



Optical Networks Daily

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Foreword

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Palo Alto's gift horse

Palo Alto is a highly affluent city, with average income per household recorded in the 2000 Census as \$90,377, and a median house price of \$1.7 million in 2007, according to one national comparison service, apparently making it the fifth most expensive city for housing in the U.S. One imagines most residents would not bend to pick up a buck and maybe not even to pick up ten bucks, especially if they thought someone they knew was watching.

While it is not our role to advise the Palo Alto City Council, to be diffident about accepting the [offer](#) of a free, high-speed, city-wide broadband network, including initial upfront funding of over \$30 million by a consortium of Axia NetMedia, PacketFront and 180 Connect, seems overcautious to say the least.

Part of the issue may be that although this consortium is, by any normal measure, a global gold standard cooperative that would be almost impossible to better, two of the three members are foreign groups renowned in Canada and Europe but virtually unknown in the U.S. and U.S. citizens have always properly been warned from birth about accepting freebies from strangers.

Certainly the council should have no misgivings over the capability of the consortium. The Alberta Supernet, already serving well over 2.5 million Alberta residents is by far the largest such project in the Americas and probably in the world, while PacketFront has taken contracts for several projects in Swedish and Dutch cities of around the size of Palo Alto, apart from installing a network in the Austrian capital Vienna with an urban population of 1.7 million.



The upfront financial commitment by Axia NetMedia is no doubt partially motivated by the company's desire to stamp its brand on the American map by fixing the broadband problems of a prominent U.S. city, which despite being host to a wealth of high-tech assets has not apparently been able to completely live up to its implied external reputation with the kind of broadband services the residents of a city of this quality should expect*.

Also having just spent several years on a similar and much larger project, Axia is confident both of being technically successful but also of making money.

The timing of the project, which the consortium has apparently indicated could be up and running by yearend, seems attractive.

AT&T which in March 2007 acquired a licence to provide TV services in Palo Alto under the Californian DIVCA legislation, which gives the state rather than municipalities the right to issue such licences, has just started to provide such services in East Palo Alto - and is due to do so in Palo Alto itself by mid-2008 - but as of the turn of the year was in dispute with the city council over poor handling of local channels, which due to the video streaming technology are being transmitted at inferior resolutions to other channels. Comcast's license is also due to expire in around two years, which may have other implications.

The Palo Alto City Council is apparently due to further review the proposal on July 14, by which time hopefully they will have overcome their fear of Canadians and Swedes bearing gifts** and will take the plunge into what should be a glorious broadband future.

* In fact the company seems to have stated this directly in a letter to the Palo Alto Council.

** Ref Virgil "Aeneid" (II, 49) "Timeo Danaos et dona ferentes". In this case, as we know, the gift was a large wooden horse whose acceptance was in fact disastrous to the inhabitants of Troy; Palo Alto hopefully should do better.

2) Axia NetMedia-led consortium proposes high-speed broadband access project for city of Palo Alto, California

July 8th The city council and a number of residents of Palo Alto, California (pop: 61,200) have been presented a proposal for ultra-high-speed (100 Mbit/s) broadband Internet access for all businesses and residences, based on expanding the city's fibre optic network over three years, by a consortium consisting of:

1. [Axia NetMedia](#) of Calgary, Alberta, potentially the major investor in the consortium, a provider of open access networks in Canada, France and elsewhere, whose main development to date has been the Alberta SuperNet, a high-speed network funded by the Alberta State Government, connecting over 429 communities in both urban and rural Alberta.
2. [PacketFront](#) of Stockholm, Sweden, a developer of open broadband systems for the delivery of triple play services by municipal and utility fibre networks, which in August 2007 acquired DynamicCity, the operational force behind the UTOPIA initiative in Utah.
3. 180 Connect of Englewood, Colorado, a provider of installation services to the home entertainment, communications, enterprise data and home integration service industries in North America, with over 4,000 employees in 85 branch locations.



The project is estimated to cost around \$44.2 million, of which Axia NetMedia would contribute up to \$30 million, with the remaining \$13 million or so being the value of the dark fibre and other assets to be contributed by the city.

Under the proposal, Axia would own the entity, 180 Connect would design and construct the network and PacketFront would supply hardware and software and manage the network.

The city itself would have an "arms-length relationship" with the group by entering into specific contracts and leasing a few city assets, including the use of 36 of the city's dark fibres, but would need to commit to finding retailers willing to sell services through the network. The whole deal could be closed after 25 years if the city wished to purchase the entire network for \$1.

Following the presentation, a number of concerns were expressed by former mayor and council member Bern Beecham, including doubts as to whether the network would attract sufficient service providers; what the financial risk to the city council might be if the scheme collapsed or overran on cost; whether Comcast, which has an exclusive local cable licence to 2010, would have any basis for suing the city council if the scheme went ahead; and to what extent the scheme might trigger a price war with existing service providers.

NB: The City of Palo Alto Utilities (CPAU) organisation, which operates city-owned utility services such as electric, natural gas, water and sewer services, already operates a significant, open, 26 mile long optical backbone network, consisting mostly of 144 fibre strands (packed 12 x 12 per cable) much of it hosted on the vendor-neutral PAIX and supported, according to CPAU, by around 100 service providers.

In December 2003, the CPAU launched an FTTP trial for businesses and residences in Palo Alto, involving Motorola and Quantum Bridge, which if successful would have resulted in the replacement of CPAU's legacy infrastructure. However this project does not seem to have been very successful. Apart from any technical issues, of which there are always many, any such previous proposals seem to have foundered on how to finance such an expensive scheme.

3) Lightstorm Networks, supplier of Ethernet silicon, appoints Rick Du, previously with TriQuint, to lead China operations

July 8th [Lightstorm Networks](#) of Galway, Ireland and in the U.S. of Waltham, Massachusetts, an emerging fabless supplier of highly integrated, standards-based semiconductor solutions for carrier-grade Ethernet networks, which:

- a. Since its founding in 2003 has raised around \$8.2 million from Trinity Venture Capital, Delta Partners, Enterprise Ireland and the Western Development Commission.
- b. Works with software and complimentary silicon partners including IP Infusion, Cortina Systems, LSI Logic and semiconductor foundry TSMC.
- c. In September 2007 announced availability of its first product, the MEF 9/14-compliant Brooklyn-10, a carrier-grade 20Gb Layer 2 switch designed to support carrier Ethernet services for PBB, PBB-TE, VPLS, VPWS and H-VPLS, CFM (802.1ag and 802.3ah) for 3.3ms OAM and EFM services, and to offer the latest carrier Ethernet services at wire-rate speed without the requirement for complex NPU or FPGA programming.



- d. In December 2007 announced sampling of its latest carrier Ethernet solution, the Hudson OAM service accelerator, designed to enhance OAM capability with support for both IEEE 802.1ag and ITU Y.1731 connectivity fault management protocols.

Has announced the recent addition of Rick Du, previously with TriQuint Semiconductor and Future Electronics, to its China-based operations to provide support for the Chinese market from the company's local headquarters in Shanghai.

Under Du's direction, the team of field application engineering, regional marketing and strategic business development personnel, along with local distribution partner Dragon Technology Distribution, will focus on meeting the growing needs of the Chinese market in Lightstorm's target application areas of packet optical transport, carrier Ethernet switching and wireless backhaul.

4) NTT Com displays Teknovus GEPON chip-based SFP ONU from Furukawa Electric at Interop Tokyo

July 8th [Teknovus](#) of Petaluma, California, a fabless supplier of EPON chips and embedded software for use in broadband access networks, whose products:

- a. Have been deployed by more than 35 service providers around the world, enabling the delivery of convergent services, including IPTV, via optical fibre networks.
- b. Support the full FTTx network, covering both the OLT and the ONU.
- c. Are supported by sales and support centres in Tokyo, Seoul, Beijing, Shanghai and Shenzhen.
- d. According to Teknovus include the only PON chip that fits into the SFP form factor, which requires a small chip and extremely low power consumption.

Announced that [NTT Communications](#) of Tokyo, a major Japanese carrier providing advanced information and communications technology solutions worldwide, has displayed at Interop Tokyo 2008 a small form factor pluggable ONU from [Furukawa Electric](#) based on the Teknovus GEPON ONU chip.

The FITELwave AG9, designed to enable network solution providers expand rapidly into fibre-based networks, fits entirely within the standard SFP and enables plug-and-play for FTTx without requiring AC adaptors, Ethernet cabling or changes to existing LAN software.

The Teknovus-based ONU works with any standard SFP port, enabling a wide range of applications, including:

1. Enterprise switches and routers for fibre to the desktop.
2. Mini-DSLAMs for fibre-to-the-basement.
3. IP-PBXs and softswitches for fibre-to-the-business.
4. Home gateways with SFP socket for FTTH in one box.
5. WiMAX/femtocell backhaul for fibre-to-the-base station.



According to Teknovus, the Furukawa Electric SFP ONU offers all of the advantages of the Teknovus GEAPON chip design, such as guaranteed SLAs, advanced traffic management, multiple LLIDs, application aware filtering, IPv6 and optical monitoring and management.

5) Huawei Technologies reports 2007 revenues of \$12.6bn, up 47.7%, for net income of \$674m

July 8th [Huawei Technologies](#) has released its 2007 annual report included the following profit and loss specifics and balance sheet items based on IFRS accounting principles:

1. Revenues in 2007 of \$12.560 billion compared to sales of \$8.504 billion in 2006, an increase of 47.7%.
2. Gross profit in 2007 of \$4.262 billion or 33.9% of revenue, up 38.4% compared to gross profit of \$3.080 billion or 36.2% of revenue in 2006.
3. Net income in 2007 of \$674 million or 5.4% of revenue, up 31.6% compared to net income of \$512 million or 6.0% of revenue in 2006.
4. Operating profit percent of 7% in 2007, unchanged on 2006.
5. Cash and cash equivalents at December 31, 2007 of \$1.686 billion, up \$636 million over 12 months compared to the same measurement at December 31, 2006 of \$1.056 billion.
6. Finished goods inventory at the end of 2007 of \$721.665 million, up 57% compared to finished goods inventory at the end of 2006 of \$459.576 million.
7. "Goods delivered but not completely installed" at the end of 2007 of \$679.578 million, up 47.1% compared with a valuation for the same category at the end of 2006 of \$461.988 million.

NB: A notable contribution mentioned in the report is Huawei's solution for global warming - "recyclable chopsticks" - now used in all its canteens. Huawei claims this innovation will save the equivalent of 16,800 fully-grown trees or 1,800 tons of CO2 emissions in a single year. Additional benefits possibly come from shorter meal times due to the need to eat up quickly before the papier mache chopsticks start wilting, or are they just normal wooden chopsticks that are boiled and then reused - something westerners who like to try their hand at chopsticks at home often do anyway!

6) EXFO introduces web-based NQMS*fiber* 5.0 monitoring software for centralised fibre network management

July 7th [EXFO Electro-Optical Engineering](#), headquartered in Quebec, Canada, a developer and supplier of test and monitoring solutions for network service providers and equipment manufacturers in the global telecommunications industry, has announced the release of NQMS*fiber* 5.0, a web-based fibre monitoring solution with functions for centralised fibre-optic network assurance.

Enabling improved operation and maintenance, the latest element management system software release includes:

1. An enhanced learning feature that automatically sets fault-detection thresholds across a full dynamic range, thus rendering the optimisation of the system easy to achieve.



2. Other features such as alarm management, scheduled reporting, trouble-ticket handling, and status view of a specific region or entire network on a two-dimensional map.

EXFO claims NQMS*fiber* 5.0 is the only EMS software on the market in which all access and reporting functions are web-based, with real-time alarm management and status monitoring functions supported using applets that are fully integrated into web browsers.

Etienne Gagnon, VP of Product Management and Marketing at EXFO, commented:

- "This latest version of NQMS*fiber* delivers the intelligence that customers have been demanding from their fibre monitoring solutions and sets a new standard for remote fibre test systems".
- "The combined benefits of EXFO's best-of-class OTDRs and automated functionalities within the most advanced fibre monitoring solution allow NSPs to avoid network disruptions or accelerate restoration time without the need for complex and time-consuming configurations".

7) OTE of Greece selects SeaChange unit On Demand Group for managed VoD solution

July 8th [SeaChange International](#) of Acton, Massachusetts, a provider of software applications, services and integrated solutions for video-on-demand (VoD), digital advertising and content management, operating via three segments:

- a. Broadband: develops and markets VoD systems for digital management, storage and distribution of video.
- b. Broadcast: offers products for the storage, archiving, on-air playback of advertising, and other video programming for the broadcast television industry.
- c. Professional Services: offering implementation, training and education, maintenance and system integration services.

Announced that its subsidiary OnDemand Group (ODG) of London, UK, a VoD content acquisition and management partner to operators, has taken a contract from OTE of Athens, Greece's largest telco with 5 million fixed lines and over 700,000 broadband customers, whereby ODG will provide an outsourced VoD solution as part of OTE's plans to extend its service offering and roll-out IPTV services to its customer base.

Specialising in the development and management of transactional television services, ODG already works with customers such as Virgin Media, Kabel Deutschland, Unity Media, Telekom Austria and others, with end-to-end content solutions, combining services management and technology with speed to market.

In 1998, ODG launched the Front Row television PPV movie service over the UK cable network, which became the largest PPV movie service outside of the U.S. with, to date, more than 45 million paid viewings.

In 2004, ODG formed FilmFlex, a VoD movie service with Sony Pictures and The Walt Disney Company as joint venture partners, which was launched over UK cable networks in 2005.



8) Conexant acquires SigmaTel multi-function printer imaging product lines from Freescale on undisclosed terms

July 8th [Conexant Systems](#) of Newport Beach, California, a \$250 million-capitalised supplier of semiconductor solutions for Internet connectivity, digital imaging and media processing applications, has signed a definitive agreement with [Freescale Semiconductor](#) of Austin, Texas, supplier of a portfolio of power management solutions, microprocessors and microcontrollers, sensors, analogue and mixed signal circuits and software technologies, involving:

1. Conexant acquiring Freescale's single-chip SigmaTel multi-function printer (MFP) imaging product lines.
2. More than 50 Freescale employees, with expertise in printer and imaging technologies and primarily based in Waltham, Massachusetts, joining Conexant's Imaging and PC Media (IPM) group when the transaction closes.
3. Conexant also acquiring Freescale's SigmaTel digital photo frame product lines, which allow users to view and share photos from traditional digital cameras, camera phones and photo-sharing web sites on high-resolution LCD displays.

When closed, expected within the next 30 days on undisclosed terms, the Conexant imaging product offering will include fax SoC and datapump solutions, highly integrated MFP SoCs for inkjet, laser and photo printers, and high-performance system solutions for digital photo frames.

Bernd Lienhard, SVP and GM of Conexant's Imaging and PC Media business, was quoted as saying:

- "When we complete the acquisition of Freescale's SigmaTel MFP imaging product lines, Conexant will be a leading supplier of innovative solutions to the high-growth MFP market segment".
- "We will also strengthen our imaging product and technology portfolio and broaden our customer base".
- "In addition, we gain a dedicated and experienced design team that will enable us to accelerate the introduction of advanced imaging solutions".

More Beans

(Links against the company name illustrate the entire history of the company; those against the "more" legend bring up the individual story).

EC approves grants of \$223m for Germany, \$11m for Italy, to expand broadband service availability in rural areas [more](#)

[NTT Com](#) and Russia's TransTeleCom launch service on 570 km, 640 Gbit/s capacity Hokkaido-Sakhalin Cable System [more](#)

Titan Global Holdings launches GWI, wholesale provider of international telecom traffic [more](#)

Timbercon begins production of XFP Electrical Loopback device for testing transceiver ports [more](#)

[Acme Packet](#) expects Q2 revenue of \$24.5-25.5m, vs \$31.7m in Q1, net income of \$0.2-1.2m [more](#)



[Zarlink](#) notes demand from National Bank Financial hedge fund, with 5.2% stake, for replacement of CEO + board members [more](#)

[Nortel](#) appoints Jackson Wu as head of Greater China, Francois Lancon to lead Asia Pacific region [more](#)

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