utilities have experimented with narrowband PLC and some with low-end broadband PLC (with speeds in the 100 kbps range), providing services such as load management and security control as well as metering. Although utility involvement in narrowband PLC shows some acceptance of the technology, however, the capabilities are quite different from broadband PLC.

Unfortunately, broadband Power Line Communications does not have an unblemished track record. One of the first commercial trials of broadband PLC was by Nortel in cooperation with NorWeb in Warrington, United Kingdom from 1997. The trial achieved data connections of 1 mbps to a few hundred utility customer sites, but did not match up to expectations in key respects. The system failed to comply with strict radio frequency emission standards proposed by the telecom regulatory authority OFTEL, and recorded customer connection costs of US$ 300-350 per household, higher than ADSL.

With these failings, and capacities that were lower than currently being offered by alternative technologies (2 mbps for cable modems and 3-9 mbps for ADSL), Nortel decided to withdraw from this trial, and from the PLC business altogether, in September 1999. Power Line Communications has suffered other major setbacks. Early in 2001 Siemens, another giant of the telecom equipment business and a leader in PLC development made a surprise announcement that it was to pull out of this market and cease involvement in trials with German utility EnBW. Perhaps even more damaging was the recent decision by Germany's largest electric utility, RWE, to pull out of the business. The company had signed a two-year contract in February 2001 with equipment supplier Ascom for the set up of field trials in Essen and Mannheim.

Partly because of the withdrawal of some major players, broadband Power Line Communications technology has not succeeded in gaining mass penetration. There are now a little over 60 PLC sites in the world with around 200,000 paying customers. Most of the schemes are small scale and many are trials rather than full commercial operations.

Had RWE gone ahead with PLC as it had planned it would have been a major player; its initial target was to achieve 20,000 customers as early as end-2001. (In fact, RWE got nowhere near this target.) Germany was a natural focus for early PLC development, with a deregulated electricity market and emission control regulations already in place. Other than RWE, German PLC schemes were put in place by utilities MVV (initially targeted at 3,000 homes), BnEW (7,500 homes), while E.ON, through its telecom subsidiary, has been active in PLC both within and outside its service area. Like RWE, most of the German schemes offer broadband access at 2.5 mbps. Other commercial PLC developments in Western Europe are being put in place by EdF of France, ENEL of Italy, Endesa of Spain, Sydkraft and Vattenfall of Sweden, Jyvaskyla Energy and Sonera Entrum of Finland, FEW in Switzerland, Scottish & Southern Energy of the UK and Reykjavik Energy of Iceland. While the number of companies involved is quite large, however, none of the schemes involves more than a few thousand paying customers. One of the more ambitious utilities is MVV in Germany, which intends to have 20-30,000 paying customers by the end of 2003. The utility PLC schemes are set up in conjunction with companies specialising in PLC equipment and system architecture, of which Ascom of Switzerland and Main.net of Israel are the best known.

Why the Focus on Europe?

Western Europe has been the focus of most PLC development so far. There are good reasons why this should be the case. Not only are the energy and telecom markets deregulated, but also the physical structure of the utility power network makes it more suitable for PLC development than in many other parts of the world, particularly the United States. In Western Europe, low voltage utility transformers normally serve over 50 customers, often 150 to 200, In the United States, individual transformers normally serve 8 to 10 customers. This difference means that the cost of equipment

installed at the transformer and its connection to the external electricity network must be shared between a smaller number of subscribers, raising unit costs. The development of technology by Amperion and Ambient of the United States and Main.net to take PLC one tier higher up the electricity network to the medium voltage transformer may partly overcome this cost disadvantage, but it will not eliminate it. Another technical disadvantage in the United States is that its 120 volt unshielded premise distribution wires are more likely to cause and to suffer from electrical interference than the 240 volt standard wire in Western Europe.

PLC in the United States

The technical drawbacks in applying PLC to the United States have, until recently, meant only very limited interest in this country. Interest here has only really grown within the past two years, as the market for home and small business data networking has mushroomed and the products available to achieve networking via PLC have become available. As yet, commercial roll out of broadband PLC is insignificant in the United States, but there are many trials which are due to enter the commercial phase this year (2003). Main.net has in progress trials with utilities Southern Co., Ameron and PPL which are all due to become commercial in the first quarter of 2003. Trials are also being held with utilities by US equipment suppliers Ambient, Current Technologies and Amperion. Ambient is working with Consolidated Edison of New York, one of the country's largest investor owned utilities. In October 2002, Consolidated Edison acquired a 50% stake in Ambient.

How Competitive is PLC in Mature Markets?

The success of Power Line Communications in mature markets depends in part on the ability of the power utilities to leverage their existing customer base. PLC has one huge advantage in that the power utilities have unrivalled access to potential customers through their exiting network. Without straying too far from core business, the utilities could introduce PLC into the market at relatively low cost by offering packages allowing the efficient use of electricity in the home and office based on narrowband PLC functions such as metering, load management and home automation. From here, it would not be too great a step for the utilities to penetrate more sophisticated data and telephony markets, as long as pricing was competitive. Although the potential exists, however, the willingness of utilities to act on it appears to be lacking.

The business case for Power Line Communications as an access medium in mature markets does not appear to be very strong. The telecom networks are already fully developed and, especially in the case of the United States, partially overlaid with CATV connections. Telecom/data wiring within buildings is also quite extensive. This being the case, PLC may appear to offer little cost advantage over other data access media. But it does have two important attributes. As telecom operators generate a large part of their revenue directly from the use of the access network, power utilities may be able to afford lower line rentals as they already make money from their power lines by delivering electricity. Secondly, although telephone line penetration is almost universal, DSL capability in the exchanges is not. If transmission rates above that offered by ISDN are required (typically 128 kbps), there is still a case for PLC.

As a medium for data networking, PLC has to compete in a very aggressive marketplace. The need for networking within medium to large offices is now accepted; but the small business and home networking market is still emerging. Smaller users need networks to allow resource sharing, efficient communication, home scheduling and control. In creating a data network, a small business or residential customer has a choice of fixed wiring solutions (Ethernet or phone line), or wireless options (Ethernet standard, RF or Bluetooth). The technical limits and relative costing of the different options are in a state of constant flux, so it is not a simple matter to make comparisons. Some of the considerations involved are indicated in Table 1.

For the larger office, structured Ethernet wiring delivers the capacity and reliability needed for complex network systems. Ethernet wiring allows transmission rates of up to 100 mbps. In the small office or home, both phone line and wireless solutions have their merits. Phone line service uses the existing phone lines typically available in the home. Using frequency division multiplexing (FDM) the standard phone line is able to carry multiple layers of signals. Perhaps the biggest drawback of phone line is the small number of outlet points around a building. Wireless resolves this problem entirely. Wireless, however, does have its deficiencies. Signals can be blocked by some building materials and a base station, which can be expensive, has to be purchased. Despite this, wireless is gaining ground against phone line. Both technologies are currently limited to transmission speeds of around 10 mbps. The Bluetooth wireless standard is fast becoming accepted at the low end of the data networking market. Although Bluetooth range is limited to about 10 metres

Power Line Communications and Other Data Networking Media

	Conventional Ethernet	Phone Line	Wireless Ethernet	Wireless Home RF	Wireless Bluetooth	Power Line Communications
How it Works	Uses Category 5 wiring (or higher) with a server and hub.	Uses existing phone lines and FDM	Uses radio signals to transmit between access point and users. Base station required.	Uses radio frequency at 4.2 GHz. Base statation required.	Uses radio frequency at 4.2 GHz to form ad hoc network. Base station required.	Uses existing power lines and sockets within building. Base station required.
Speeds	10 to 100 mbps	Up to 10 mbps	Up to 10 mbps	Up to 10 mbps	1 mbps	Up to 10 mbps
Range	Up to 200 metres	Up to 200 metres	Up to 100 metres	Up to 40 metres	Up to 10 metres	Up to 1,000 metres
Outlets	Depends on system	Limited in number	Mobile	Mobile	Mobile	Numerous
Flexibility	Expansion requries additional wiring and network devices	Expansion requries additional wiring and network devices Adapters required to connect some devices	Adapters required to connect some devices	Adapters required to connect some devices	Limited to products with Bluetooth chips	Adapters required to connect some devices
Reliability	High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High
Cost	High	Low	Varies	Moderate	Low to Moderate	Low to Moderate

Source: Metalica Ltd.

and transmission speed to 1 mbps, this still provides a cheap and very flexible medium for simple home networking.

Given the range of competitive products already available, the case for Power Line Communications in the data networking market is not yet proven. Whether or not it can be justified purely on the grounds of cost is doubtful. The combination of fairly low cost, flexibility and capability could put PLC at a competitive advantage in the mid-range market, where phone line or Bluetooth is not good enough, but structured wiring or high capacity wireless solutions are too expensive.

Although they are actively pursuing projects in Western Europe and the United States, the major PLC vendors tacitly accept that they have missed the mass market. This does not mean that they do not still see a great deal of potential. Because of the cost of adapting an exchange for DSL or installing CATV, access to standard broadband solutions may never be economic in small communities and remote locations. PLC has one key advantage in that it is “scaleable”. Broadband connections via PLC can be installed transformer by transformer, with virtually no front-end cost. PLC has some potential where other forms of access may not be economic, in schools and hotels for example. It is also being offered in mature markets as a means of extending data networking within premises where the primary data access is through DSL or cable modem.

The real problem for PLC in establishing a niche in mature markets is that it is late on the scene. As an access medium, DSL roll out is now well underway in the United States, Western Europe, Japan and South Korea. Cable modem is also established in some countries, especially the United States. The departure of Nortel from the PLC market in 1999 was seen at the time to be directly related to the rapid advance of DSL roll out plans in Europe. As a data-networking medium, PLC is also a long way behind its competitive rivals; recent development and deployment of both phone line and wireless has occupied much of the market that PLC might have been able to claim had it been developed earlier.

PLC in Emerging Markets

While PLC could develop a significant niche in mature markets, the real potential exists in emerging markets, especially where telephone access has not been installed. Here, PLC could displace the fixed telecom infrastructure altogether. Ascom quotes the example of India to illustrate the point. India is a country of 175 million households, of which 21 million have a phone line connection. Around 49% of the population receives secondary education, which Ascom uses to indicate the proportion that is likely to want and has the ability to pay for a telephone connection. By this measure, the gap between current telephone penetration and the potential is around 65 million households,

3 million of which are currently on the phone companies' waiting list.

These figures are impressive, but the performance of PLC in emerging markets to date has been disappointing. Ascom, which has been the main proponent of emerging market PLC development, has so far succeeded only in attracting small-scale projects, mainly in Africa (Egypt, Algeria, South Africa, Ivory Coast and Botswana) and Latin America (Brazil, Chile and Honduras). Ascom's penetration in the huge Asian market is limited to Saudi Arabia, Hong Kong, Singapore and Indonesia.

In 2002, Ascom received a sizeable order from the Russian electric utility Energomegasbit for the connection of broadband PLC to 20,000 homes in the city of Zhelesnogorsk. But this appears to have been too late to reaffirm the company's faith in the technology. For Ascom, cooperation with RWE in Germany had been a flagship project. With the withdrawal of RWE from the PLC business, Ascom was left with a huge commitment to PLC in terms of resources, but very little in terms of orders. Against a background of company losses of CH260-290 million in 2002, Ascom announced in January 2003 that it was to substantially withdraw from power line and other non-core businesses, focussing instead on wireless, security and network integration markets. Ascom Powerline will be reduced to a technology company, with sales, industrialisation and manufacture of PLC equipment in future being conducted under licence.

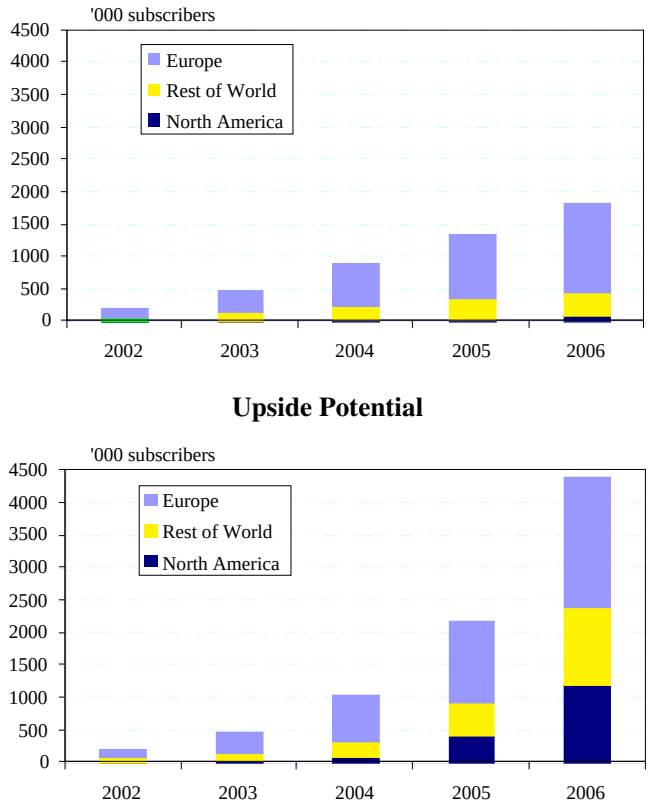
Implications for the Wire and Cable Industry

If Power Line Communications is to gain a significant market role, what does this mean for the wire and cable industry? At face value, the prognosis is not good. In essence, PLC technology makes it possible to transmit information without the need for telephone and data wiring. But, even if PLC is to succeed, we do not see this as meaning the wholesale displacement of telecom/data cable. In mature markets, PLC is likely to be used as a primary access medium only where DSL or cable modem is not economic (but where phone lines already exist). Although it may displace some DSL equipment in the exchanges, outside plant cable is likely to suffer very little. Indeed, connection between the utility transformers and the main telecom network could provide a boost.

Inside the premise, the negative affect of PLC on telecom/data wiring may be a little more evident. If PLC is chosen as a networking medium in preference to phone line, it may displace some extensions of internal phone wiring. We do not see PLC as being a major competitor with structured data wiring, where its impact could be more severe. Indeed, PLC may be most effective in competition with wireless solutions, where any impact on wiring should be positive.

Other than the external telecom network connection, PLC could potentially benefit the cable industry by stimulating the replacement of substandard utility power cables and building wire. Wiring configurations based on independent circuits and two-phase wiring are not ideal for PLC, as signal loss between circuits is almost inevitable. It is possible that the installation of PLC may, in some situations, lead to power quality problems that could best by resolved by using more independent circuits, large conductors or neutrals. While major wiring upgrades would almost certainly make PLC uneconomic, some marginal benefit through replacement is likely. Also positive could be the active role of the electric utilities in

Forecast Broadband Power Line Communications Subscribers



Notes:
Consensus Forecasts based on Informa Media Group figures
Upside Potential based on successful roll out in 2003 in Europe and USA, acceleration in Asia.

Source: Metalica Ltd.

energy management made possible by PLC. Energy efficient appliances often contain much greater volumes of winding wire than their less efficient counterparts.

In emerging market situations, we can be less sanguine about the likely impact of Power Line Communications. If PLC is chosen as the access medium for telephone services, the last mile of outside telecom cable and internal telecom/data wiring could be dispensed with altogether. The potential loss of market for cable is huge, but in reality PLC is only likely to displace standard telecom services in small to medium sized communities and rural situations, not in large urban clusters. In such sparsely populated environments, wireless is already a significant contender, so the direct impact of PLC may not be that great. Indeed, with parallel developments going ahead in the electricity market that favour distributive rather than centralised generation, PLC may offer the utilities greater incentive to develop their networks fully, offsetting the cost against a number of revenue streams rather than just the sale of units of power.

While Power Line Communications may not have very much net affect on the market for wire and cable, it could affect its structure. The success of PLC depends on how well it establishes its position in relation to competing technologies, be they wired or wireless. These alternative technologies also have specific implications for the wire and cable industry. For the wire and cable manufacturer, it is important not only to understand the roles of the competing technologies and their potential impact on cable, but also the new opportunities that change creates. If it takes off, the PLC market will create a huge demand for equipment. So far, the involvement of cable makers in PLC equipment development has been fairly modest. The poor performance of PLC to date appears to justify this decision, but with the imminent commercialisation of PLC in the United States, significant roll outs due in Europe and the substantial withdrawal of one of the main players in the market, Ascom, developments in Power Line Communications merit close scrutiny.

News in Brief

(provided by Metalica Ltd. UK)

Corning Gears Up for Profitability in 2003: In the fourth quarter of 2002, **Corning Inc.** recorded a net loss of US$ 709 million on sales of US$ 801 million. The figures include a restructuring charge of US$ 1.46 billion and a gain of US$ 415 million from the sale of its precision lens business. Corning has cut 18,800 jobs or 44% of its workforce and has recorded US$ 6 billion in losses since June 2001. The company reports that it will have nearly completed its restructuring programme commenced in 2002 in the first quarter of this year and expects a return to profitability in the third quarter. In the telecom sector, Corning expects stable sales against a background of US$ 300-330 million per year lower costs as a result of restructuring. Earnings from the company's technology segment are expected to improve by US$ 100-120 million, driven by revenue growth.

Submarine Fibre Optic Cable: The submarine fibre optic subsidiary of **Tyco Electronics Corp., Tycom,** recorded only US$ 26 million in sales in the fourth quarter of 2002, compared to US$ 405 million one year earlier. This reflects the dire state of this market sector. Another indication is given by the sale by **Alcatel** of its 74% stake in UK-based submarine fibre optic cable laying firm **CTC Marine Projects** in a management buyout by the original company founders. CTC was founded in 1993; Alcatel acquired its stake in 2000.

Alcatel to Close a Fibre Factory: French telecom group Alcatel is to close its optical fibre plant at Yvelines, near Paris, France. Employees at the plant have already been cut from 615 to 380.

Belden Streamlines its Operations: US-based **Belden Inc.** is to close its copper telecom cable factory in Kingston, Ontario in Canada by September 2003, transferring production to other units, principally Phoenix, Arizona. The Kingston factory had been purchased from **CDT** in October 2002. The closure comes as part of a wider streamlining of Belden's business in which the company will exit the business of long line single mode fibre optic cable, discontinue certain minor non-strategic product lines, dispose of inefficient excess cable making equipment and rationalise production facilities in order to achieve greater efficiency.

Madeco on Track to Restructure Debt: Doubts over the Chilean cable and copper products group **Madeco's** second attempt at an equity issue to resolve its debt crisis have waned as the receipt of US$ 70 million committed by its parent, the **Luksic Group,** now seems assured. Luksic's funds have been boosted by the resolution of a long-standing dispute between the Chilean brewer CCU, also part of the Luksic Group, and Germany's Schorghuber. It has been agreed that Schorghuber will pay Quinenco, the Luksic holding

company, US$ 123 million. Madeco is expected to get a large share of this cash. In total, Madeco intends to raise US$ 130 million. Its debts amount to US$ 325 million.

Cabelum Ownership Change Advanced: The proposed transfer of 70% of the shares of the heavily indebted Venezuelan aluminium conductor and wire rod company **Cabelum** to state-owned holding company **CVG** has been speeded up, with a 60-day deadline being set by the national finance ministry. CVG will also acquire 70% of the shares of aluminium foil producer **Alucasa,** with government exchanging debt in both companies for bonds issued to CVG. The remaining 30% stake in Cabelum and Alucasa will remain with CVG subsidiary **CVG-Alucasa,** which supplies both companies with primary aluminium. For Cabelum, CVG intends a company restructuring under which a rise in output to a "break even" point of 15,000 tpy is envisaged.

Nexans Buys Furukawa Cabos of Brazil: French cable maker **Nexans** has signed an agreement in principle to purchase **Furukawa Cabos de Energia S.A.,** which is 51% owned by **Furukawa Electric** and 49% by **Mitsui & Co.** of Japan. Furukawa Cabos manufactures bare overhead aluminium conductors. The company, with its 250 employees at its site in Lorena, recorded sales of US$ 50 million in 2002.

Sterlite to Spin Off its Copper Business: India's diversified **Sterlite Industries Ltd.** is to spin off its copper related business, including copper refining and cable operations, at book value into a new company on April 1st 2003. Sterlite will retain power transmission line, aluminium conductor and non-metal assets of the company. The proposal is subject to shareholder and regulatory approval.

Management Buyout of Pirelli's Italian and Chinese Winding Wire Business: Subject to the approval of antitrust authorities, the winding wire business of **Pirelli Cavi e Sistemi Energia SpA** in Italy and China is to be sold to management, with private equity funding coming from **Investitori Associati 111.** The deal will improve Pirelli's net financial position by Euro 28 million. The Pirelli subsidiaries Invex and Icew Insulated Conductors, together with the Invex winding wire plants in Quattorio (Italy) and Baoying (China), are covered under the deal. The two plants employ 350 staff and generated revenues of Euro 110 million in 2001. Additionally, the sale of Pirelli Esmar in Spain within the next year for Euro 4 million is envisaged under the deal, while there is to be an option for the acquisition by the new company of Pirelli's Brazilian winding wire activities by September 2004 (to be valued under the equity method). The divestment of winding wire business by Pirelli is in accordance with a rationalisation plan for Pirelli's energy cable sector under which the group will focus on higher value added products.

Rea Magnet Wire Acquires Southwire Speciality Products Unit: United States winding wire producer **Rea Magnet Wire** has acquired the assets of **Southwire's** Speciality Products Division (SSP) in Osceola, AR. The Osceola facility employs around 100 people and makes copper and aluminium winding wire and speciality insulated wires. The former Southwire facility will operate under the name "Algonquin Industries Division, Osceola Plant".

Coming Events

The 52nd IWCS (International Wire and Cable Symposium) will take place in Philadelphia from 10th to 13th November 2003. IWCS also announced management changes: Dipl. Ing. Dieter Nordmann (Alcatel Hannover) has been elected as Chairman of the Board of Directors. Elmer F.Godwin, CEO since 1979 retired in Nov. 02 and is replaced by James R. Leech, formerly with Dow Chemical Co.

JICABLE 03 (6th International Conference on Insulated Power Cables) will take place in Paris-Versailles, France from 22nd to 26th June 2003.

Correction in Last Issue No. 42 on Mitsubishi Cable Industries

It was reported that 3 business units will be relocated, please note following correction: "Their 2 plants at Itami (optical fiber and telecom. cables) and at Kumagaya (building wire) have been separated to 2 new companies (Ryousei MC Itami and Ryousei Cable and Wire, both are 100% owned by Mitsubishi) for cost reduction purposes. All sales activities are handled by Mitsubishi's Tokyo office."

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