



Transforming Broadband Into DOLLARS

- **Answers Inside the Network - Grant Seiffert comments on industry challenges**
- **Impacting Revenue Per Subscriber**
- **Copper's Still Got Game!**
- **Delivering Profitable Ethernet Solutions**



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Editor's Letter



Baking Broadband Cake

What is the hottest topic in the telecom industry today? You guessed it, broadband! It doesn't matter what part of the country you examine, Company A is always trying to out-do Company B, by providing faster internet speeds, the most HD channels, and the best phone service all in one cost efficient bundled service plan. In order to provide the best services a provider must first build a future proof network that encompasses a grow-as-you-go design.

As a person who enjoys cooking on occasion, designing a broadband network reminds me of baking a cake from scratch using my grandmother's favorite recipe. It's important to come up with the right mix of ingredients in order to create a product that people will enjoy eating, I mean using, each day.

When baking a broadband cake you will need to figure out the flavor, which could be GPON, Active Ethernet, VDSL2, ADSL2+, etc. Next you will need to decide if you will want to use a fiber or copper cake dish.

Then you should make a note of all the ingredients needed to complete your master piece. Those should include the following: one softswitch box, four boxes of DSLAMs, ½ cup of modems, a carton of OLTs, an extra large bag of ONTs, multiple sticks of distribution cables, drop cables, and feeder cables. You will also need several cups of splitters, 3 tablespoons of splice cases, a dash of demarcation devices, and three ounces of pedestals. To top it off use a bag of fiber distribution hubs and two cups of fiber termination equipment.

After understanding the type of ingredients you will need for your recipe, the real challenge is finding the best brands that will give your broadband network cake the best taste at prices that fit within your budget. If you go to the tradeshow grocery store you will be overwhelmed by all of your options. Therefore, most people look to a consulting and engineering firm (CEF) or distributors who understand the pros and cons of the product choices before they make purchasing decisions. Once you're knowledgeable about your branding options what will the ingredients be in your cake?

This issue of Skinny Wire is filled with articles and information to help you put together the best recipe for your broadband network. Happy Baking!

Jennifer Beck

Making Broadband

By Rodney Wise
Director of Engineering Services
Walker and Associates



We are always looking for ways to improve our businesses, become more profitable, and have less impact on the environment. Lately, everyone is obsessed with healthcare and broadband topics. Healthcare is understandably a very important topic and from all of us in the telephony business, we like having our offerings discussed in front of larger audiences.

Why Us?

I believe our government and general population have listened to us over the last twenty years as we touted the benefits of broadband telephony. Everyone seems to have bought into all the advantages broadband telephony has to offer such as distance learning, telemedicine, e-commerce, and public safety just to name a few. Of course there is the usual telephone conversation offering and on the pure entertainment front we have the IPTV and internet video offerings. If you measure success by the amount of attention thrown our way by the general public and the government, broadband telephony is a runaway success story.

What is it?

Broadband Telephony is high speed internet access usually provided through one of the following transmission technologies:

Digital Subscriber Line (DSL) is a wireline technology that transmits high speed data over the traditional copper telephone lines. DSL transmission speeds vary widely based on the type of DSL deployed and the length of the copper loop.

Cable Modems allow cable operators to provide high speed data over coax cables that traditionally have been used to broadcast television signals.

Fiber to the home (FTTH) uses fiber optics as the transmission medium for high speed data delivery. Transmission speeds vary depending on type of technology used to deploy FTTH, but usually the speeds are ten times greater or more than DSL or Cable Modem.

Wireless broadband connections can be mobile or fixed and generally provide speeds similar to DSL or Cable Modems.

Satellite broadband is useful in remote sparsely populated regions. The internet

In October 2009, according to the Census Current Population Survey data, 63.5 percent (75.8 million) of U.S. households used a high-speed Internet – “broadband” – service (i.e., technologies that are faster than dial-up, such as DSL, cable modem, fiber optics, satellite, and wireless). This represented a 25 percent increase from just two years earlier (50.8 percent in October 2007).

d Successful

speeds available are not as fast as DSL or Cable Modems and generally cost more.

Broadband over Power Lines (BPL) uses existing power line connections to the home for providing similar speeds to DSL and Cable Modems.

Profitability

Trying to gauge profits in a very competitive market place during high growth and construction periods is probably best left to someone much more in tune to accounting practices. However, improving profit ideas that surface across the industry generally focus on new services and positioning, market expansion, improving technology and reducing costs. Some ideas that may improve broadband success are listed below.

- Deploying new services such as IPTV and specialized product bundles can improve market penetration. Offering tiered pricing or tailoring prices for the product application instead of having a one size fits all approach can improve overall margins.
- Expanding higher margin business services by improving the suite of products and services for business customers helps to offset low margin, high volume business. Upgrading a business customer to active Ethernet from a DSL service or PON network and bundling CPE products associated with the service, helps improve customer loyalty by offering

higher speeds and availability.

- Upgrading to new technology to increase bandwidth using existing facilities can improve take rates and billing alternatives. Evaluating areas for VDSL2 deployments and active Ethernet solutions can improve overall system efficiencies.

Summary

As in any venture, there are advantages and disadvantages for being in the news headlines. Broadband Telephony is no different. Its popularity continues to soar not only in North America, but globally as well. The advantage to this is everyone is requesting broadband service and asking for higher and higher speeds. This leads to flexibility in how services are priced and bundled. Pricing alternatives such as offering one price for multiple services or tiered pricing for bandwidth usage provides flexibility in the market and possible margin opportunities.

In my opinion, the dark side to this popularity and the government's involvement in broadband telephony is the blurred line between the right to broadband telephony and the privilege to have broadband telephony. We want everyone to have access to broadband telephony, but we also need customers to be willing and able to pay for the broadband telephony they desire. To make broadband successful, everyone must understand that we can't deliver all services to all people over night without tremendous cost and associated price points.

“By 2013, smartphones will account for 41 percent of wireless handset unit sales compared with 25 percent in 2009”

Source - TIA 2010 Market Review and Forecast

THE WISE GUY



As Director of Engineering Services for Walker and Associates, Rodney Wise confronts a variety of technical questions on a daily basis. His broad background provides him a real-world perspective of challenges and opportunities telecom engineers and project planners face in the field. This experience, along with continual training from the manufacturing community and a staff of equally talented Sales Engineers provide customers with a wealth of pre and post-sales engineering support. The Wise Guy is a regular feature in The Skinny Wire and on our website, www.skinnywire.net.

Answers Inside the Network

By Grant Seiffert
President, TIA

Who cares about Network security, reliability and sustainability?

The answer, of course, is "EVERYONE."

Everyone including me, you, your company, your customers, consumers, the world. A case in point:

Steve Jobs can't get mobile service when launching the Apple iPhone 4. After testing the new product, and raving about its merits, Wall Street Journal "Personal Technology" columnist Walter S. Mossberg says he wouldn't recommend the product for voice calling. Why? Because of the mobile network's limitations.

Now, let's look at the question: How will the Network support the next 80 billion devices and applications? Unfortunately, with the strain on the Network, the information and communications technology (ICT) industry has become a victim of its own success. Demands on the Network have created new problems and challenges that all of us have to pay attention to: security, reliability, performance, scalability, sustainability.

Complicating matters is the uncertain regulatory climate in Washington, which has chilled much-needed investment in the Network, and the changing face of our industry, requiring new business models and partnerships as a means to survive.

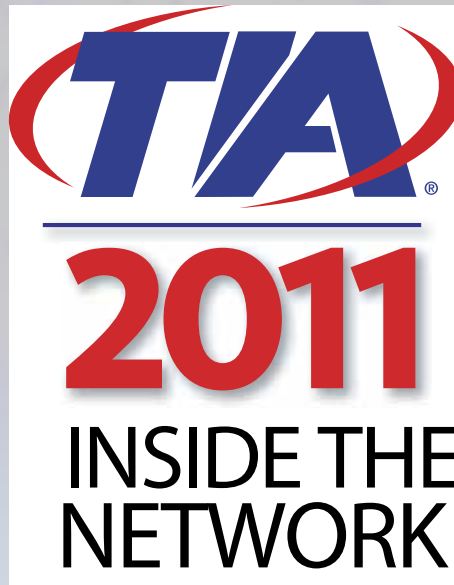
The looming problems are so large that they require an industry-wide conversation, collaboration and response.

Collectively, we all are responsible for the ongoing success of the Network, a multifaceted, elaborate blend of broadband technologies and components, wireless and fixed architectures, applications, protocols, standards and regulations that enables the multitude of services we all take for granted, such as smart phones, videoconferencing and business being conducted via "the Cloud."

Among the challenges facing the ICT industry are questions such as:

- How we as manufacturers, distributors, carriers, developers and providers of services can come together to deliver what our customers need: converged solutions to their security and reliability problems as the demands on the Network continue to exceed capacity;

- How telecommunications service providers and equipment vendors will continue to innovate in response to the onslaught of demand for high-bandwidth applications that are stressing network infrastructure capacity;
- How disruptions to the value chain from players such as Google, Skype, Amazon and utilities will affect business as we know it.



With that in mind, and on the industry's behalf, the Telecommunications Industry Association (TIA) has launched a new event: TIA 2011: Inside the Network, May 18-20, 2011 at the Gaylord Texan adjacent to the Dallas-Fort Worth International Airport.

Three distinct components of TIA 2011 have been created with one idea in mind: To gather the TIA membership and our industry around solving the problem: What are we doing about the exploding demands on the Network?

- 1) A C-Level Summit kicking off May 17, during which executives in our industry will be invited to converse with leading representatives from end user organizations about their burgeoning requirements affecting the Network in the coming years. Participants of the Summit will be asked to develop specific deliverables and report on them during the main event Conference. The Summit will kick off a year-long interactive process designed to accomplish specific objectives.

- 2) A Digital Marketplace, providing state-of-the-art interactive Web networking and learning opportunities, as well as a branding and visibility platform for participants. The Digital Marketplace will extend the reach of the physical TIA 2011 event by focusing on attracting an international audience over a three month period (April-June 2011).

- 3) TIA 2011 Conference & Exhibition, which will focus on rallying the industry around solving the problems of capacity of the Network. The Conference will be designed to tackle these problems in a variety of areas, including:
 - a. Broadband Policy and Regulation
 - b. The Converged Network
 - c. Smart Devices and M2M
 - d. Mobile Backhaul
 - e. Sustainability
 - f. The Utility Network

As members of our industry and of TIA, you are invited to the table. Now is the time to work closely together to create innovative solutions for a robust Network that can meet demand today and for the foreseeable future. It is paramount to keep ICT companies alive, vibrant and thriving. We look forward to seeing you there.



Grant Seiffert is President of the Telecommunications Industry Association. Visit www.tiaonline.org for information about TIA 2011: Inside the Network.

Impacting Revenue Per Subscriber

By Kevin Morgan
Director of Product Marketing, CN Division
ADTRAN

Drive for Enhanced Broadband

Consumer demand for IPTV and other advanced services continues to rise and carriers are moving quickly to grow bandwidth throughout the network. Nowhere is that more visible than in the last mile of the access infrastructure. Most new greenfield deployments are fiber-based as there is minimal cost difference in deploying new copper versus new fiber. Many times, delivering Fiber To The Premises (FTTP) is the best solution — offering carriers a high-capacity fiber access network that enables the delivery of next-generation services and allows carriers to increase their revenue per subscriber.

The Right Technology

Gigabit Passive Optical Network (GPON) has emerged as the key enabling technology for FTTP deployments. Offering carriers end-to-end IP/Ethernet connectivity, GPON provides carriers with a cost optimized, high-density solution that allows the delivery of a converged voice, video and data infrastructure, enabling carriers to maximize their revenue opportunities to every end user — today.

Enabling the Last Mile

Designed with fiber deployment in mind,



the ADTRAN Total Access 5000 supports a 220 Gbps backplane architecture, offering high-capacity switching and bandwidth for ultra-broadband services. The GPON Optical Line Terminal (OLT) provides a full 2.5 Gbps of dedicated bandwidth per PON, enabling the delivery of advanced solutions like IPTV across an all-Ethernet architecture. ADTRAN's family of Optical Network Terminals (ONTs) provides carriers with different delivery options for both residential and business opportunities. In addition to GPON, the Total Access 5000 also enables the delivery of advanced services over copper networks thereby allowing the Total Access 5000 to offer the industry's most comprehensive set of solutions from an all-Ethernet platform.

Ethernet End-to-End

ADTRAN is focused on delivering solutions that are designed for tomorrow's networks. Ethernet's global standardization and rapidly growing deployment are fueling the next-generation network. Deploying fiber to the end user is a costly proposition for any carrier. When making that investment, it's critical that the right technology be in place to enable the required services. Bandwidth alone isn't enough. Service convergence and awareness are critical to success. The Ethernet core of the Total Access 5000 allows carriers to confidently deploy a solution that they know is built for tomorrow's network while enabling Ethernet end-to-end.

Deployment for a Secure Future

The Total Access 5000 is more than just a next-generation device — its multi-service capabilities allow carriers to leverage their investment by efficiently expanding service offerings by just adding a line card. Service providers can utilize the same platform to simultaneously deliver advanced access for new customers, including GPON, ADSL2+ and VDSL2. Ethernet aggregation, Ethernet over Copper (EoCu), Ethernet over TDM (EoTDM), and Active Ethernet solutions are also available.

Walker and Associates Completes Bi-Annual Quality Audit

By Randy Turner
Marketing Communication Manager
Walker and Associates

In June, Walker and Associates received its annual audit for TL9000 compliance. Auditors converged on the corporate campus in Welcome, NC, as well as at the remote sales office in Alpharetta, GA, and at the Winston-Salem, NC distribution center. Results were reviewed with senior management immediately following the audit.

Walker scored extremely well in all areas of review, with no major infractions noted. Auditors noted opportunities for improvement with the company's quality initiatives, but did not reference any issues impacting delivery of customer service. Overall, the

company received high marks of praise and congratulations for its commitment to quality standards.

In addition, Walker conducted its annual Customer Satisfaction Survey in May as part of TL9000 plan. Responses from survey participants provided invaluable feedback regarding Walker's performance, business requirements, and customer satisfaction levels.

Nearly 50% of responses came from customers who work for independent telephone companies and competitive service providers. Customers from utilities, wireless carriers and resellers accounted for another 25% of responses.

ISO 9001:2000 applies to organizations involved in the design and development, manufacturing, installation, and servicing of products. To be certified to the standard, companies must implement a comprehensive quality management system that addresses all areas of operation - from in-

ternal staff training practices to product design, manufacturing, delivery, and service.

Walker successfully completed its initial audit in August, 2008, and was officially ISO-certified. The ISO certification process ensures ongoing compliance because, once certified, companies are externally audited every six months.



Copper's Still Got Game!

By Jake Sailana
Marcomm Manager
ZyXEL

Fiber to the Home [FTTH] may be the end game but copper is definitely not done yet! Operators are leveraging their investment in existing copper for faster broadband connections for IPTV, Internet and voice services over existing copper. In addition to ADSL2+ that boosts speeds up to 24Mbps, Bonded ADSL2+ and VDSL2 solutions can double and quadruple these speeds respectively to help operators leverage existing copper infrastructure while improving connection reliability and offering premium services like IPTV.

Bonded ADSL2+

Loop bonding technology provides the telecom industry with a revolutionary technique to combine multiple ADSL2+ connections into a single, aggregated connection. Supporting up to 48 Mbps downstream and 2 Mbps upstream data rates, service providers can offer advanced bandwidth-dependent services such as broadcast

video and video-on-demand (VOD) to subscribers. Bonded ADSL2+ supports multiple high-definition television streams at significantly longer distances than other existing xDSL technologies. Loop bonding also provides carriers with opportunities to target the profitable SOHO and SMB markets with cost effective and differentiated services.

VDSL2

Very-High-Bit-Rate Digital Subscriber Line 2 (VDSL2), or G.993.2, is gaining popularity globally among the xDSL family of standards. VDSL2 gives consumers speeds of up to 100 Mbps upstream and downstream at 700 feet and 20-30 Mbps between 2500 to 4000 feet. So VDSL2 solution serves as an ideal solution for FTTB, FTTC and FTTN eliminating last-mile bottlenecks and enabling mass deployment of triple-play services. In addition, VDSL2 gateways that offer auto ADSL2+ fallback feature address

the backward-compatibility issues of the traditional ADSL technology making migration to VDSL2 much easier for operators.

Internet use is no longer limited to surfing web pages, download a few songs, send and receive some photographs. The web apps landscape is changing fast and so is user behavior and Internet use - driving the demand for faster connection speeds. Technologies like Bonded ADSL2+ and VDSL2 can enable service providers to satisfy this demand, even as they transition to fiber, while boosting revenue and keeping customers loyal.

ZyXEL based in Anaheim, CA is ranked among the top 5 global manufacturers of xDSL CPE. ZyXEL offers a complete range of multi-service broadband gateways, connected home devices and SMB networking solutions. www.us.zyxel.com.

Remote Monitoring for Critical Sites via the Internet

By Jeff Wright
National Sales Manager
Newmar

Knowledge is power! Receive immediate notification and view current conditions at any remote sites when problems occur before dispatching personnel with Newmar's Site Power Monitor, model SPM-200.

Web-enable and integrate intelligence to any site's AC and DC power system for 24/7 monitoring, alarm condition notification and data logging of vital electrical functions. All functions are programmable, accessible, and managed via the Internet: TCIP or SNMP.

The ruggedized Site Power Monitor is designed specifically for monitoring outdoor DC systems, solar power systems, rectifiers, batteries, converters, inverters and

AC power at communication sites, outdoor enclosures, and base stations in harsh environments via Ethernet or Wireless connection. The palm sized unit can be rack, DIN-rail, or wall mounted, and is easily adapted to virtually any make of power system via nine sensor input ports, which capture and stream critical data via the Internet for analysis and logging of site history. Web page based programs are easily user configured for site parameters with up to 50 desired alarm conditions settings and multiple automatic notification options by e-mail, PDA, and mobile phone.



Sites without internet access can use the monitor solely as a data logging instrument that captures and retains a 30 day history file, ready for download to a lap top computer during maintenance visits for recording site history and analysis of component performance and failure conditions.

Multi-Site Software Simplifies Remote Site Monitoring of 100 Sites

Multi-site console software for the SPM-200 enables system network monitoring to 100 sites with a single web page based interface.

The console software allows system network monitors to consolidate data from numerous locations' SPMs into a single web interface. Utilizing the console software enables network administrators to view current alarm notification condition at any one of their remotely monitored sites, combine logged data and execute firmware updates to several units at once. Additionally, remote sites' alarm levels can be configured and adjusted from the convenience of one's office.

Accessories

SPM Rackmount Bracket Allows for 19" and 23" rackmounting of the SPM-200 with two convenient mounting options: Recessed Mount and Front Mount. The SPM-RM only occupies 2 RU (3.5") of vertical space.

Optional Sensors available for the SPM-200 are: Water, Door/Window Open and Fire/Smoke Detector.



Meeting the Challenges of Profitable Broadband Delivery

The challenge for service providers today is to blend network architectures and create solutions that work for both wireline and wireless networks while leveraging new technologies and techniques that help accelerate the cost-effective delivery of broadband services.

Customers want more bandwidth to share their data, photos and video on social-networking applications like Facebook. They also want high-definition TV (HDTV) and video on demand (VoD), as well as coverage for their iPhone applications. And with more consumer electronics devices coming on the market, service providers will need to take steps to ensure their networks can keep pace. In short, customer demand for faster access speeds creates the need for high-performance networks that will require the bandwidth capabilities of fiber.

Increasing Bandwidth Demands in Rural Communities

Obviously, the requirement for increasing bandwidth goes beyond the easy-to-reach urban and suburban end-user. That's why ADC is committed to helping service providers bring improved, widespread broadband services to underserved rural communities through its comprehensive product portfolio of fiber-based solutions accepted by the USDA Rural Utilities Service (RUS).

For example, ADC's OmniReach® Hub-in-a-Pedestal (HIP) is a fiber distribution hub (FDH) designed for deploying fiber in rural communities consisting of 12 to 96 homes. Right-sized for rural landscapes, this field-friendly unit is enclosed in a pedestal, rather than in a metal cabinet, and can be placed in the ground without pouring a concrete pad or installing a hand hole. This feature speeds deployment of fiber to the home and reduces overall project costs.

Rural FTTP Deployments Need Right-Sized Solutions

In their initial fiber-to-the-premise (FTTP) deployments, service providers focused on delivering services to single-family homes and large residential multi-dwelling units (MDUs). Now, as they turn their attention to smaller MDUs, multi-tenant units (MTUs) and rural applications, they are discovering that traditional fiber-installation equipment is not always well-suited for these environments. If they are to build reliable FTTP networks quickly and cost-effectively for these customers, service providers will need products that are right-sized for these deployment scenarios and have the flexibility, accessibility and scalability necessary to ensure long-term reliability, easy maintenance and fast service turn-ups.

Reaching Rural Developments

Residential single-family units in new housing developments and existing rural neighborhoods also require right-sized installation equipment. Although some new applications require traditional 144-, 288- or 432-fiber densities, many developers today prefer to reduce costs by phasing in deployment of the FTTP network. For example, they may begin with an initial 100 homes and roll out subsequent phases over time. As a result, service providers need products that scale from smaller to larger fiber densities as the network is phased in.

Responding to these requirements, ADC has designed a product portfolio that enables service providers to build faster, more efficient FTTP network architectures. These products are effectively configured into units right-sized for smaller and phased-in deployments but with the same features available with traditional equipment: easy-access swing frame, plug-and-play splitter architecture, splitter output parking lot and fiber-management capabilities. Several of these products are listed below.

- **OmniReach® RealFlex™ 3 Drop Cables** – are designed for maximum flexibility, handling and performance to meet the rigors of inside or outside plant FTTP deployments. These products are available in Indoor/Outdoor, Riser and Plenum cable types for use in residential, business or multiple dwelling unit (MDU) structures.
- **OmniReach® Indoor Fiber Distribution Terminal (IFDT)** – a compact, wall-mounted enclosure for splicing and termination of 6, 12, 24 and 48 fibers. Its double-hinged design separates the splicing and cable termination in the rear compartment from the jumper interconnection in the front, resulting in a space-efficient, easily-accessible unit.
- **NEMA Fiber Demarcation Cabinet (FDC)** – for termination and splicing for fiber cables in environments that require secure, low-profile enclosures. Designed to satisfy NEMA 250, both the one- and two-door versions are wall-mountable in doors and on a building's exterior. Their compact design features familiar industry interfaces with FC, SC, ST®, LX.5® or LC connectors.

New technologies in fiber, equipment and plug-and-play solutions are enabling many service providers today to stay competitive in an ever-changing environment. By investing in these advanced technologies, they are delivering the high-speed, fiber-based broadband access their customers demand.

For more information, visit ADC's Broadband Stimulus Resource Center at www.adc.com/rus or call **1.800.366.3891, ext. 73026**

Delivering Profitable Ethernet Services Over Any Access Media

By Ken Morris
Channel Program Development Director
Fujitsu Network Communications, Inc.

The industry has a tall order to fill: a single, coherent, secure network providing voice, video and data services whenever and wherever needed. At the same time, Ethernet has become the most popular interface to attach end users and access devices to the range of Ethernet and IP network services.

There are many challenges in making the next-generation network a reality, with a major one being disparate transmission media among existing access networks. Built over decades, access networks contain a mix of twisted-pair copper, fiber and coaxial media. As networks evolve to efficiently deliver emerging and next-generation applications, including interactive gaming, videoconferencing, Voice over IP (VoIP), and streaming audio and video, the specific problem of combining these diverse access media types in a single Ethernet-friendly infrastructure becomes critical. But there is good news. A technology already familiar to many now puts this goal within reach. This technology is Ethernet or, more precisely, Connection-Oriented Ethernet (COE). COE promises the reliability, performance, and security of trusted SONET/SDH technology, but with the low cost and bandwidth flexibility

inherent to Ethernet.

Regardless of the access technology, the most scalable and cost-effective way to aggregate and switch Ethernet and IP services across any type of access network and transmission media is the EoX Gateway. This is an application-specific configuration of the Fujitsu FLASHWAVE® 9500 Packet Optical Networking Platform (Packet ONP). The EoX Gateway enables ubiquitous delivery of standardized Metro Ethernet Forum (MEF) services.

The EoX Gateway serves diverse applications, including wholesale Ethernet access, retail Ethernet and IP services access, mobile backhaul, and DSLAM backhaul. Service providers can, for the first time, define a common Ethernet service specification for their retail or wholesale Ethernet service portfolio and deliver service regardless of the type and mix of access network technologies over which the service is delivered. Ethernet services can be delivered via native Ethernet over Fiber (EoF), SONET (EoS), T1/T3 (EoPDH) and WDM (Eoλ), and the EoX Gateway handles all of the interworking tasks. It performs all COE switching and grooming, and presents fully-



protected Ethernet or SONET/SDH hand-offs to other transport or service delivery networks.

With the ability to handle multiple types of access media, the EoX Gateway can help wholesale and retail Ethernet service providers dramatically increase the number of addressable customers for differentiable Ethernet and IP services. By leveraging existing access networks and significantly reducing the cost and space of hub Central Office (CO) equipment, the EoX Gateway offers the best approach to profitable Ethernet service delivery.

Manage Costs Using Online Resources

By Randy Turner
Marketing Communication Manager
Walker and Associates

During the past year Walker and Associates has witnessed steady growth among its users of eBusiness accounts on Walkerfirst.com. Matching business trends across the country, customers now expect an online option from their suppliers to keep pace with business requirements.

Our recent Annual Customer Satisfaction Survey indicated strong interest among customers for even more online features from our website. Options currently available include:

- Order/Shipment Tracking
- Order Status (includes shipment notifications)
- Invoice Look Up
- RMA Creation and Status Updates
- Pricing and Availability
- Quote Creation
- Product Search

Additionally, it is possible to turn on Online Ordering Capabilities for a company, from which they can then shop from tens

of thousands of items using an online shopping cart. (Certain limitations may apply to activating this feature for an account. Customers are encouraged to discuss requirements with Walker in order to maximize all available resources.)

With an account, users are free to perform many tasks that would normally require a phone call or an email message to sales or customer service. While there are still plenty of reasons to reach out to Walker via phone or email, many simply find it very convenient to conduct at least portions of their business with us online. Available 24/7, accounts provide a secure, reliable resource of order and quote data.

To access this online feature set, customers simply create a free account from the home page of www.walkerfirst.com. An account is activated within 24 hours. Users are notified by email once the account becomes active. For more information, or questions, contact us today.



One CPE can support your entire broadband network

- VDSL
- HPNA
- ADSL
- Gigabit Ethernet
- Fiber
- Wireless N

Who is Actiontec?

Founded in 1993, Actiontec has become a **leader** in high speed Internet modems and routers, shipping over **20 million** Internet Access devices thus far. Our customers include Verizon, Qwest, TDS, MTS and hundreds of smaller carriers throughout North America. We continuously **innovate**, offering some of the most powerful, feature-rich routers in the residential market. Plus, we strive for **100% customer satisfaction**, delivering **high quality** products that are often times customized to each customer's requirements. Thus, it should not surprise you that more and more carriers are switching to Actiontec.



www.actiontec.com



You are Here. So is ADC.



ADC is a leader in the design and deployment of next-generation networks, including innovative FTTX solutions. Accelerate construction and deployment of the “quadruple play” services required to retain subscribers and generate new revenue.

ADC is committed to providing excellent service and value to our customers. We are committed to offering:

- **Innovative solutions.** ADC’s ‘connectorized’ fiber plug-and-play approach defers capital equipment costs, lowers operational costs, aligns cost to revenue, and helps future-proof the network compared to labor intensive splicing.
- **A wide breadth of RUS-listed products.** ADC has hundreds of products to support US Stimulus Program-funded projects. Learn more at www.adc.com/rus.
- **Best-in-class support.** ADC provides industry-leading technical pre- and post-sales support for product installation and integration.
- **Stability and longevity.** For over 75 years, we’ve supported our customers through the best and worst of times.

ADC’s Leading Fiber Infrastructure Solutions:



OmniReach® Multiport Service Terminal (MST) and Hardened Drop Cables

The MST features hardened connector technology designed to withstand the rugged outside plant environment. ADC’s Hardened Cables provide a reliable interface for fiber drop cables in the outside plant environment.



OmniReach® Fiber Distribution Hubs (FDH)

ADC’s FDH solutions provide for rapid connection between fiber optic cables and passive optical splitters in the outside segment of Fiber-to-the-Premises (FTTP) networks. These solutions facilitate fast service connection and reconfiguration, simplified networks installations, and field efficiencies.



OmniReach® Passive Optical Splitter Modules

The Passive Optical Splitter Modules installed in outside plant enclosures give carriers the ability to split optical signals to multiple homes or businesses.

Fiber Optical Panels

Fiber Optical Panels provide fiber termination, splice and/or slack storage and excellent cable management in a high-density panel for network element, OSP, RNC and distribution network applications.



Next Generation Frames (NGF)

ADC’s Next Generation Frame product line is designed to fit a variety of high-density termination, splice, and storage applications.



FiberGuide® Optical Raceway Systems

ADC’s FiberGuide® solution set is designed to protect and route fiber optic patch cords and multi-fiber cable assemblies between network elements and optical distribution frame areas.



Visit adc.com/rus for Broadband Stimulus & ADC’s RUS-listed solution information.

Walker and Associates and Juniper Networks

*New Opportunities to
"Make a difference in your
network."*

By Juniper Networks



Walker and Associates and Juniper Networks have begun working together to better serve the IP networking needs of service providers. Walker and Associates is a trusted supplier to a wide range of service providers and Juniper is a leading supplier of high performance network and network security solutions for the carrier industry. Juniper looks forward to working with Walker to help serve its customers with their IP networking needs.

Juniper's solutions have been proven successful and reliable in the toughest networks in the world and have developed a track record for performance, simplicity, and manageability. Juniper can help service providers rapidly offer new IP services that can increase revenue, improve customer retention, and move beyond the commoditization of bandwidth. These solutions are built on the innovative EX switches, M-Series routers, MX carrier Ethernet routers, along with a full range of security solutions to protect

wireline, mobile, and cable networks. Juniper also has security software that can run on desktops and about 70% of smart phones currently on the market. This can protect the smart phone as well as provide protection to the carrier network from malware that would enter from the radio access network.

Many service providers are looking to converged IP networks to handle data, voice and video traffic. Juniper has the products needed to help carriers deploy "multi-play" solutions with the needed capacity, security for the different types of network traffic, and will help achieve a lower Total Cost of Ownership (TCO) in deploying the solution.

Juniper is proud to be partnering with Walker and Associates and we hope you will include Juniper on your list of vendors to consider when expanding or upgrading your network, and securing your network. Give Juniper an opportunity to make a difference in your network.

Proudly Serving Our Country

By Teri Ward
Market Development Manager & Proposals Manager
Walker and Associates

Mark Ogilvy, who works in Walker's Marketing Department, is Company Commander, TRP I, 3RD SQDN, 278th Armored Cavalry Regiment of the Army National Guard. Mark joined Walker and Associates in August, 2009 as part of the acquisition of the Sales and Marketing teams from Windstream Supply. Prior to his deployment in support of the Contingency Operation Iraqi Freedom, Mark worked as a Market Development Manager, supporting CPE sales and IPTV solutions. In addition to his Market Development role, Mark also took on additional responsibilities to scout out new products, technologies and applications that would be valuable to the company's growing customer base. During Mark's 14 year career in the distribution business, he has had the opportunity to work in counter sales, sales engineering, marketing and sales management.



Mark Ogilvy, seen on the right, saluting.

Mark has been in the Army National Guard since 2000, and this is his second tour in the Gulf. Mark served during Operation Iraqi Freedom in 2004. Mark and his wife,

Anne Ogilvy, and their 2 children, Julia and Davis, live in Cumming, GA.

The National Guard has a unique dual mis-

sion that consists of both Federal and State roles. For state missions, the governor, through the state Adjutant General, commands Guard forces. The governor can call the National Guard into action during local or statewide emergencies, such as storms, fires, earthquakes or civil disturbances.

In addition, the President of the United States can activate the National Guard for participation in federal missions. Examples of federal activations include Guard units deployed to Kosovo and the Sinai for stabilization operations, and units deployed to the Middle East and other locations in the war on terrorism. When federalized, Guard units are commanded by the Combatant Commander of the theatre in which they are operating.

The Walker family and all of their associates wish Mark all the best during his tour of duty and a safe return home. Walker also would like to say "Thank You" to all the men and women who serve in any branch of the military, past or present.

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Lesley Kirchman
Director of Corporate Marketing
Actiontec Electronics, Inc

High speed broadband is now the most common way for people to connect to the Internet. But with competition fierce, pricing has remained flat. Broadband carriers need to find new ways to deliver broadband at even lower prices.

With the new V1000H, Actiontec Electronics is helping broadband service providers tame the growing complexity of services, speeds, and technology upgrades across their deployment regions, by offering one SKU that can support just about everything. This versatile device supports VDSL2 (with auto-fallback to ADSL), HPNA 3.1 (Home PNA), and Gigabit Ethernet on the WAN side, making it the only CPE device to fit into virtually any ultra-broadband or broadband access architecture, including ADSL, VDSL, fiber to the curb, fiber to the neighborhood, even fiber to the home. That's just one SKU to manage, one product for customer service to learn, less inventory to handle — and upgrading residential customers to faster speeds and new services is seamless.

Not only does this router reduce operating costs, but it can also enable broadband providers to increase ARPU by offering value-added-services over the top. Capable of hosting a number of Java applications, the Router allows you to make more options available to your customers (home automation or enhanced security, to list only a couple of options) in a modular fashion. And the device has been developed and tested in a Microsoft Mediaroom environment, ensuring a seamless experience for these digital entertainment and TV services.

With its unprecedented versatility and value, the V1000H has garnered praise from the industry since its launch, including winning awards and honors from Network Products Guide Best Innovation 2010 and Best Products and Services 2010, TMC Communication Solutions Product of the Year, and the American Business Awards (The Stevies).



Walker and Associates - Connected With Industry Leadership

By Randy Turner
Marketing Communication Manager
Walker and Associates

Your network infrastructure's integrity is critical to your ability to meet customers' growing needs for speed, reliability and future expansion. Compliance with industry standards remains important as innovative products enter our ever-changing marketplace.

Walker and Associates proudly supports associations that are focused on setting and maintaining industry standards, participating in lobbying efforts that promote telecommunications interests among lawmakers, and providing educational opportunities for telecom professionals.

Likewise, we support regional association conferences, expos and golf outings, through event attendance, sponsorships, directory advertising, and promotion on our web site. We're privileged to be associated with these organizations.

In addition to local associations, we enjoy active relationships with national organizations such as AFCEA, FTTH Council, NTCA, RCA, TIA, and UTC. Their newsletters, lobbyists and educational programs result in increased awareness among lawmakers who make critical decisions about our industry. As technology continues to change it becomes even more important that organizations like these retain their influence and significance.

Throughout changes in recent months, these organizations presented comprehensive responses to requests for comments regarding broadband spending issues last year. Their input, along with many others, will assist in shaping new industry rules, guidelines and laws. Their presence and power has not gone unnoticed, and will continue influencing outcomes for our industry.





What are you waiting for?



Juniper Networks is proud to be partnering with Walker and Associates. Over the last 25 years we've seen incredible advances in technology, with one glaring omission – the network. Frustratingly slow. Unreliable. Costly to manage and too complicated to overhaul. Until now.

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Mark Walker Elected to Telecommunications Industry Association (TIA) Board of Directors



Walker and Associates President Joins Board Overseeing Association That Advocates for Broadband Equipment Manufacturers

The Telecommunications Industry Association (TIA), which represents the manufacturers of broadband equipment, products and services for the information and communications technology (ICT) industry, announced this past spring that it has elected Mark Walker, President of Walker and Associates, Inc., to its Board of Directors.

"On behalf of TIA, I wish to thank each new board member for agreeing to serve the ICT industry in this capacity," said TIA President Grant Seiffert. "Each has long been engaged in working with TIA to promote the growth and wellbeing of our industry and has individually expressed a personal commitment to work diligently to help carve a path to prosperity in this time of regulatory and economic uncertainty."

"As a thought contributor to TIA, I look forward to supporting and extending TIAs position and influence on government regulation," commented Mark Walker. "This is particularly important today in allowing the market to operate in ways that encourage private investment in telecom and datacom infrastructure."

As a new board member Mark Walker will bring new perspective to an already rich and diverse body that now encompasses senior-level executives from ADTRAN, Alcatel-Lucent, ANDA Networks, AttivaCorp, Cisco Systems, Ericsson, Inc., GENBAND, Inc., Henkels & McCoy, ILS Technology, Intel Corporation, Intersect, Inc., LGE, Microsoft, Motorola, Nokia Siemens Networks, OneChip Photonics, Openwave, Inc., Panasonic Computer Solutions Co., Powerwave Technologies, Qualcomm, Research In Motion, Sumitomo Electric Lightwave Corporation, Tellabs, Tyco Electronics, Uticom, Inc., and Wirefree. Advisors to the Board include FAL Associates and Telcordia Technologies.

Mark Walker assumed the role of president of Walker in 1998, following leadership positions in other areas of the business, including the company's former manufacturing facility, Evergood. Mark resides in Lexington, NC with his wife and daughter.



ADVANCING GLOBAL COMMUNICATIONS

By Randy Turner
Marketing Communication Manager
Walker and Associates

Walker Recognized in Broadband Properties 2010 Top 100 List

By Randy Turner
Marketing Communication Manager
Walker and Associates

The summer issue of Broadband Properties magazine will feature its annual listing of Top 100 businesses. The 2010 list includes Walker and Associates, who for the first year was selected for consideration. Walker has become an integral supplier for broadband deployment projects over the years, bringing products to market throughout North America.

Criteria

In selecting the Top 100, the publication's editors looked for organizations that are advancing the cause of fiber to the premises in one of several ways:

- Deploying fiber networks. They look for large deployments, or for

innovative business plans and technology configurations.

- Helping others deploy networks by supplying key hardware, software, design services, construction services and so forth.
- Introducing innovative technologies, even if the technologies have not been commercially deployed at the time the list is compiled. They are always on the lookout for technologies that change the rules – by reducing early deployment costs, for instance, or making builds significantly cheaper overall.

Walker continues its quest to become the preferred provider of telecommunications



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BROADBAND PROPERTIES

products within a broad range of market segments. Customers know Walker for its broad range of manufacturer relationships, strong commitment to value, high standards of customer service, and innovative services that reflect a true interest in customer success. Since 1970 Walker has built and maintained a reputation for excellence, resulting in high levels of customer commitment and confidence.

UPCOMING

EVENTS

As an active member of multiple state, regional and national industry associations, Walker and Associates is strategically engaged with organizations supporting telecommunications markets. We demonstrate our commitment through event sponsorships, exhibiting at conferences and expos, and directory advertising. Look for us at the events listed here, and refer to our Upcoming Events section of our website, www.Walkerfirst.com, for additional details.

AUGUST

LandWarNet Conference 2010
TTA Annual Convention
MTIA Annual Conference
NTA Annual Convention
NC Chapter AFCEA Show

Tampa, FL
Murfreesboro, TN
Branson, MO
Lake Tahoe, NV
Fort Bragg, NC

SEPTEMBER

TTA Conv. & Product Showcase
ITA Vendor's Showcase
FTTH Conference and Expo 2010
TANE Annual Convention
PTA Technical Showcase
OTA CO / Info. Tech. Seminar
UTC Region 1 Meeting

Horseshoe Bay, TX
East Peoria, IL
Las Vegas, NV
Dixville Notch, NH
State College, PA
Newport, OR
Rocky Hill, CT

OCTOBER

NCTIA What's New Expo
WSTA Fall Conference and Exhibits
OSP EXPO 2010
MATSS
AMTA Annual Convention
KTA-TTA Conf/Showcase
Midwest Telecom Expo
ATA Associate Member Showcase
NYSTA Vendor Showcase
UTC Region 4 Meeting

Greensboro, NC
Wisconsin Dells, WI
San Antonio, TX
Kansas City, MO
Point Clear, AL
Bowling Green, KY
Fort Wayne, IN
Anchorage, AK
Verona, NY
Acme, MI

NOVEMBER

ITA Annual Convention & Showcase

Des Moines, IA

DECEMBER

MTA Annual Showcase

Billings, MT

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In the

Spotlight



By Randy Turner
Marketing Communication Manager
Walker and Associates

Melissa Daly, Walker's Regional Account Manager in the states of Tennessee, Kentucky, and southern Indiana, serves as the Chairman of Associate Members for the Kentucky Telephone Association. Her responsibilities include assigning vendor tabletops for the KTA vendor expos, golf pairings, organizing events, encouraging new vendor memberships, and offering a voice to KTA members. In addition, she assists in recruiting speakers for breakout sessions during association events. Melissa has served in this position for the past eight years.

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Larry Pratka joined Walker and Associates in January as the Regional Account Manager for the Pacific Northwest. Larry began his telecom career in 1985 with degrees in Electrical Engineering and Telecommunications Engineering. Since then he has held positions in engineering, direct sales, sales management, portfolio/product planning and marketing. During his 22 years of service at Tellabs Operations, Inc., assignments gave him deep experience in service provider and utility networks, with strong emphasis on customer business drivers and imperatives.

Larry states "I have learned that understanding business issues from the customer's perspective is the basis for providing solutions and value key to successful customer relationships. My approach to working with customers does not change and always starts with the basics. Once I fully understand my customer's challenges and priorities, only then can I present solutions and make recommendations based on their needs."

• • • • •

Dan Kuebler received a promotion to Credit Manager for Walker and Associates in April, 2010. Dan returned to Walker in November, 2009, having worked as a Senior

Credit Analyst from 2000 – 2003. He previously worked for Lowes Home Improvement from 1977 – 2000, where his roles included Senior Manager of Corporate Credit. Dan now supervises a staff of Credit Analysts, who are responsible for setting credit limits for Walker's customers, account collections, and reviewing risk assessments. He graduated Magnum Cum Laude from Lincoln University with a BS in Business Administration and a minor in Psychology and Pre Law. Dan is affiliated with NACM (National Association of Credit Managers) and served on the Board of Directors for NACM in Orlando, Florida. Dan lives in Winston-Salem, NC with his wife, Suzanne.

• • • • •

Two of Walker's engineers recently completed technical training on advanced optical transport. **Fred Phillips** and **Ken Smith** completed the course, providing them additional resources with which to assist customers. Both of these associates work directly with customers to answer questions about products in both a pre and post sales capacity.



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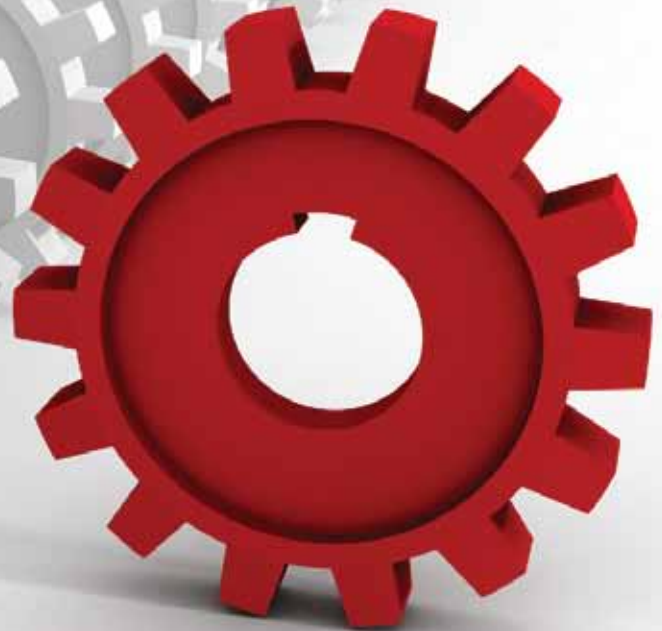
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