

Shaping the Future

***How Policy, Politics,
Power and Innovation are
Changing the Courses of
Information and
Communications
Technologies Markets***

Think
forward.

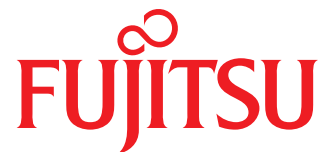


Stay connected.

Are you ready to meet future needs for network growth? Do you have the agility and flexibility to seize new opportunities while staying efficient and keeping control of your costs?

We design, build and maintain high-bandwidth, cost-effective networks in partnership with the corporations and organizations that connect you and keep you in touch. Thinking forward with you.

shaping tomorrow with you



Fujitsu Network Communications • 2801 Telecom Parkway, Richardson, TX 75082 Tel: 800.777.FAST (3278) • us.fujitsu.com/telecom

© Copyright 2012 Fujitsu Network Communications Inc. FUJITSU (and design)® and "shaping tomorrow with you" are trademarks of Fujitsu Limited in the United States and other countries. All Rights Reserved.

In This Issue . . .

Feature Articles

- 4 **Technology Expansion By Policy**
By Rodney Wise
- 7 **Creating Our Future Together**
By Shirley Bloomfield, NTCA
- 8 **The View From the Valley**
By John Bradford, VTCI
- 10 **Policymakers Must Ensure A Competitive Wireless Industry**
By Steven K. Berry, RCA
- 14 **Shaping the Future of the Industry**
By Grant Seiffert, TIA
- 16 **Pro-Competitive Policies Fuel Innovation and Choice**
By Jerry James, COMPTTEL

Resource Articles

- 4 **Understanding FCC Leadership and Organization**
- 5 **Beyond 100G**
By Randy Eisenach, Fujitsu
- 11 **The Mobile Backhaul Challenge**
By Jim Deasey, Juniper Networks
- 12 **Impacting the Telecommunications Industry Through Innovation**
By Pam Dodge, Brocade
- 13 **Good News for Broadband Providers**
By Tara Seals, V2M
- 18 **The Truth About Rural America**
By Randy Turner, Walker and Associates
- 20 **Help Tackle #1 Killer of Teens**
By CellularSaveALife.org
- 22 **What Really Makes A Top Sales Producer?**
By Brenda Abdilla, Management Momentum
- 25 **Packet Optical . . . Not Just for Transport Anymore**
By Kurt Raaflaub, ADTRAN
- 27 **Demystifying IPv6**
By Duncan Freeman, Brandon Ross, Walker and Associates

Walker News

- 13 **Walker To Exhibit at TelcoTV**
- 25 **Walker Recognized in FTTH Gold 100 List**
- 26 **In the Spotlight**
- 28 **Upcoming Events**

The Skinny Wire is a bi-annual publication of Walker and Associates, Inc.
"Equal Opportunity/Affirmative Action Employer m/f/d/v"

Editor's Letter



FCC Policy Changes: USF to CAF ... Potential Effects

If you are involved in the telecom industry then you've most likely heard something about the changes that the FCC announced this year. Service providers who were benefiting from the Universal Service Fund (USF) year-after-year received a shocking blow when the FCC announced they had new plans for those funds. No longer will they be used to supplement carriers for deploying voice services to rural America. Now the annual \$4.5B will be used to assist in broadband services deployment to territories that are unserved by any such services today.

USF also received a name change to Connect America Fund (CAF). The plan is that the budget will remain at \$4.5B, which was the capped amount of the USF program. Distribution of the funds will be to allocate \$2B to rate-of-return carriers, \$1.8B to price cap carriers, \$100M to remote area funding, \$500M to the broadband mobility fund, and of that \$100M will go to tribal areas.

Phase one is designed to incentivize carriers to deploy "robust, scalable broadband to hundreds of thousands of unserved Americans". Within this phase, an additional \$300M came up for grabs to a select group of carriers for incremental support. Only eight of those carriers accepted the terms and funding, which totaled \$115M. The unused CAF Phase one funds become a FCC slush fund to address "budget fluctuations".

Although, the government is working towards a plan to allow everyone access to this technological benefit, there are immediate concerns in the design that could negatively affect incumbent telephone companies. Many carriers accustomed to receiving USF dollars operated their day-to-day businesses with those funds as a part of their regular income. Removing a percentage of the revenue diminishes their ability to operate their businesses profitably.

Additionally, when carriers who earned USF applied for BTOP funding, they built their business plans with USF funds as a part of their revenue. By eliminating that element, the ILEC may no longer be able to repay the government loans in the allotted time frame. This, in turn, causes more debt issues with the Federal Government.

Furthermore, incentivizing new carriers to provide broadband services to unserved areas is driving new competition into those markets for voice services. Now, when offering broadband data plans to business and residential customers, competing carriers can wrap their voices services in with their data plan, thus cutting out the smaller incumbents.

On a positive note, the FCC is stating that this plan will create 500,000 new jobs. Not only will more jobs be required to support the two to five year installation plan of broadband, but daily behaviors among users will create job development. More companies will create websites to promote their businesses and consumers will purchase more products online. This will also increase staffing requirements in support roles, such as manufacturing and shipping, which benefits our economy.

The FCC is still in the process of writing Phase two of the Connect America Funding program. Each time they release information through Public Notices, petitions get filed against the program, which brings to light the potential flaws in the plan as it is written thus far. Hopefully, the FCC will take a step back and consider all of the impacts this policy could create, and write it in a manner that helps extend broadband services, boost the economy, and minimize negative business impacts for smaller Telco's.

Jennifer Beck

Opinions expressed by contributors and commentators do not necessarily reflect the views of Walker and Associates, Inc.

Technology *EXPANSION* by Policy

The Wise Guy

By Rodney Wise
Director of Technology
Walker and Associates



As Director of Technology 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. The Wise Guy is a regular feature in *The Skinny Wire* and on our website, www.skinnywire.net.

It is hard to look forward through the web of policy proposal changes or additions without first reviewing the consequences of policy surrounding our industry in the last few years. Through the Broadband Technology Opportunities Program (BTOP), we can evaluate the effectiveness of this program that is near and dear to most of us. From the look of the latest Broadband Map available (<http://www.broadbandmap.gov>), it appears that if you load all technologies (DSL, FTTH, Cable Modem, and wireless) on the map about 30% of the United States land area isn't receiving broadband coverage. According to the FCC, 18 million Americans have no access to robust broadband infrastructure. I take that to mean roughly 300 million or 94% of us are fortunate enough to have access to robust broadband infrastructure. Therefore, it appears that BTOP is working well to increase access to broadband.

One perceived issue I have with BTOP is the evaluation surrounding an incumbent service provider serving area. If an incumbent service provider is doing business as usual by following its own ROI guidelines and business plan analysis but isn't policy proficient, we may have "subsidized" an unprofitable over build in the same footprint just because the BTOP fund recipient is policy proficient. If a project turns out to be unprofitable, is there an opportunity to acquire an unprofitable BTOP funded build at a reduced rate? Perhaps the language of BTOP funding surrounding a BTOP broadband network acquisition contains provisions on operating time.

On the other hand, the overwhelming advantages of elevating broadband technology

and innovation across the nation more than makes up for the less desirable situations. I consider the 50,000 miles of fiber expected to be deployed during BTOP a new natural resource or national treasure. The advantage of deploying fiber is that it will reliably be around as a medium much longer than any transmission design currently in use or in development. In most cases, fiber deployments are done in conjunction with Multi-Service Access Platforms and aggregation layers pushed closer to the end user than ever before. The fiber resource and electronics out in the network represent an overall national network enhancement ready to provide access to an increasingly internet dependent society.

To further expand technology to the outer reaches of the network and accelerate broadband to un-served areas, the FCC has adopted reforms that transform the Universal Service Fund (USF) into a new Connect America Fund (CAF) focused on broadband. CAF has been developed in phases. One interesting aspect of phase one is the designation of a minimum data rate of 4 Mbs down and 1 Mbs up. In order to receive CAF, the network must support these minimums. Phase 2 of CAF is still being developed and probably will not be adopted until the end of 2012. As with BTOP, I am excited that we are continuing to push more technology closer to the end user and enhancing the overall quality of the network.

Unlike some others around the nation, I don't think broadband is quite as important to sustain life as oxygen. However, I do thoroughly enjoy being part of our expanding "natural resource".

Understanding FCC Leadership and Organization

The agency is directed by five commissioners who are appointed by the President of the United States and confirmed by the U.S. Senate. The president also selects one of the commissioners to serve as chairman. Only three commissioners can be of the same political party at any given time and none can have a financial interest in any commission-related business. All commissioners, including the chairman, have five-year terms, except when filling an unexpired term. The commission is organized into bureaus and offices, based on function.

Bureau and Office staff regularly join forces and share expertise to fulfill responsibilities such as:

- Developing and implementing regulatory programs;
- Processing applications for licenses and other filings;
- Encouraging the development of innovative services;
- Conducting investigations and analyzing complaints;
- Public safety and homeland security.

To better understand the organizational structure of the FCC and its Bureaus and Offices, visit the Organizational Charts of the FCC at <http://www.fcc.gov/encyclopedia/organizational-charts-fcc>.

(courtesy, FCC website, www.fcc.gov)



Beyond 100G

By Randy Eisenach
WDM Product & Technology Marketing Manager
Fujitsu Network Communications, Inc.

Carriers face ever-increasing needs for bandwidth and capacity in their metro, regional, and long-haul optical networks due to the demands of high-speed data services, Internet video services, data centers, and higher bandwidth residential broadband connections. In order to provide additional network capacity, improve spectral efficiency, and lower cost per bit, the optical transport industry has been developing higher speed 100G technologies for the last 3-4 years. Fujitsu introduced 100G transponders and muxponders, based on single-carrier DP-QPSK modulation and coherent detection last year. With 100G units entering carrier deployments, the optical industry is shifting focus to the next generation of even higher speed optical interfaces operating at 400G.

Since the mid-1990s, increasing WDM network capacity followed a well established and predictable game plan, vendors simply kept increasing the channel speeds (from 2.5G up to 10G) and increasing the overall

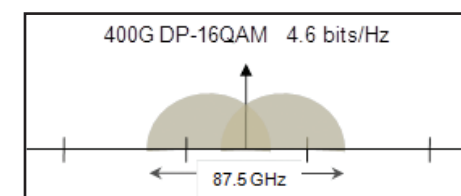


Figure 1 – 400G DP-QAM w/two subcarrier

number of channels (from 40 to 88) supported on WDM systems. However, further increases in optical network capacity come with their own set of challenges, limitations, and trade-offs.

With the introduction of 100G, the industry shifted from very simple modulation techniques (OOK) that transported a single bit of data, to much more advanced phase

“ . . . the optical industry is shifting focus to the next generation of even higher speed optical interfaces operating at 400G.”

modulation techniques (DP-QPSK) capable of encoding and sending multiple bits at once. Along with coherent receivers, these more advanced modulation techniques enable much higher data rates and improved compensation for optical impairments such as chromatic dispersion (CD) and polarization mode dispersion (PMD).

The trade-off with these advanced modulation techniques is they require higher Optical to Signal Noise Ratios (OSNR). OSNR translates directly into the optical distances that can be achieved prior to a regeneration node. In other words, the more sophisticated and powerful the modulation, the shorter the optical reach. This trade-off between modulation technique, channel size, and OSNR requirements are at the heart of current 400G research efforts and industry debate.

The industry is evaluating the optimum combination of modulation, channel size, and OSNR requirements for 400G. One likely modulation candidate under consideration is DP-16QAM with two subcarriers. Using subcarriers offers a number of key advantages, including lower data rates on each subcarrier, better fit within existing silicon technology, and support for standard 50 GHz WDM grid spacing. Subcarriers enable very high data rates to be divided and transported over any number of closely spaced subcarrier channels. The lower data rates on each subcarrier enable implementations that fit within existing component level silicon technologies. In addition, subcarriers channels can be spaced on existing 50 GHz grid channels providing compatibility with existing WDM networks, or future flexible grid spaced WDM systems.

Why Speed Matters

Benefits of High Speed Internet for Rural Communities

When given access to affordable broadband, rural businesses restricted to local markets, such as “mom and pop” shops or home-based businesses, can expand their market reach across the nation and even the world.

Broadband brings the opportunity for direct access to education and health care for rural residents who are otherwise forced to travel long distances for college courses and medical treatment.

Rural libraries newly enhanced by high speed Internet often experience a resurgence of community interest and participation. High speed Internet provides rural residents access to global information and cultural resources.

Affordable broadband enables historically urban businesses like graphic design, website design, and other creative industries to experience new

life in rural settings while competing on the same level as city-based companies.

Farmers gain real-time access to vital information such as crop prices or weather forecasts, and marketing opportunities through high-speed networks.

For more information, scan this QR code using your smartphone, or go to http://files.cwa-union.org/speedmatters/FactSheets/SpeedMatters_RuralCommunities.pdf to download a copy of a fact sheet on High Speed Internet and Rural Communities.



ETHERNET FABRIC.

OTHERS TALK AROUND IT. WE DEPLOY IT.

Brocade is the only company delivering Ethernet fabric technology that enables cloud-optimized networks right now.

Brocade Ethernet fabrics deliver a flatter network architecture that reduces cost and complexity while giving you greater flexibility to deliver applications anywhere.

When the Mission Is Critical, the Network Is Brocade.™

Learn more at Brocade.com/Everywhere
#EthernetFabric



BROCADE

© 2011 Brocade Communications Systems, Inc. All Rights Reserved.

Creating Our Future Together

By Shirley Bloomfield, CEO
National Telecommunications Cooperative Association (NTCA)

There's a saying in Washington: "If you're not at the table, you're on the menu." While this may be a rather crude way of looking at the lobbying bonanza that happens year-round inside our national capital's 60 square miles, it certainly sums up the reality of today's advocacy environment. In short, if you're not part of the conversation, there's a good chance you're getting eaten.

For rural telecommunications, now couldn't be a more important time to be "at the table." And, as the chief advocate for community-based telecommunications providers, the National Telecommunications Cooperative Association (NTCA) is taking an all-inclusive approach to shaping public policy affecting rural telecom, particularly the Obama administration's hasty reforms of the Universal Service Fund (USF) and intercarrier compensation (ICC) support mechanisms, which have the potential to undo more than 50 years of success delivering telecommunications services to rural America.

This means NTCA is leveraging what I call concentric circles of influence - across all branches and at varying levels of the federal government - to achieve our goal of ensuring a bright future for rural consumers and the independent companies that serve them.

Think of it as a "surround sound" strategy. In other words, we're not just engaging the policymakers with direct oversight of our industry (i.e. the FCC). We're also reaching those agencies with important ties to our members and their customers - entities whose success depends on the continued health and prosperity of rural America and the businesses and people who make it grow.

Take the executive branch. While the White House continues to play a pivotal role in rural economic development and the deployment of broadband to unserved Americans



"... it's anything but business as usual in Washington these days."

through its new Rural Council, we also have built relationships with leaders inside the National Telecommunications and Information Administration, U.S. Department of Agriculture (USDA) and the Department of Health and Human Services (HHS), to name a few. And these relationships are reaping rewards. USDA Secretary Tom Vilsack recently shared his concerns about USF and ICC reforms and their impact on the Rural Utilities Service loan portfolio during a meeting with FCC Chairman Julius Genachowski. NTCA staff members also recently joined executives of Lenora, Kansas-based Nex-Tech, a Rural Telephone Company, at a meeting with HHS staff about the telco's ability to continue serving hospitals and clinics in its community under the FCC's USF/ICC order.

Of course, these are just a few examples of the many ways we're building concentric circles and engaging lawmakers to shape policy. Our timing couldn't be better because it's anything but business as usual

in Washington these days. We have a very close presidential election coming up, which means Congress and federal agencies are feeling pressure from all sides. At the same time, we're seeing an unprecedented number of regulatory changes, making the relationships we've built over time more valuable than ever.

So what does this all amount to? NTCA is working to create our future. With all that is happening on the policy front, business shifts and consumer demand, we need to create a future that will enable rural communities to thrive. At the center of each concentric circle are the most important players in this game - rural telecom providers, our members and the consumers they serve. With their voices and the partnerships we've created together, we are well positioned to launch this industry into the future, no matter what Washington throws at us. Policymaking is a marathon, not a sprint. And our race has just begun.



Shirley Bloomfield is Chief Executive Officer of the National Telecommunications Cooperative Association, the premier association representing more than 570 locally owned and controlled telecommunications cooperatives and commercial companies throughout rural and small-town America. Bloomfield is a veteran of the telecommunications industry, having served in a variety of leadership roles since 1985. After beginning her career on Capitol Hill, Bloomfield joined NTCA as a lobbyist in 1986 and advanced her career to hold the position of vice president of government affairs and association services. Prior to rejoining NTCA in 2010, Bloomfield served in federal relations roles for two large, national telecommunications companies.

The View From the Valley

RURAL TELECOM PROVIDERS GAIN SECOND CLASS CITIZENSHIP UNDER THE FCC NATIONAL BROADBAND PLAN

By John D. Bradford
Business Development Manager
Valley Telephone Cooperative, Inc. ("VTCI")
VTX Communications ("VTX")



With recent orders released at the Federal Communications Commission (FCC) through their enactment of the National Broadband Plan (NBP), small rural independent telecommunications companies find themselves relegated to a subordinated, precarious position within the industry.

The NBP Creates a Digital Divide Between Urban and Non-Urban Areas

The FCC established what will be a digital divide by the broadband speed standards imposed on carriers to provide for end-user subscribers. In the urban areas, the standard is 100 Megabits (MB) per second – while in rural areas 5 MB (4MB up/1MB down) is all the FCC thinks the rural areas need. The FCC's "logic" for this wide disparity of a 20:1 ratio in speed lies with the assumption that no work or recreational needs exist in the rural areas that would require 100MB service. Unfortunately, federal and state regulatory agencies do not seem to understand value of the embedded resources that rural America contributes to the nation's economy, security, and future. The vast majority of our nation's wealth is in the rural areas, and it is extremely shortsighted of our regulators not to realize that the nation's petroleum, agricultural, mineral, textile and meat resources come from rural areas, and that it requires state of the art technologies (wireline and wireless) to produce and distribute these resources to market. The reality is that there is no difference in broadband usage between urban and non-urban areas – both use the Internet in the same way to accomplish the same tasks.

The FCC Has Bet the Farm On Wireless

The FCC's reliance on the capabilities of the next generation of wireless services (4G/LTE) may prove to be a huge monetary and logistical mistake. The young, academic-heavy urbanites steering the FCC have given carte blanche to the giant wireless providers because these companies' lobbyists have assured regulators "don't worry, we have the rural areas covered." Unbeknownst to the FCC staffers, the coverage of rural America has been abdicated to these giant, oligopoly players in the industry

whose operations people have been telling rural homes and businesses for years to "get local and broadband services from your local, rural telephone companies." Wireless industry metrics to construct new cell towers have been reported to start at a minimum of 1,000,000 minutes of traffic before a cell tower site could be authorized. Wireless service to a dozen farms or ranches scattered over a thirty mile radius will never satisfy this metric and will never be able to adequately receive reliable wireless service in these areas. Further, in rural America, wireless service is totally dependent on the wireline infrastructure to get calls, texts, and data through their systems. Without a ubiquitous wireline system, lives will certainly be placed in peril given the coverage and reliability of wireless service during emergency situations. The FCC staff has, with its current order, relegated the rural wireless user to a life of "you-get-what-you-get" when traveling between major metropolitan areas. Americans are already subjected to lengthy downloads, dropped calls, static, voice and data degradation with today's wireless service. The rural areas will have to remain content being in a 2G, or maybe if they are lucky, a 3G wireless service area for many years to come. 4G/LTE wireless service? It's simply not on the radar screen for rural America.

The FCC Has Put Rural Telcos in Limbo With The New USF Rules

The FCC took a cost recovery and revenue support method called the Universal Service Fund (USF), declared it antiquated and broken-beyond-repair, and discarded it entirely. Unfortunately, the FCC did not make their decisions while developing a new program with totally factual and complete information. The FCC dumped the existing USF Program and began from a blank slate leaving small rural telecommunications companies to run their existing businesses with no continuity or way to plan for more than a few months at a time. No provisions were made to protect previous investments or loan obligations to the USDA and other lenders. It is ironic that the FCC, in its order, actually created a subsidy program which bolsters the

giant, multi-national telecommunications companies.

The proven concept of universal service (established in the Communications Act of 1934) no longer works in the rural markets. In areas of abnormally high costs to provide broadband services, the FCC has now ensured that rural and remote telecommunications companies have a strong financial disincentive to offer services, and they will now tell consumers that "it simply costs too much" to serve them. With the National Broadband Plan, rural telephone companies can now adopt that same economic excuse which the large companies have used for almost a century. The National Broadband Plan has now become the National No-Broadband Plan. Another irony is that the FCC wants to reduce the USF fund at the same time they say they want to foster development and wider adoption of broadband throughout the USA. References are made by the FCC at "getting the waste out of the program;" however, they have yet to find any USF "waste" in rural telecommunications companies. The USF fund should be increased for this effort – not decreased.

A longtime observer of the telecommunications industry recently commented on the FCC's decisions that abandon rural America by stating that "the FCC is clueless when they impose rulemaking that shortchanges any sector of American society. The current thought at the FCC is that USF is a subsidy, and, subsidies are 'bad.' And – since they are 'bad', they should be abandoned." These same agency staffers do not understand that a basic economic foundation of the United States is that it is supported from border-to-border and coast-to-coast for the "common good" of all citizens. There are many examples of the "common good" funding philosophy with bridges, roads, urban rail systems, airports, national parks and reserves, coastal weather, and security services to name a few. All citizens share in the costs as taxpayers – whether we will ever be a direct beneficiary or not. If we take USF money away from rural telcos be-

cause "only a few people benefit," does that mean people in Kansas should no longer have to support and fund the Coast Guard? How will petroleum and natural gas be effectively located, extracted and processed? How will agricultural products be grown with the highest yield and sold off at the highest price? Only inexperience and misinformation from the large companies could lead the FCC staffers down such a dead end road.

Rural Telecommunications Companies Are Innovators

In the broad spectrum of the telecommunications industry, the small, rural and independent local exchange carriers have long been a proponent of the adoption of new technologies. The small independent telephone company has always been willing to beta test new technologies with real, live customers; while the multi-national conglomerates will take new technologies to their labs to put new equipment through its paces. The start-up and growing technology companies could always depend on economic and deployment support from the small, rural and independent telephone companies. With the gross uncertainty of a National Broadband Plan with operating and reporting standards that are continually in a state of flux, the capital expenditure ties between telecommunications equipment manufacturers and the small independent may be a passage in the industry's history books. When rural telephone companies cannot be certain of their economic futures, the risk of ordering equipment without the ability to pay for it will overshadow the reward of bringing new broadband services to rural customers. Another irony in the National Broadband Plan lies in naive assumptions made by the FCC that that major telecommunications conglomerates will push acceptable broadband services into the remote areas of rural America. Recent industry history has demonstrated an unwillingness by these same companies to offer acceptable broadband – regardless of technology – because it is easier to ignore and dismiss non-urban areas as not having a critical mass of customers to make broad-

band economically or technically feasible.

Another myopic industry view by federal and state regulators involves the claim that rural service providers are "gold plating their networks" by putting fiber optic technology in place. Unfortunately, these groups are not willing or able to understand that the entire telecommunications industry is beginning a quantum leap in technological services. For almost 130 years, copper has been the preferred medium for transmission; however, beginning in the mid-2000s, the economic parity between fiber optics and copper was achieved, and fiber optic cable immediately became the preferred choice by most telephone companies. Along the same time period, Time Division Multiplexing (TDM) is being replaced with an Ethernet-Internet Protocol (IP) as the preferred technologies for moving information. As this giant telecommunications industry metamorphosis was just beginning, the same agencies who were entrusted with industry's growth, the consumer's welfare, and keeping America at the forefront of modern technologies, have economically shackled the players with the largest geography.

Fiber Optics is the Long Term Answer

The reality is that with the technology transition that all Telcos need to achieve with migrating from copper to fiber optics, the trend should be increased USF funding – not less. In the industrialized world, only the US has forgone the landline industry – both urban and rural – in favor of wireless. In Asia and Europe, wireless is ubiquitous; however, fiber is king, and Gigabit (GB) speeds simply unachievable by wireless are becoming the norm in the major cities. The FCC National Broadband Plan and its subsequent rulings will keep the USA at the back of the pack – both on the ground and in the air – for years to come.

Policymakers Must Ensure A Competitive Wireless Industry

By: Steven K. Berry, President & CEO
RCA – The Competitive Carriers Association



Steven K. Berry is President & CEO of the Rural Cellular Association (RCA), the nation's leading association for competitive wireless providers serving regional and rural markets in the United States. The licensed service area of RCA members covers more than 95 percent of the nation.

A seasoned lawyer who worked for Congress, the Executive Branch and as a partner at Holland & Knight law firm, Berry has held positions as the Senior Vice President of Government Relations for three associations, the National Cable & Telecommunications Association (NCTA), the CTIA-The Wireless Association, and the Direct Marketing Association (DMA).

Prior to joining RCA, Berry served as Director Governmental Affairs (Global) at Merrill Lynch & Co. Inc., New York and Washington, DC.

The wireless industry has faced massive consolidation over the last several years, with two companies, AT&T and Verizon Wireless (the “Big Two”), emerging as dominant players by any relevant measure. With this consolidation and resulting market concentration, the wireless sector has reached a critical tipping point with competition on life support. Policymakers must restore a competitive wireless marketplace to prevent further consolidation, less choice for consumers and economic harm.

RCA – The Competitive Carriers Association represents over 100 wireless companies and more than 160 communications-related vendors that provide robust broadband services to their customers. RCA members’ dynamic, innovative services provide consumers a competitive choice. With a continuing threat of further industry consolidation, it is imperative that the Federal Communications Commission (FCC), Congress, and the Department of Justice (DoJ) foster market conditions that enable competition to thrive and prevent consumer harm. If policymakers fail to address structural imbalances in the marketplace, competitive carriers will be unable to transition to next generation networks and may be eliminated from the market, at consumers’ expense. We must avoid this result.

Wireless carriers depend on certain critical inputs to compete including access to spectrum, devices, just and reasonable roaming arrangements, and economical backhaul / off-load services. An appropriate,

light regulatory touch is necessary to restore and preserve access to these critical inputs. Competitive carriers are ready and willing to build their networks but are prevented from doing so due to anticompetitive practices of the “Big Two.” To achieve the Administration’s important goal of bringing high-speed mobile broadband services to 98% of all Americans within the next five years, policymakers must ensure competitive carriers are able to invest in and build out their networks. This goal cannot be achieved without the help of competitive carriers, especially those serving rural and hard-to-reach areas, and these carriers must be able to compete.

RCA has long been a champion of market-based principles and policies. The wireless market is not a normal market because the fuel on which all carriers operate – spectrum – is a taxpayer owned resource. Competition does not exist in a vacuum, and policymakers must act to ensure the market provides benefits to consumers. Due to anticompetitive practices of the “Big Two,” minimal, targeted regulation is necessary to restore competition to the currently broken wireless market. Competitive carriers need interoperability, reasonable roaming arrangements, access to LTE-ready spectrum, and access to the latest, iconic devices. Policymakers have the opportunity today to ensure a competitive mobile ecosystem. The FCC, Congress and the DoJ must take immediate action to correct current market failures. Taxpaying consumers deserve no less.

RCA Annual Convention
The Competitive Carriers Association
September 23-26, 2012



wynn las vegas las vegas, nv

The Rural Cellular Association will hold its 20th Annual Conference and Innovation Showcase September 23 - 26 in Las Vegas at the Wynn Casino and Resort. For more information on this important industry event, go to www.rca-usa.org.

The Mobile Backhaul Challenge

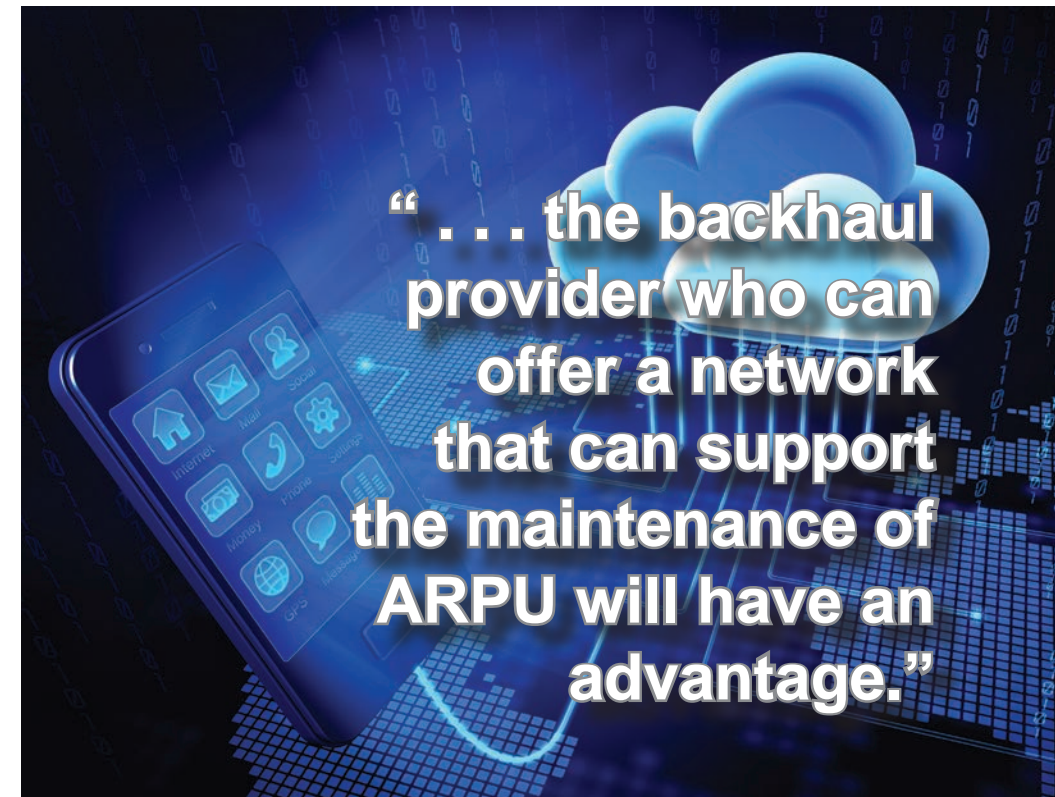
By: Jim Deasey
Senior Marketing Manager
Juniper Networks

Mobile carriers seek to deliver new, high-speed services to improve ARPU and customer retention while decreasing OpEx and CapEx. A scalable backhaul solution that protects their investment at the cell site, while providing flexibility to add next-generation technologies quickly and cost-effectively, is desired. The smart phone and the advent of 4G networks will drive the increase in data traffic from mobile device to even higher levels. To achieve their goals, mobile operators realize that they must evolve legacy backhaul networks that do not provide the flexibility or scalability to cost-effectively support multiple services on the same network.

Providers of backhaul services to mobile carriers must also have the right tools to support the goals of the mobile carriers in terms of capacity, traffic engineering and cost. Point to point connection between cell tower and the access network needs to be examined to see if they measure up to the goals of the mobile carrier for the services users expect to work on their mobile devices. ARPU will be at stake and the backhaul provider who can offer a network that can support the maintenance of ARPU will have an advantage.

Limitations of the existing mobile backhaul solutions include:

- **Cost:** For mobile backhaul today, operators typically use copper or microwave time-division multiplexing (TDM) links, often leased from other service providers. Any cost savings realized in backhaul go straight to the bottom line.
- **Scalability:** A typical cell site requires two or three leased T1/E1 lines, representing 4 to 6 Mbps of bandwidth. New data intensive mobile services could more than double this requirement.
- **Flexibility:** As mobile networks evolve from 2G to 3G and beyond, cell sites must support multiple transport technologies such as TDM, Asynchronous Transfer Mode (ATM), and IP/Ethernet. Carriers have



substantial investments in 2G technology, so a rip-and-replace strategy is not feasible. The next generation of backhaul components must support multiple coexistent technologies at the cell site.

- **Efficiency:** Because each T1/E1 line is dedicated, excess capacity cannot easily be shared. The current method of providing backhaul capacity invariably involves a substantial amount of unused—and expensive—bandwidth in the mobile backhaul.

Juniper’s solution supports a full range of transport types, enabling a cost-effective and adaptive services architecture for multi-generation networks. The solution includes products for the cell site, metro backhaul and aggregation network, with a unified network management solution:

- Converged networks for IP/MPLS and legacy systems
- Unmatched performance to support emerging data-intensive services

- Operational intelligence and traffic engineering capabilities
- Proven and deployed timing technology for highest Quality of Experience (QoE).

IP/MPLS is the ideal next-generation mobile backhaul solution because it enables MSPs to optimize their networks for the transport of all revenue generating services - both voice and data. The Juniper Networks mobile backhaul solution leverages IP/MPLS technology already in use in many mobile packet cores across the entire mobile infrastructure.

Carriers’ requirements for simplicity and increased operational intelligence are met with the Juniper Networks ACX Series Universal Access Routers. This portfolio includes temperature hardened fixed models and a modular platform with support for TDM, as well as Ethernet GbE and 10GbE interfaces. With throughput of up to 60 Gbps in all models, the ACX Series delivers unmatched performance for an access router.

Impacting the Telecommunications Industry Through Innovation

By Pam Dodge
Sr. Manager, Product Marketing
Brocade



“... service providers have the potential to engage in this market with new applications.”

To borrow a quote from the famous spiritual motivator, Deepak Chopra, “All great changes are preceded by chaos” couldn’t be more fitting for the current state of the telecommunications industry. Much of this uncertainty has been brought about by the proposed change in Information and Communications Technology (ICT) funding and USF reform, as well as the winding down of the BTOP/BIP program. At this point, it is hard to tell who the winners and losers will be, but one thing that is certain is that all providers are re-evaluating their current business models and looking for ways to generate more revenue.

Although there are many challenges that service providers face including regulatory uncertainty, threats to existing revenue streams, and greater competition, there are key opportunities as well. With the emphasis on broadband deployment for rural America, service providers have the potential to engage in this market with new applications.

First, they can promote a robust network solution that will be critical to support key applications within the educational, health-care, farming, and public safety sectors.

Secondly, within the IT/Data Segment, they can provide managed service offerings to enterprises since there is the ability to perform remote monitoring and troubleshooting. This will alleviate the burden on the business users and provide a source of revenue for the service providers.

Finally, through collaboration rural providers can work with some of the incumbent providers to support the 4G wireless and LTE initiative. The deployment of 4G wireless will be significant in rural America where it is estimated that there will be a need for tens of thousands of new cell sites all requiring

backhaul. This will require the deployment of equipment that will support broadband as well as mobile backhaul.

Brocade, as a key player in the broadband equipment market provides Carrier Ethernet solutions that will enable service providers to reduce their cost of operations, provide new service offerings, and scale to meet the bandwidth demands of broadband applications. Service providers will be able to converge their networks onto one common platform that can be positioned right at the edge of the network for broadband, backhaul and business Ethernet deployment. This multi-service platform will enable providers to reduce their cost of operations as well as roll out services when they see a market need. The value is that the platform will already be in place to support these new applications giving them a shorter time to revenue.

Brocade has also taken the lead in driving technology innovation through the development of Software Defined Networking (SDN) with OpenFlow. OpenFlow, which is an open API, provides a standard interface for programming these existing Ethernet switches. The benefit is that service providers have greater flexibility with their network resources to manipulate bandwidth, traffic flows and performance more dynamically. SDN will enable providers to extend management to their customers who, via portals, can potentially control their network needs i.g., special events, web promotions, video conferences, sales promotions. This will alleviate the service provider from having to perform the function and the cost associated with it.

The telecommunications industry will continue to undergo change, but with collaboration between providers and key innovation by vendors, there will be key opportunities for new revenue generation and leading edge services for customers.

Directions

In a small saucepan, bring water and sugar to a simmer. Cook until sugar dissolves. Remove from heat and let cool.

In a large pitcher, fill with ice. Stir in simple syrup, vodka, juice, lemon and lime slices. *for kid-friendly version, omit alcohol.

Vanilla-infused Vodka:

- 1 liter vodka
- 2 vanilla beans

Split beans lengthwise and add to vodka bottle. Let infuse overnight in a cool dark place. Strain into another sterilized bottle.

Walker and Associates Exhibiting at TelcoTV

By Randy Turner
Director, Marketing Communications
Walker and Associates

Today’s broadband network service providers are quickly seeking actionable strategies to enhance the monetization of their investments in the face of increasing competition and decreasing government support. TelcoTV provides the leading forum for network operators and builders, equipment vendors and content providers to meet and set the fast-track to profitable broadband services. Hosted and led by the industry’s recognized experts, TelcoTV delivers the latest critical business, technology and regulatory insights along with opportunities to grow business and partnerships.

Now in its 11th year, TelcoTV remains the leading forum for network operators and builders, equipment vendors and content providers to meet and set the fast-track to profitable broadband services.

Over 130 Exhibitors

With over 130 exhibitors, TelcoTV 2012 delivers the industry’s largest expo focused on the broadband services ecosystem. Delegates will see the latest innovations in broadband technologies, products and service offerings. TelcoTV’s expo provides an unparalleled opportunity to network, drive new business and develop new partnerships.

Walker and Associates, in Booth 931, features products and solutions from manufacturers such as Actelis, ADTRAN, TE Connectivity and more. Booth visitors will have the opportunity to speak with industry professionals about their network questions.

Rich Conference Content

TelcoTV’s comprehensive program includes over 25 conference sessions covering the critical issues of the broadband services ecosystem. Learn first-hand from those who design and have deployed broadband networks and services.

Sustainable Business Models

Wireless replacement and Washington regulatory changes are cutting into traditional telco revenues. TelcoTV examines new sources of revenue and new directions for the telecom business that can deliver a more stable future and profitable growth.

Exceptional Keynote Line-up

TelcoTV provides an unrivaled line-up and opportunity to engage with the industry’s experts. Get a comprehensive and detailed perspective of the state-of-the-industry and its future from industry thought leaders.

Forge New Business Relationships

TelcoTV is the best place to meet innovative telcos actively looking to video as an essential component of their consumer offering. Whether you’re developing or growing business opportunities or seeking to create new partner or alliance relationships, TelcoTV provides the perfect venue to engage, network and succeed.

TelcoTV 2012 will be held at The Las Vegas Hotel (formerly Las Vegas Hilton), October 24 - 26. For additional information, visit the Telco TV website at http://www.lightreading.com/live/event_information.asp?event_id=29957.

telcotv2012

11th annual conference & expo

Register NOW and save \$100 off Executive and Standard attendee passes
Use priority code: UKBQTV01
Register for an Executive pass and receive this complimentary Heavy Reading research report “OTT Traffic Control Options for Network Operators” a \$3995 value!

Good News for Broadband Providers

Connected TV Penetration to Reach 70%

By Tara Seals
Editor In Chief
V2M

Consumer electronics manufacturers are increasingly building Web connectivity into their living room entertainment devices, with smart-TV penetration to hit 70 percent of total TV shipments during 2016. Last year connected TVs accounted for a full quarter of TV sets shipped globally, IMS Research has revealed.

The segment will result in more than \$117 billion in revenue for consumer electronics manufacturers, but the opportunity for video service providers of all stripes is not to be underestimated. Take, for instance, the opportunity to drive upper-tier broadband sales. Higher usage of connected TVs to access, say, Netflix or VUDU, will require increased bandwidth availability. Increases in consumers opting for higher broadband tiers can aid in the quest for Over the Top (OTT) monetization, while offsetting increased investment in broadband infrastructure. In fact, online video has al-

ready pushed median U.S. broadband usage to more than double from the last year, to more than 10 gigabytes per month per household, according to Sandvine Research. Netflix alone accounts for 29 percent of broadband usage over fixed networks during peak hours.

“The faster bandwidth consumption escalates, the better the cable industry is positioned,” wrote BTIG Research’s Richard Greenfield in his blog. “With an increasing number of IP-enabled devices ‘on net’ in the home all the time, consumers will demand increasingly robust bandwidth and be willing to pay for it.”

More available screens or online video, particularly on the main living-room device, can only serve to spur the opportunity along. “Internet connectivity is becoming a standard on high-end TV sets, and it’s increasingly being added to mid-end televisions,” says

Veronica Thayer, market analyst at IMS Research. “TV set manufacturers’ product launch plans are expected to drive the majority of the growth for connected TV sets during the forecast period.”

Also important for operators trying to get their arms around the exploding device profile landscape, the IMS Research study also reveals that proprietary operating systems will remain the main type used by manufacturers in the next five years, although Android OS will start gaining presence and it’s expected to reach a significant share of the market by 2014. IMS Research’s forecast shows that during 2016, more than 80 percent of the connected TV sets shipped worldwide will have built-in Wi-Fi, and close to 30 percent will have advanced user interface features such as motion, gesture or voice.

LEMONADE

Recipe

Ingredients

- 2 cups water
- 1 cup sugar
- 8 cups ice
- 4 ounces vanilla-infused vodka, (recipe follows*)
- 1 cup fresh lemon juice
- 1 lemon, sliced into rings
- 1 lime, sliced into rings

Recipe courtesy of
Sunny Anderson,
Cooking for Real

Shaping the Future of the Industry

- How Policy, Politics and Power Are Changing the ICT Market

By Grant Seiffert
President
Telecommunications Industry Association (TIA)

In 1965, Gordon Moore predicted that the number of transistors on memory microchips would double every year, which he later revised to every two years. Amazingly, this prediction – Moore's law – has proven true to the present, despite the ups and downs of the economy. What is also true is that, if one plots technological developments back to the early 1900s, the fundamental thesis of Moore's law has clearly applied to the Information and Communications Technology (ICT) industry.

Competition within the industry has produced exponential industry growth, world-altering products and services, at faster and faster speeds, that could not be imagined even five years ago. What is so exciting about the ICT industry is the leading role it plays in technological innovation, and the significant effect it has on so many lives.

As a society, the United States has greatly benefited from the ICT industry. ICT companies accounted for 3.5 million jobs in 2009, and the average compensation for ICT workers is more than 80 percent higher than for the workforce overall. ICT firms contribute approximately \$1 trillion to the U.S. GDP through both direct and indirect contribu-

tions — that's a remarkable 7 percent of the U.S. economy.

While it is very difficult to predict the next ground-breaking ICT innovation, we do know from experience what it takes to enable the industry to succeed. The recipe for success includes advancing competitiveness through increased market access and trade, and shaping regulations and tax policy in a way that encourages investment. A continued light-touch approach to regulation, as well as certainty in the marketplace, will ensure continued investment in a technology-neutral manner.

However, at the same time that our industry is seeing compelling growth and remarkable innovation, we are facing increased challenges. Because of the importance of the ICT industry to our society, these issues can also become politically charged, complicating and even endangering good policy decisions.

There are a number of domestic challenges facing the ICT industry, including the fact that we lag behind 16 other countries in broadband penetration as of 2011. In addition, with the passage of the Middle Class

Tax Relief and Job Creation Act of 2012, the Federal Communications Commission (FCC) is moving towards freeing up crucial frequencies for increased commercial mobile broadband use, while the National Telecommunications and Information Administration is working to establish a new nationwide public safety broadband network. We are also currently seeing rulemakings across numerous Federal agencies in previously unregulated areas, including Internet traffic management, cybersecurity, and supply chain integrity.

In all of these areas, TIA is closely engaged on both Capitol Hill and in the agencies to ensure that new regulations adopted do not hamper ICT industry innovation and job creation. Policymakers on all levels must understand that heavy-handed regulations, and straying from a technology- and competitively-neutral regulatory model, will have a damaging economic impact and hurt America's technology leadership.

On the international front, the ICT industry works hard to address market access and trade issues that are critical to its future. For example, China has the largest wireless market in the world, with 950 million

wireless subscribers in 2011. By 2015, this is expected to grow by another 400 million subscribers to 1.35 billion.

To sustain growth, U.S. companies need access to new markets such as China. Unfortunately, we have seen policies that seek to lock out "foreign" competition, or that demand direct government access to U.S. companies' equipment and services. In facing these issues, our industry is in close partnership with the U.S. government. We are also working with U.S.-based stakeholders, including the government, to combat proposals that would create a new international-level governance structure for the Internet, which could severely threaten the economic and consumer opportunities it presents.

On both a domestic and international level, the development of voluntary, consensus-based standards enhances competitiveness by promoting openness and innovation. The continued success of this ecosystem is essential for allowing the ICT industry to thrive.

TIA is accredited by the American National Standards Institute (ANSI) to develop voluntary consensus industry standards for a

wide variety of telecommunications products and systems. We create specifications for public safety radio equipment, cellular towers, data terminals, satellites, VoIP equipment, structured cabling, data centers, mobile device communications, multimedia multicast, machine-to-machine communications, and smart utility mesh networks, among others. The sustained development of these standards is ingrained with TIA's regulatory efforts across agencies, as well as our work on international market access issues.

TIA, along with its partners, continues to press for technology- and competitively-neutral, market-based laws and regulations that will complement the development of new and improved ICT equipment. Importantly, these efforts will also promote full, fair, and open competition in international markets. Policies that reflect these principles will increase connectivity to the 21st Century infrastructure for such critical needs as education and healthcare, create new jobs, enhance productivity, improve eco-sustainability, heighten the effectiveness of public safety entities, and augment the accessibility of advanced communications services to all.

As president of DC-based TIA, Grant Seiffert oversees all facets of the leading international association representing the manufacturers and suppliers of global networks.

Seiffert joined TIA in 1996 as director of government relations. His main priority was the representation of the equipment industry's interests, particularly regarding competitive issues during implementation of the Telecommunications Act of 1996 by the Federal Communications Commission (FCC). He was promoted to vice president in 1998, directing domestic and global policy to help the association's supplier members gain marketing opportunities around the world. In that role, he oversaw policy, including interaction with the U.S. Congress, the FCC and the Administration, as well as with international regulatory bodies and government leaders and fulfilling the senior management role for association membership and TIA tradeshows.

Seiffert serves on the Executive Committee of Connected Nation, the American National Standards Institute's (ANSI) CEO Advisory Committee, and the Board of Directors of the Sustainable Technology Environments Program (STEP).

He holds a Bachelor of Science degree in political science from Radford University. He and his wife, daughter and two sons reside in Mt. Vernon, Virginia.

About TIA

The Telecommunications Industry Association (TIA) represents manufacturers and suppliers of global communications networks through standards development, policy and advocacy, business opportunities, market intelligence, sustainability, and events and networking. TIA enhances the business environment for broadband, mobile wireless, information technology, networks, cable, satellite and unified communications. Members' products and services empower communications in every industry and market, including healthcare, education, security, public safety, transportation, government, the military, the environment, and entertainment. Visit tiaonline.org for more details.

History

In 1924, a small group of suppliers to the independent telephone industry organized to plan an industry trade show. Later, that group became a committee of the United States Independent Telephone Association. In 1979, the group split off as a separate affiliated association, the United States Telecommunications Suppliers Association, and became one of the world's premier organizers of telecom exhibitions and seminars. TIA was formed in April 1988 after a merger of USTSA and the Information and Telecommunications Technologies Group of EIA. EIA began as the Radio Manufacturers Association in 1924. Since 1988, TIA has advocated numerous policy issues for the benefit of its members, sponsored engineering committees that set standards

determining the pace of development in the industry, provided a marketplace for members and their customers, and served as a forum for the examination of industry issues and industry information. In the fall of 2000, the MultiMedia Telecommunications Association (MMTA) was integrated into TIA.

TIA Facts at a Glance

TIA is a member-driven organization representing hundreds of domestic and international firms across the globe. Board members are selected from member companies and formulate policies to be carried out by policy staff in Washington, D.C. TIA staff also carry out activities through its other divisions – Technology and Standards, Market Intelligence, Marketing, Membership and Events.

TIA Online and TIA NOW

TIA's web site is designed to be a business facilitator and an information portal, promoting industry awareness of telecom standards, issues, events and market development opportunities, while inviting open discussion. Visit tiaonline.org for details.

TIA NOW is the organization's web channel, featuring premiere content and analysis for the ICT world. Specifically, TIA NOW provides compelling programming that spans across policy, news, emerging technologies and evolving business strategies. Visit tianow.org for details.



For more details about TIA, scan the QR code above with your smartphone to view its new membership benefits video, or go to <http://tiaonline.org/tia-members-are-creating-future>.

Pro-Competitive Policies Fuel Innovation and Choice

By Jerry James
CEO
COMPTEL



Competition is the catalyst that has sparked a wave of innovation, delivering affordable telephone, broadband services and cloud solutions to businesses, homes and wireless devices – essentially creating and redefining the communications market. COMPTEL member companies have been leading this charge, utilizing private investment to bring competitive broadband voice, video, Internet, data and other advanced services to market. These entrepreneurs have been – and remain – at the forefront of innovation in developing new products/services and bundles – at more affordable price points. For example, they were the first to offer greater access to DSL in the mid-1990s and now many are deploying next-generation, IP-based managed networks utilizing fiber, copper and wireless technologies.

But competition, and the technological advances that accompany it, would not have been possible without laws and policies

designed to strike down monopoly control over communications services. Without these actions, there would have been no incentive for new companies to enter the market, or develop new products, services and broadband networks that, in turn, result in more choice, better prices and continued innovation for customers.

While divestiture and the '96 Telecom Act sparked the competitive revolution, more must be done to ensure that the communications market doesn't stagnate as some of the larger providers continue to wield immense market power. The White House, Congress and the Federal Communications Commission must continue to promote policies that support a competitive market, resulting in affordable broadband access and a variety of new services.

There are several issues that COMPTEL companies are engaged in, including cloud computing, cybersecurity, privacy and spec-

trum reform. In addition to a broader investigation of these issues, there are currently a number of core topics under examination on Capitol Hill and at the FCC that have the potential for impacting the competitiveness of the market, as well as the benefits to consumers and businesses.

These include:

- IP-to-IP Interconnection – The '96 Act opened the market to competition and granted competitors the right to interconnection. Some large incumbents have claimed that they are not required to allow competitors to interconnect with their IP networks in order to exchange voice traffic with quality standards equal to TDM interconnection.
- Special Access – The current framework for pricing in the special access market is broken. Pro-competitive policies must

“ . . . more must be done to ensure that the communications market doesn't stagnate . . . ”

be instituted to support investment in new networks and innovation on existing infrastructure – whether it's copper or fiber, or the technology is TDM or IP – while precluding the existing significant overcharging by the incumbent LECs.

- Last Mile Access – While competitors have continued to invest in new network deployments, consumers in many areas of the nation still do not have a choice of providers. To ensure consumers and businesses in those markets can benefit from competition, policies must exist to enable new entrants to access last mile networks at just and reasonable rates.

As the administration, FCC and Congress continue their pursuit to achieve greater competition and innovation in the communications market, there are some funda-

mental tenets from which they cannot stray. First, policies should make clear that competitors have access to underlying incumbent networks, on reasonable terms and conditions as already established under the '96 Act, which is an essential component in ensuring a functioning competitive market. Second, a 21st century telecommunications policy must recognize that the interconnection obligations under the Act are technologically neutral. Failure to do so would jeopardize all the economic and consumer benefits that competition provides and would return us to a depression era monopoly or duopoly structure. And, finally, policies should foster a robust wholesale market that provides new entrants a means for entering the market with differentiated service offerings.

These essential policies must be backed up by continual enforcement to ensure that those providers with substantial market share do not abuse their inherent control of

the communications market. Together the combination of pro-competitive policies and vigilance against the wielding of monopoly power will ensure that further growth of a vibrant communications marketplace will continue, encouraging investment and job creation, delivering lower prices and new services, and allowing innovation to flourish.



About the Author

Since 2007, Jerry James has served as CEO of COMPTEL, the leading trade association for the competitive communications industry. He has more than 40 years experience in the communications industry, starting his career at Southwestern Bell, working as an industry consultant, and co-founding and serving as president of Grande Communications, which constructed Texas' first fiber-to-the-home network. During his career, James has been active in policy advocacy at the local, state and federal levels. He helped found state associations for the competitive communications industry in several states, served on the boards of national trade associations and served as vice chairman and chairman of COMPTEL.

The TRUTH About Rural America

By Randy Turner
Director, Marketing Communications
Walker and Associates

Why Rural America Demands and Deserves Broadband

The complete picture of the debate over funding mechanisms for rural broadband deployment can only be realized when we consider a broader scope of the contributions made beyond the reaches of major metropolitan areas. Certainly population density plays a factor, but other truths equally apply. Consider some of these observations about the areas of our country in jeopardy of adequate funding.

Rural America provides a large majority of the non-imported fuels being used by Americans (oil, gas, bio-fuels and other). Those lovely elixirs coming from the service station/convenience store's pumps didn't start in tanks below the concrete driveway. For those who use public transportation such as buses, cabs, and rail systems, the fuel originated and was often refined in rural America, particularly with the rise in ethanol consumption in recent years.

Rural America provides stewardship for a majority of the useable water in America. Without any required intervention from any federal agency, the rural areas within each state have been more than sensible, cautious, and prudent when it comes to fresh water. When we reach for our favorite bottled water, do we pause to consider its origin from some of the most rural and rugged landscapes in our country?

Rural America provides a large majority of the building materials (raw and finished) used in home and commercial construction. It would be very difficult to imagine how the American economy would suffer if the United States was dependent on imported building materials.

Rural America provides a large majority of the electricity used by homes and businesses. When the home or business light switch is moved from the down-off position

and concrete of a downtown modern city. Where do most of the urbanites go for rest, recreation, relaxation, and vacation? Our migration to the beaches, the hills and mountains, the forests, and other restful places is almost a primal calling. Even during these respites, however, we find ourselves in need of the tether of connectivity.

Rural America is often a centerpiece of research and development, reaching into nearly every aspect of Americans' lives. Research into agriculture, water flow and hydroelectricity, algae uses, hydrocarbon exploration, carbon dioxide retention and reuse, nuclear power for electricity generation, forestry planning, development, and sustainability, and nuclear waste storage, are all conducted in pastoral settings. When proof-in-concept research is conducted, access to high speed broadband is a prerequisite.



Rural America provides the raw textiles (cotton, wool, mohair, etc.) used by Americans and exported to countries overseas. As America dresses itself for another day, the cloth that makes up its clothing more than likely came from a farm or ranch in rural America. Although it may be processed overseas, the raw materials are produced in America's countryside.

Rural America provides a majority of the food consumed in America by humans and animals. No truer statement was ever uttered when someone remarked that, "America is the world's food basket." For more than a century, the United States agricultural food exports have been welcomed by countries that could pay for them, often coming to their aid in times of natural disaster.

to the up-on position, the electrons that create the photons of light are generated in a distant power plant located in rural areas where it will not be a visual or audible blight on the urban and suburban landscape.

Rural America is the center of emerging "green industries" with the following innovations at the forefront:

- wind turbines producing electricity,
- solar panel farms producing electricity,
- geothermal wells powering steam turbines generating electricity, and
- farmers and entrepreneurs working to develop, refine, and distribute biofuels.

Rural America is a source of natural beauty. The splendid architecture of Mother Nature cannot be equaled by the glass, steel,

Although final statistics are in question, it appears that no one argues the assertion that a disproportionate number of armed forces men and women come from Rural America. This contribution alone should be reason for pause as we consider the best ways to keep those serving our country in remote corners of the world connected with their families in America's country sides.

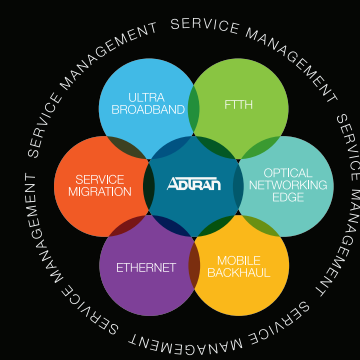
Our national interdependency, whether we are metropolitan, suburban or rural seems clear. All parts bring value to the whole. Are changes in ICT policies in order? Definitely. Are newly outlined legislative remedies in the best interest of all citizens of our country? Clearly, that remains at debate. Innovation, leadership, and competition have served us well in the past. We would do well to consider this formula going forward.



The only constant is change.

Customers are accessing the network from a broad array of devices and new media, causing service providers to reexamine how they define access. **ADTRAN**® is working with customers to deliver innovative solutions for every ingress point in the network. This innovation helps **ADTRAN** service provider customers accelerate change and quickly launch new revenue generating services.

For more information, visit www.adtran.com/access and discover how **ADTRAN** is *Reinventing Access*.



ADTRAN
reinventing
access





Carriers & Manufacturers asked to help tackle #1 Killer of Teens

Announced this May at CTIA, the Cellular Save-A-Life Foundation is taking action toward preventing deaths and accidents caused by cell phone use while driving, and they're inviting wireless industry leaders to do the same.

The number one killer of teens today may not be what you think. No, it's not drugs, acts of violence, illness, or even drunk driving. Today, distracted driving is the number one killer of teens.¹ And it doesn't stop there.

- More than **28 percent** of all accidents are caused by mobile phone distraction²
- At this moment, **13.5 million** drivers are on hand-held phones³
- Drivers are **23 times** more likely to be in an accidents if using a cell phone⁴
- Car accidents cause **9 teen deaths** per day⁵
- Cell phone use while driving causes **1.6 million accidents** each year⁶

The Cellular Save-A-Life Foundation was created as a response to these shocking, and continually rising, statistics. The foundation's mission is a simple one: increase awareness and provide educational programs to reduce the number of accidents and deaths caused by distracted driving. The campaign was announced May 2012 at the CTIA Wireless Trade Show.

We know it's dangerous, we know we're better drivers when we're not distracted, yet somehow it seems impossible to set the cell phone aside and focus on the road. Cellular Save-A-Life is not alone in their efforts to improve safety on the roads. The National Safety Council promoted April as the National Distracted Driving Awareness Month, and organizations like FocusDriven, Text Free Driving Organization, and The Coalition for Cellphone-Free Driving are advocates for cell-free driving. Cellular Save-A-Life differs as it is specific to the wireless channel, and is able to leverage a network of carriers, manufacturers, and more than 5000 independent wireless dealers to make an impact.

Distracted driving is a 'hot topic' within the wireless industry. As legislation is changed and accident tallies rise, wireless professionals, and the devices they sell, are caught in the middle of a growing storm. "It is absolutely essential that carriers and corporate leaders take charge on this," says Mark Landiak, who serves as the Cellular Save-A-Life Foundation's National Director. "We have an obligation to our customers to ensure that our products are being used safely."

¹ Children's Hospital of Philadelphia and State Farm Insurance Study
² National Safety Council
³ NHTSA Study, National Highway Traffic Safety Administration, 2011 study
⁴ Virginia Tech Transportation Institute research
⁵ IIHS fatality facts 2008
⁶ National Safety Council

Landiak has worked in the wireless industry for more than 20 years with manufacturers, dealers and carriers, and understands industry demands, but first and foremost he is a parent, and parenthood warrants a whole different set of demands. "I understand the responsibilities our industry has when it comes to this issue, but I also understand the need, as a parent, to protect your children. So many of the stories you hear about distracted driving accidents involve young drivers. As a parent, it's hard to watch your kid walk out the door jingling car keys, but it's even more difficult knowing that in their car there's a temptation in the form of a cell phone, threatening their life. That's part of the reason why this is so important to me."

"It's hard to watch your kid walk out the door jingling car keys, but it's even more difficult knowing that in their car there's a temptation in the form of a cell phone, threatening their life."

Cellular Save-A-Life shares an important partnership with wireless trade organization, the Wireless Business Owner's Consortium (WiBOC). WiBOC boasts a network of more than 3,000 dealers and has the opportunity to bring the Cellular Save-A-Life message to communities around the nation via its members. Additionally, WiBOC provides the resources, training and marketing support to ensure that those who adopt the program are successful. Meg Nigro, Executive Director of WiBOC affirms that, "as the largest industry trade organization for independent wireless retailers, we can work with our members to bring awareness to their communities and make a difference in the lives of their customers."

As a manufacturer partner, Cellcontrol provides the Cellular Save-A-Life campaign with a real solution to distracted driving. The Cellcontrol device disables a driver's cell phone when the vehicle is moving. In addition to providing alerts if the device is ever disabled, Cellcontrol's robust reporting system allows parents or administrators to accurately monitor car mileage, speed reports and dangerous driving. Unlike common GPS solutions, Cellcontrol uses a vehicle's onboard diagnostic port to collect data, thereby avoiding battery drain and allowing the product to be superiorly accurate and safe. According to Landiak, "the issues of safe driving really hits home with parents. I think that's why when you tell any parent about Save-A-Life, they're immediately on board, and why when you tell them about Cellcontrol, they're immediately ready to buy."



OPPORTUNITIES FOR CARRIERS

Currently, Cellular Save-A-Life is managing a preliminary Pilot Program. The 25 pilot locations have become Cellcontrol distributors and are bringing the Cellular Save-A-Life message to their communities. Each location is providing a valuable community service, while simultaneously increasing traffic, loyalty and sales. The Pilot Program will set the foundation for the campaign's future efforts in retail locations.

Cellular Save-A-Life offers a variety of involvement opportunities to carriers and manufacturers. Sponsorships are flexible, and tailored to complement the existing programs, needs and philosophy of each organization.

For carriers:

- Bring Cellular Save-A-Life to your Retail Operations - Allow your stores to make a difference in the communities they serve while boosting profits. We provide the training and marketing support to ensure that Cellular Save-A-Life is a success.
- Closed driving course - This is a carrier-sponsored event designed to show teens (and adults) how distractions affect the quality of their driving.
- Parent Resources - Sponsor the creation of our 'Parent Resources Guide,' and help families become safer drivers together. (this can be branded and printed for any high school or community organization).
- Group presentations - SAL will provide interactive presentations that can be made to: local high schools, sports teams, churches, community organizations, and other groups.
- Mini Sponsorship - Don't want to host an entire event? Team up with Save-A-Life to support local events. (athletic tournaments, local festivals, trade shows, high-school activities)
- Adopt Save-A-Life internally - We'll help you spread the message to your team, and help them and their families, become safer drivers.

If you represent a carrier, manufacturer or organization that is interested in learning more about joining the Cellular Save-A-Life initiative, please contact us at info@cellularsavealife.org. Press inquiries and interview requests may be sent to elise@cellularsavealife.org.



What Really Makes A Top Sales Producer?

By: Brenda Abdilla
President, Management Momentum

Emotional Intelligence (EI) is defined as a set of emotional and social skills that collectively establish how well we:

- Perceive and express ourselves
- Develop and maintain social relationships
- Cope with challenges
- Use emotional information in an effective and meaningful way

“The sharp sales managers know intuitively the sales characteristics that used to work no longer work . . .”

Believe it or not, someone’s Emotional Intelligence Quotient (referred to as EQ-i) is actually a predictor of success in life and work.¹ If you have ever heard yourself saying, “That guy can really read a room,” or “I don’t know how she does it, but even the toughest customers will buy from her every time,” then you are describing a rep who has a strong emotional intelligence in the areas that matter for their field and market. The US Air Force (USAF) discovered the power of EI when they decided to tackle the high attrition rates of Air Force Recruiters and ended up saving \$2.7 million in training costs (talk about a tough market—imagine trying to recruit people to join our armed services in a climate of one crisis after another!). The USAF decided to study the differences in EQ-i among their most and least successful recruiters. They found that the most successful recruiters had a higher-than-average level of assertiveness, which is not surprising, as salespeople need to be assertive, right? But they also had higher levels of flexibility—meaning the ability to adapt emotions, thoughts, and behaviors in unpredictable circumstances—and stress tolerance—which is a belief that one can manage and cope during difficult situations.

Another surprise was that the top producers had higher happiness and self-actualization scores. Happiness, of course, speaks to a person’s outlook on life, while self-actualization is a person’s willingness to improve themselves in the pursuit of a

rich and enjoyable life. By paying attention to the science of emotional intelligence the USAF increased their retention by 92% in the first year alone, and a report to a congressional committee stated that the USAF recruiters are twice as productive as other branches of the armed forces.²

If you think about it, it makes perfect sense. Experienced managers know how futile it can be to motivate and inspire the rep who simply has a dark view of life, or the one who is always complaining about any and all changes that are presented. The good news is that EI can be improved with a concerted effort, and most of us get more emotionally intelligent with age. It’s important to note that a high EQ-i is not necessarily the only thing you should look for in a rep. While a higher overall score is definitely a good sign, you have to look a little deeper and consider the specific job the rep would be doing and the environment they would be selling into.

One’s level of impulse control is another important attribute and is a prime example of how important it is to consider the specific job when measuring EQ-i and attempting to predict sales success instead of just looking for a candidate with a high score. Culturally, we value someone with a high impulse control (the ability to resist or delay the drive to act), and when it comes to road rage and waiting in line at the Post Office, this is a good thing. However, too much impulse control can make a person risk-



Brenda Abdilla is passionate about momentum. She likes results-oriented action so much she founded her company on the principle of moving people and organizations forward. Brenda is a skilled professional mentor using her experience and advanced tools to help motivated professionals reach their desired outcomes. Those outcomes include promotions, career-changes, higher productivity, better internal relations—most anything that moves a person’s career or business forward. Brenda is the author of two books about getting results at work with a third book underway. Learn more or inquire about hiring Brenda’s Management Momentum at ManagementMomentum.net.

averse, and many times companies need someone in that sales spot who is willing to act on impulse to make that call or test that new approach.

“An ROI study conducted by a debt collection agency found that collectors who were hired according to the company’s new emotional intelligence model achieved 163% against target the first year. Even those who were low performers and were trained in EQ-i brought in 80% against target within 3 months.” Source: MHS multi-health systems 2011.

Here are some examples to help you recognize various forms and levels of Emotional Intelligence that may be found within your team, along with some thoughts on how to turn them to your advantage:

You have a rep who tends to side completely with the customer base. If the customer has even the tiniest of issues

with the product, the rep will blow it way out of proportion.

He is overusing his empathy skills and could use some work developing other EI skills like assertiveness, independence and problem solving.

Your rep comes off as arrogant and overly confident and she ignores feedback from others.

She is overusing her assertiveness by behaving aggressively and needs to develop empathy skills, social responsibility and emotional self-awareness.

Your rep fixates on a problem and is very black-and-white with her thinking; even when a solution is readily available to her.

From an EI perspective, this rep has a low flexibility index and would benefit from learning to develop more stress tolerance

and improving flexibility and a skill called reality testing—which is the capacity to remain objective.

As you are assessing the development plan for your team and putting together plans to hire, pay attention to how your best producers develop relationships with customers, how they view the world, handle stress and communicate their thoughts and emotions to others. Although it’s tempting to focus solely on past experience, know that you will get more bang for your buck if you focus on hiring and developing emotional intelligence skills in your team.

1 - Source Multi-Health Systems
2 - Source Multi-Health Systems and Gourville, 2000: Handley; 1997



The most common question asked by my sales manager clients is, “What should I be looking for in a sales rep or business developer in today’s environment?” Not only do they wonder what they should look for in their hiring endeavors, but they are also at a loss when it comes to knowing which skills to develop in their current team. Sales managers already have their hands full with the combination of a hard-to-read market, the pressure to perform and the stress of constant changes at work, so it’s hard to know where to begin.

The sharp sales managers know intuitively the sales characteristics that used to work no longer work—however, old habits die hard, and it’s tempting to look for the rep who seems like they will “hit the ground running,” when in reality, they may end up hiring someone who simply hits the ground instead because they are not a fit for the customer base you serve or have old-school sales habits.

The short and the long answer to the question about what makes a top producer in today’s selling environment has everything to do with the emotional intelligence/skills of the rep and ultimately the team.



Fiber to the Antenna UP CLOSE & PERSONAL



Take an up close and personal look at Corning Cable Systems Solutions for Wireless Networks and discover how our fiber connectivity products make fiber-to-the-antenna (FTTA) deployment the fast, cost-effective way to upgrade and expand your network.



CORNING

www.corning.com/cablesystems

NETWORK INNOVATION



Explosive Traffic Growth
Over the Top Content
Mobile Backhaul

Innovation to help you get
ahead of the curve

The growth in network traffic fueled by exploding use of video on the Internet has brought many challenges to carriers of all sizes. Juniper Networks innovative network solutions allow you exploit new revenue opportunities, contain costs and offer a superior user experience.

Whether you are dealing with over the top content, rapid growth in network traffic, or providing backhaul for cellular carriers Juniper Networks can help. Get ahead of traffic growth, cope with over the top content, exploit revenue opportunities in mobile backhaul, and prepare your network for IPV6.

For more information, visit us at:
www.juniper.net/us/en/solutions/service-provider/universal-edge/

JUNIPER
NETWORKS

Packet Optical . . . Not Just for Transport Anymore

Kurt Raaflaub
Product Manager, Ethernet & Optical Solutions
ADTRAN

Fiber optic communication systems have been deployed for the past few decades to address the need to transport large volumes of communications services, primarily voice and fax, across long transoceanic or transcontinental distances. The proliferation of optical solutions in these high-density, 'long-haul' and core network applications, combined with new optical technology innovation and advancement, has enabled these solutions to be economically extended from the core toward the network edge, closer to the subscriber. At the same time, the communications market has dramatically transformed from primarily voice to predominantly data and video, resulting in a fundamental shift in network infrastructure to Internet Protocol (IP) packet-based solutions in support of the new services mix.

The entire telecom network, from the network core out to customer access, is under tremendous pressure to effectively scale in a video-centric world. Global IP traffic has increased eight-fold over the past five years and will increase four-fold over the next five years. This growth comes from every

service segment. New mobile, residential and enterprise applications are becoming increasingly bandwidth intensive and prolific such as Carrier Ethernet-enabled high-resolution medical imaging equipment; Fiber-to-the-Home-enabled video-centric home appliances; and 4G-enabled multimedia mobile consumer devices.

Highly scalable fiber-optic solutions were traditionally focused on relieving capacity strain at the largest confluences of telecom traffic. Packet optical innovations are applied at the core of the network to deliver unrivaled transport capacity for long haul transoceanic or transcontinental fiber routes. As good as these solutions have been in alleviating capacity issues at the heart of the network, these same solutions are ill equipped to respond to the new demands on the opposite side of the network, the access and edge. It is here where the network is now under the greatest pressure.

Optical Networking Edge

Given our unique perspective and vantage point, ADTRAN® recognized the opportu-

nity to leverage packet optical innovations, repurposing and right-sizing this technology to redefine last mile access aggregation. As a result, this blurred the network boundaries between access and transport requiring a new market category at the Packet Optical Edge. ADTRAN's Optical Networking Edge (ONE) solutions leverage packet optical innovation and techniques to solve the capacity bottlenecks created by the aggregation of last-mile, high-bandwidth services to homes and businesses. ADTRAN's innovation in this area is focused on further right sizing core packet optical technology and uniquely differentiating ADTRAN by integrating fundamental voice, data and video service delivery capabilities for superior economics and maximum scale. Simply put, ADTRAN enables service providers to eliminate the need to deploy a two box solution (metro/edge packet optical solution + MSAP) by delivering a high-performance Optical Networking Edge solution that is fully integrated into the MSAP.

For more information on ADTRAN's ONE solution, visit www.adtran.com/ra-one

Walker Recognized in Broadband Communities' Fiber-To-The-Home Gold 100 List

By Randy Turner
Director, Marketing Communications
Walker and Associates

Broadband Communities magazine recently announced it has rebranded its annual Top 100 to the Fiber-To-The-Home Gold 100. The list highlights integral suppliers for broadband deployment projects, bringing products to market throughout North America. For the third year running, Walker and Associates is included in the list. A variety of businesses among a broad cross section of telecom markets, including those taking advantage of broadband stimulus programs available through ARRA funding, know Walker as a reliable partner for their projects.

Criteria

In selecting the Gold 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 etc.
- 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.

Customers recognize Walker by their extensive manufacturer relationships, strong commitment to value, high standards of

customer service, and innovative services that reflect a genuine interest in customer success. For over four decades Walker has built and maintained a reputation for excellence, resulting in high levels of customer commitment and confidence. Awards and recognitions such as this one confirm customer satisfaction ratings that indicate trust and brand loyalty. For more information, visit www.walkerfirst.com.

Fiber-To-The-Home
GOLD 100
Broadband
Communities Magazine
2012

In the

Spotlight

By Randy Turner
Director, Marketing Communications
Walker and Associates



Chris Walker received a promotion to Regional Account Manager for the Heartland Territory, which includes Missouri, Oklahoma, Kansas and Arkansas.

Chris has held various positions in Walker's Sales and Marketing departments and has demonstrated a genuine interest in professional growth and the commitment to produce tangible benefits for the company. Derek Granger, Sales Director for the West Sales Regions states "I am very excited and optimistic that Chris will be successful in his new role and that he will provide us the growth needed in our Heartland patch!"

Chris is the grandson of Chris and Virginia Walker, company co-founders. In coming weeks he will relocate from North Carolina to the Kansas City area, positioning himself for immediate customer contact in his sales region. He can be reached by email at chris.walker@walkerfirst.com.



Tracy Crowell rejoined Walker and Associates in June, 2011 as a Sales Executive. Since then she has proven herself as a sales professional, focusing on Broadband Stimulus projects and

working with reseller customers. Most recently she has been reassigned as the Inside Sales Executive for the states of California, Hawaii and Nevada.

Tracy previously managed an account base for Walker beginning in 1996 until leaving to work for a large industry manufacturer in 2000. Tracy offers customers years of telecommunications experience, but more importantly, a strong track re-

cord of building and maintaining customer relationships. Over the past decade she has built a solid reputation as a customer advocate, tirelessly working to resolve customer issues, create productive outcomes, and build brand loyalty.

Tracy lives in Lexington, NC, and works at Walker's headquarters in Welcome, NC. She can be reached by phone at 800-647-8470 or by email at tracy.crowell@walkerfirst.com.



Mark Walker, President of Walker and Associates, has been appointed as chairman for the Public Policy Committee (PPC) for TIA (Telecommunications Industry Association). The committee is the primary

policy group responsible for establishing and advocating TIA positions on domestic public policy issues and strategies that represent the consensus of the membership. Mark has been a member of the TIA Board of Directors since 2010.

Demystifying IPv6

By Duncan Freeman and Brandon Ross
Network Architects
Walker and Associates



"... a successful transition will require planning and expertise."

How will IPv6 impact my network? What's required to make my network IPv6 capable? What benefits will I gain? How much will it cost?

These are a few of the questions to consider when planning your IPv6 strategy, and ones that we're hearing more frequently from our customers. To help demystify IPv6, below are ten aspects you should know:

- 1) IPv6 is inevitable, as IPv4 addresses [about 4.3 billion total] will soon become exhausted as a result of a more connected planet with a widening range of devices;
- 2) IPv6 is more scalable, allowing for more than 3.4x10³⁸ addresses - that's N with 37 zeros following it;
- 3) IPv6 is more efficient, allowing for auto-configuration, smaller routing tables and more simplified packet handling, to name a few;
- 4) IPv6 is more secure, with IPSec built into the architecture, capable of end-to-end encryption;
- 5) IPv6 is more robust, as direct addressing is possible, allowing for new network services, and more advanced quality of service;
- 6) IPv6 has better multimedia support, as IPv6 supports multicast, allowing for packets to be sent to multiple destinations simultaneously;

- 7) IPv6 has better mobility support, allowing mobile users to seamlessly pass from one network to another without losing data;
- 8) IPv6 has built in privacy extensions, which, when enabled, make it more difficult to accurately track Internet activity;
- 9) IPv6 can carry a larger packet payload [Jumbogram] than IPv4, which can improve performance over high-MTU links; and,
- 10) IPv6 will become a compliancy requirement, and as government agencies transition to IPv6, you may need to meet their IPv6 requirements for conducting business with them.

As you can see, IPv6 is in your network's best interest, but a successful transition will require planning and expertise. To that end, there are a number of implementation tactics [e.g. dual-stack, tunneling, NAT, etc.], as well as hardware, if required, to assist in transitioning your network to IPv6, without downtime or service interruption, and with minimal expense. The key is to begin sooner, than later, migrating in phases, beginning with non-mission critical aspects first.

For a free IPv6 consultation, please email or call us: duncan.freeman@walkerfirst.com; brandon.ross@walkerfirst.com; 1.800.WALKER1.

What Is IPv6?

Content compiled from Wikipedia, validated by Brandon Ross

IPv6 (Internet Protocol version 6) is a version of the Internet Protocol (IP) developed by the Internet Engineering Task Force (IETF) that is intended to succeed IPv4 as the dominant communications protocol used for Internet traffic. It was developed to deal with the long-anticipated IPv4 address exhaustion by implementing a new address system with a greatly increased number of possible addresses.

Each device on the Internet, such as a computer, must be assigned an IP address in order to communicate. With the exploding number of new computers and mobile devices being connected to the internet, there is a need for more addresses than the cur-

rent addressing scheme (IPv4) can accommodate. IPv6 uses 128-bit addresses, allowing for 2¹²⁸, or approximately 3.4x10³⁸ (a number with 37 zeros) addresses. IPv4, in comparison, uses 32-bit addresses, allowing for only 4,294,967,296 addresses.

IPv6 addresses look like 2001:0db8:85a3:0000:0000:8a2e:0370:7334, for example — eight groups of four hexadecimal digits, separated by colons.

Deployment of IPv6 is accelerating, with a World IPv6 Launch having taken place on June 6, 2012, in which major internet service providers, especially in countries that had been lagging in IPv6 adoption,

deployed IPv6 addresses to portions of their users. It was estimated that the world launch resulted in an estimated 1% of all Internet users operating from an IPv6 address.

IPv6 does not implement interoperability features with IPv4, but essentially creates a parallel, independent network. Exchanging traffic between the two networks requires special translator gateways, but this is not generally required, since most computer operating systems and software implement both protocols for transparent access to both networks, either natively or using a tunneling protocol like 6to4, 6in4, or Teredo.

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.

We look forward to seeing you at these events!

Proud Member of:



August

* TTA Annual Convention Franklin, TN
TTA Convention & Product Showcase San Antonio, TX

September

* FTTH Council Expo Dallas, TX
* UTC Northeast Region (formerly regions 1&2) Mashantucket, CT
RCA Annual Conference and Innovation Showcase Las Vegas, NV
ITA Vendors' Showcase East Peoria, IL
OTA Central Office / Information Technologies Seminar Newport, OR

October

COMPTEL PLUS Fall Dallas, TX
* UTC Region 3 Memphis, TN
TelcoTV Las Vegas, NV
* UTC Region 4 Indianapolis, IN
PTA Technical Showcase & Conference Harrisburg, PA
Midwest Telecom Expo Ft. Wayne, IN
WSTA Fall Conference & Exhibits Stevens Point, WI
NYSTA - North East Telecom. Showcase (NETS) Verona, NY
MATSS Kansas City, MO
ATA Associate Member Showcase Anchorage, AK
NCTIA What's New Expo Greensboro, NC
KTA-TTA Fall Conference and Supplier Showcase Bowling Green, KY

November

OSP Expo Denver, CO
Great Lakes Technology Showcase Toledo, OH
TASE Annual Convention Biloxi, MS
MTA 31st Annual Showcase Billings, MT

* - Indicates Walker is an event sponsor

Maintaining Quality Standards 2012 Audit Successfully Completed

By Randy Turner
Director, Marketing Communications
Walker and Associates

Walker and Associates, Inc. successfully completed its 2012 quality audit, maintaining TL9000 and ISO 9001:2008 certifications. While TL certification is a quality certification specific to the communications industry, ISO is an internationally recognized quality management system standard developed by the International Organization for Standardization (ISO). The certifications apply to Walker's Welcome, NC headquarters, its Winston-Salem, NC warehousing facility and installation and integration operations, as well as the sales and marketing branch office in Alpharetta, GA.

"Walker and Associates is intently focused on providing the best, highest quality products and solutions for our customers and their businesses - and on continuously working to improve how we deliver on that promise," said Lorie Loman, Quality Manager at Walker and Associates.

ISO 9001:2008 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 internal staff training practices to product design, manufacturing, delivery, and service.

External auditors with Orion Registrar, the world's leading quality management systems registrar, visited Walker and Associates headquarters in May, 2012 and spent several days conducting a comprehensive audit. The auditor examined all of Walker's business and quality systems, including product development processes, materials documentation practices, and measurement systems for tracking customer satisfaction and supplier performance.

Walker originally successfully completed an audit and was officially ISO-certified in August, 2008. The ISO certification process ensures ongoing compliance because, once certified, companies are externally



audited annually. Throughout its 42 years of experience in the telecommunications industry, Walker has always fundamentally operated to ensure customer requirements are met while maintaining a focus on process improvement among its associates.

Hal Sveum, General Manager and VP of Operations at Walker and Associates, commented that "TL9000 certification is held now by most of our key manufacturers. The industry's customer base has been gradually requiring this certification in order to do business with them." As a result, Walker and Associates has determined it part of its strategy to retain this important level of certification, ensuring customers of measures taken to reach its quality statement:

"Walker will fulfill customer requirements by providing a complementary mix of products and services with timely and accurate deliveries."



Professional Skilled Mentoring for Sales Managers and Business Developers

- Solid 6-12 month action plan using existing resources
- Take-away strategies for dealing with business obstacles, challenges and BIG stress
- Significant improvement on your time management and work flow
- Improve communication approach with your team, boss and co-workers
- A pipeline development plan that fits your industry and plays to your strengths
- Awareness of your unhelpful habits and the confidence to improve them

www.managementmomentum.net
303.456.1210
babdilla@managementmomentum.net

Visit our website to book a **FREE**, no obligation mentor session with Brenda Abdilla

PROTECTED

PROTECTION, FLEXIBILITY, EASY INSTALLATION

TE's Flexible Fiber Box (FFB) is designed to address the unique challenges of indoor and outside plant fiber installations. Available in two base configurations, Fixed and Rapid, the FFB promotes true flexibility with easily interchangeable components for term, sliding adapter pack, fixed bulkhead, splice, MPO and hardened multifiber optical connector (HMFOC) configurations.



The Rapid FFB system leverages TE's RapidReel™ fiber cable spool to payout fiber directly from the enclosure. By enabling faster cable routing and installation, the fiber cable spool helps to minimize overall labor costs. In addition, the spooling system reduces the need for site survey inspections, and simplifies cable ordering and inventory requirements. Any excess cable stores easily back on to the spooling system, eliminating the need for additional slack storage equipment.



The Fixed FFB system uses an assortment of fixed configuration plates to mix-and-match different cable and connector types. One half of the box manages feeder cable connections; the other half manages drop connections. To meet co-location requirements, the feeder side of the box is available with a lockable cover.

MAKING CONNECTIONS, DELIVERING RESULTS

Walker and Associates offers a one-stop-shop for all of your network connectivity needs. Combined with TE Connectivity's (TE) industry-leading products and service, Walker and Associates offers more tools, talent and resources to help customers deploy fiber and copper faster, more efficiently and at lower cost than ever before.

To learn more, connect with Walker and Associates at 1-800-WALKER1 or walkerfirst.com.



VIEW THE
FFB CATALOG



To learn more, connect with Walker and Associates at 1-800-WALKER1 or walkerfirst.com.

