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In this Issue...
1 State of the ResNet Report
2 Stream Annual Conference 2014
3 Annual Dues Invoices Mailed
4 What's Next for Net Neutrality?
5 Key Issues for Compliance with FCC Signal Booster Rules
7 Info Links
8 Thanks to Exhibitors and Sponsors
9 Check It Out


If you attended the 43rd Annual ACUTA Conference or the 18th Annual ACUTA Strategic Leadership Forum in Dallas, you no doubt saw the impressive ResNet infographic display that heralded the successful launch of the third installment of a comprehensive study that measures the pulse in Residential Networks (ResNet) practices and policies in higher education. ACUTA, the National Association of College and University Chief Business Officers (NACUBO), and the Association of College and University Housing Officers—International (ACUHO-I), are pleased to present research findings from the 2014 ACUTA/NACUBO/ACUHO-I State of ResNet study. The goal of this five-year tracking study is to provide year-over-year analysis and report on evolving trends.

New this year, the scope widened to represent nearly twice as many stakeholders, with more than three times the number of chief business officers responding compared to last year. It is also the first time that ACUHO-I partnered with ACUTA and the first time that respondents extend beyond IT and chief business officers to include housing officers.

The research, which includes data from more than 400 higher education institutions, is designed to help you address such issues as the unprecedented growth in bandwidth and connectivity demands, budget restrictions, planning, policy considerations, staffing, and support. These insights will make it possible for colleges and universities to better meet the challenges of today while fostering greater collaboration and planning to meet the challenges of tomorrow.

According to Dee Childs, Chair of ACUTA's Environmental Scanning Committee and CIO at the University of Alabama in Huntsville, “The ACUTA/NACUBO/ACUHO-I Study reveals that schools are making strides in providing better coverage and bandwidth, but are grappling with a laundry list of needs—holistic planning, better communication between departments, tighter security, etc.—while processes like resource allocation and diagnostics haven't kept pace. Administrators are trying to build better and bigger networks with yesterday's tools. It's our hope this study will provide a knowledgebase of practices and priorities to help administrators anticipate, plan ahead, and address the challenges as they scale infrastructure to meet demand.”

The 2014 ResNet Trends and Practices report and infographic (available at www.acuta.org/resnet) further explain the current state of ResNet from the perspectives of IT, business, and housing officers. The two documents also explain how universities and colleges are reacting to the diverse and quickly evolving challenges of ResNet services. In the report you will note the following:

- Schools are exploring more ways to accommodate demand for more bandwidth.
- More schools are providing robust wireless and mobile connectivity.

Contact ACUTA...
Web www.acuta.org
Phone 859.278.3338
eMail jprofitt@acuta.org

Corinne Hoch, PMP
ACUTA CEO
• More types of support are available, but 24/7 support is still scarce.
• More plans are in place now, but better diagnostics and communications are needed for greater effectiveness.
• Schools are adopting different models to cope with rising ResNet costs.

And in the report you will find the supportive details for the key takeaways, such as:
• Bandwidth management
• Wireless coverage and capacity
• ResNet service and support
• Planning and measurement
• Funding and technology costs
• Outsourcing


We thank Dee Childs, Environmental Scanning Committee Chair, the Environmental Scanning Committee Chair members, NACUBO, ACUHO-I, and all of you who participated in the collaborative effort, and, again, invite you to review the supporting documentation in the report by following this link: http://www.acuta.org/resnet.

Stream the Annual Conference 2014 to Your Desk

For a taste of the quality of education provided at ACUTA events, consider purchasing the video of eight sessions from this year’s conference and bring some of the conference right to your desk. Eight conference sessions can be streamed to your iPad, Android tablet, or Windows/Mac computer. The sessions also include synced presenter slides that advance automatically with the presentation. These sessions were recorded:
• Keynote: Digital Disruption: Unleashing the Next Wave of Innovation (James McQuivey, PhD, Forrester Research)
• Lightning Round: Tough Lessons Learned (Facilitated discussion led by Jerry Krawczyk, Penn State)
• Embracing Change (Riny Ledgerwood, San Diego State; Carolyn Trail, Roanoke College)
• Texas A&M Inbuilding DAS: Lessons Learned (Jason McConnell and Chris Norton, Texas A&M Univ.)
• Super Session Pt. 1: CIO/Community Colleges (Ken Ingle, Rowan-Cabarrus Community College)
• Super Session Pt. 3: CIO/Large University (Vince Kellen, Univ. of Kentucky)
• Annual Regulatory Update (J.G. Harrington, Cooley LLP)

To order these sessions, go to the ACUTA website, www.acuta.org.

Annual Dues Invoices Mailed May 1

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In addition to timely program content and the finest professional network available to higher education information communications technology professionals, benefits such as discounts on events, free webinars, access to important legislative and regulatory information, the quarterly journal and monthly eNews, ACUTA offers volunteers leadership opportunities to help you develop new skills and advance your career.

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What’s Next for Net Neutrality?

J.G. Harrington, Cooley LLP

The following information about the FCC’s efforts to reinstate its network neutrality rules is based on press reports and on Chairman Wheeler’s response to those reports.

First, the Wall Street Journal and New York Times have reported that the FCC will propose new network neutrality rules that will permit providers of broadband services to negotiate individual deals with content companies to obtain preferential treatment on the broadband providers’ networks. The Times describes the proposed rules as “a complete turnaround,” suggesting that they will be radically different from the current rules, while the Journal says that the new rules will “allow broadband providers to give some traffic preferential treatment, so long as such arrangements are available on ‘commercially reasonable’ terms for all interested content companies.” In evaluating these reports, these are some of the key considerations:

1. The existing rules already exempt “specialized services” provided over broadband facilities from the network neutrality requirements. As defined by the FCC, any service that provides access to a limited range of Internet content or applications can qualify as a specialized service, so many of the services described in the press reports already would be exempt.

2. To the extent that the new rules will broaden the specialized services exemption, then there could be impacts on Internet content and application providers, but those impacts are hard to gauge because the desirability of obtaining preferential treatment will depend greatly on many factors, including price and the extent to which there are bottlenecks at interconnection points.

3. The reports also indicate that, consistent with prior public statements, the FCC does not intend to address network interconnection in the new rules. This increases the likelihood that content providers that use significant amounts of bandwidth – Netflix, Apple, Amazon and Skype, for instance – will find these preferential arrangements desirable.

4. It is not clear whether the proposed rules would cover arrangements like the Comcast-Netflix agreement, which has been characterized as an interconnection arrangement.

5. It is possible that proposed rules actually would impose some level of new regulation on specialized services, particularly given the Journal report that the same arrangements would have to be made available on commercially reasonable terms. In other words, rather than reducing the level of regulation, the new proposed rules could increase it.

The reports also indicate that the FCC will propose a significant strengthening of the current transparency rule, which requires disclosure of terms and conditions of broadband services, including speeds and traffic management policies. This is consistent with the FCC’s announced intent when it first addressed how it would respond to the Court of Appeals decision in February.

In response to those reports, Chairman Wheeler posted on the FCC’s official blog and devoted a significant part of his April 30 speech to the annual cable convention to network neutrality. Wheeler’s blog, available at www.fcc.gov/blog/setting-record-straight-fcc-s-open-internet-rules, says that the proposed rules “will establish a high bar” in determining whether these kinds of arrangements are “commercially reasonable” and therefore permissible. He adds that the intent of the “commercially reasonable” test is to protect against “harm to competition and consumers stemming from abusive market activity.”

This response reflects, in part, some of the potential constraints on the FCC’s actions created by the court decision that overturned the original rules, particularly the court’s determination that the non-discrimination rule created a common carrier obligation that was inconsistent with the FCC’s regulatory classification of broadband Internet access services. It also indicates that Chairman Wheeler wants to create the impression that the new rules will be as tough as they can be within those constraints.

As with the news reports, this blog post leaves open the possibility that the FCC will broaden the coverage of the rules to include so-called “specialized services” that do not provide access to the broader Internet. If that is the case, then those services likely would be subject to the same “commercially reasonable” standard as preferential access arrangements.

The cable convention speech was, if anything, more forceful than the blog post. In the speech, Chairman Wheeler said that he intends “to put in place real protection for consumers, real protection for innovators and entrepreneurs that resolves continued.
what has to now only been a matter for debate and litigation.” Wheeler also emphasized that “any new rule will ensure an open pathway that is sufficiently robust to enable consumers to access the content, services and applications they demand and ensure innovators and edge providers are able to offer new products and services.” He also described the proposed rules as “tough” and “enforceable.” For the first time, the speech also gave some indication of how quickly the FCC would adopt new rules, which Wheeler said would be done with “dispatch,” a point he emphasized repeatedly.

The blog post indicates the proposal is being circulated to the FCC commissioners, in anticipation of a vote at the agency’s May 15 open meeting.

**Key Issues for Compliance with FCC Signal Booster Rules**

*J.G. Harrington, Cooley LLP*

**Consumer Signal Boosters**

- The FCC’s rules define consumer signal boosters to include any “bi-directional signal booster that is marketed and sold to the general public for use without modification.”
- Consumer signal boosters can be operated by subscribers in good standing for personal use following registration with the relevant carrier and carrier approval, using approved antennas, cables and/or coupling devices. The FCC’s rules do not limit the type of subscriber that can use a consumer signal booster.
- Consumer boosters include both single-carrier boosters and “wide band” boosters that work on multiple carriers’ networks.
- All major carriers and many smaller carriers have agreed that they will give blanket consent for use of consumer signal boosters that comply with the FCC’s new technical rules.
- Incidental use of consumer boosters by people other than the subscriber is permitted, but they cannot be used to provide long-term coverage for the general public or for non-subscribers (unless those individuals also register and obtain consent).
- The rules governing sale and use of consumer signal boosters go into effect on April 30, 2014. This is an extension of the original deadline, which was March 1, 2014.

**Industrial Signal Boosters**

- Under the FCC’s rules, “all signal boosters other than Consumer Signal Boosters” are industrial boosters.
- In general, industrial boosters are intended to serve multiple users simultaneously and to cover large areas, such as stadiums, office buildings, hospitals, tunnels and campuses. Boosters used to improve the signal in a small area, such as a house, generally would be treated as consumer signal boosters.
- As of March 1, 2014, companies may not sell or market industrial signal boosters that do not comply with the FCC’s rules. In practical terms, the only change for industrial signal boosters is that they must be labeled as industrial boosters, not for consumer use.

**Existing Boosters**

- Boosters purchased before the effective date of the rules (April 30, 2014, for consumer boosters or March 1, 2014, for industrial boosters) can continue to be operated if the owner registers the booster and receives consent from the affected carrier.
- Consent for use of existing boosters may be given orally or in writing. Some carriers have granted general consent for use of existing consumer signal boosters. Consent already has been granted for many existing industrial boosters, such as those used in DAS, before the rules were adopted.
- Carriers that consent to permitting use of existing boosters must have a registration system for those boosters. Boosters must be registered by the effective date of the rules or within 90 days of the time the carrier has its registration system in place, whichever is later.

**Interference**

- All signal boosters must be turned off if they cause interference. The FCC’s rules permit only secondary, non-interfering operation.
- Failure to turn off a booster in response to a complaint about interference from a carrier or the FCC can result in fines from the FCC. These fines can be significant – up to $100,000 in some cases.
Big Data: A Tool, Not an Answer

Gary Audin, Delphi, Inc.

Big Data is nothing unless the data is properly digested, correlated, matched, and transformed across systems.

Consider the data, both historical and recently collected, about your network's status and use. Consider the data collected from social media applications. Consider the data collected in your call center. All this data together can produce Big Data.

The data is nothing until it is analyzed so that conclusions can be gleaned and its meaning determined. Most people speak of Big Data's value in helping businesses make predictions.

I most recently encountered a discussion of Big Data in the book, "The Signal and the Noise: Why So Many Predictions Fail--but Some Don't" by Nate Silver. You may be familiar with him because of his accurate predictions in the 2008 and 2012 national elections. He had a nearly perfect score predicting how states would vote for president and who would be the elected senators. He also predicted that the Seattle Seahawks would win the Super Bowl (though he didn't predict the blowout that the game turned out to be).

In the introduction to his book, Silver states, "Data-driven predictions can succeed—and they can fail. It is when we deny our role in the process that the odds of failure rise. Before we demand more of our data, we need to demand more of ourselves."

New Correlations Can Be Made

Smaller data sets may be limited to known sets of elements, but when we can use Big Data analysis, bigger questions can be asked. For example, a smaller data set can be used to analyze network traffic, which can then be used to predict future network requirements and performance. Now take another smaller data sub-set, social media traffic, which ordinarily may seem less predictable. Correlating social media activity and network information may provide a better view of the impact of social media traffic—different social media events can produce very different traffic issues.

This is an example of the use of multiple smaller data sets combined together to deliver greater insight for the network architects and operators so they can be prepared for social media's impact. Still, even this broader data analysis cannot really be considered Big Data.

Big Data Defined

Big Data is defined as a collection of large, complex data sets that are difficult to process using most current database management tools or traditional data processing applications. The growth of large data sets has been stimulated by the additional information available for analysis of a single large set of related data, when compared to multiple small sets that add up to the same total amount of data. The correlations unearthed and the conclusions drawn from effective analysis have seemingly endless applications, enabling big data to be used for anything from identifying business trends to preventing disease.

Five Factors of Big Data

There are five factors that make working with Big Data difficult:

1. Quantity. The amount of data produced is expanding rapidly. Data comes in both structured and unstructured forms, an example of the latter being social media. The declining cost of data storage has stimulated the collection and retention of more data than ever.

2. Delivery Speed. The rate of data delivery stimulates rapid processing of data. If left unanalyzed, its value may decrease to where it is only historical data that is obsolete for forming predictions.

3. Variability. Data creation does not follow a nice smooth creation pattern. Large data production may be produced by unexpected events as well as periodic events.

4. Many Formats. It would be nice if all the data were in a common format, but this is rarely if ever the case. The variety of formats is already significant, with new formats introduced every year. This makes analysis that much more complicated.

continued
5. Many Sources. Attempting to connect, link, match, and transform the data is quite a task. If correlations cannot be made, data relationships will be fragmented and the end result will be a loss of control.

**Warnings When Working with Big Data**

When reading Silver’s book, three conclusions can be drawn:

1. The data collection process should be thought through well. Do not be impatient. Experience should be gained in steps, not all at once. Make sure you collect critical data. However, collecting massive data does not mean that analysis will automatically be fruitful.

2. Though you need to move quickly to take advantage of the analysis while the data is still fresh (see “Delivery Speed” above), there is risk in launching projects that are not well thought-out. You want to produce the conclusions ASAP, but too many false starts and aborted projects will only delay the end results.

3. IT has to keep their environment running smoothly. Be aware that IT has limited resources, and analyzing Big Data is another drain on these resources. Do not let the Big Data effort cause IT problems. On the other hand, don’t pursue Big Data analysis without the support of IT.

Big Data is nothing unless the data is properly digested, correlated, matched, and transformed across systems. A problem for the staff in charge of Big Data is that most of the collecting systems are not connected—nor are they designed to be connected. It appears that analyzing collected data will require training, experience, new system connections, and a lot of feedback to see if the right data was collected and if the right questions were asked. Otherwise, the predictions will be useless and possibly dangerous to the health of the enterprise.

An excellent article from *The New York Times* is “The Age of Big Data.”

I have also posted blogs on Big Data: Enterprise Social Networks and Big Data and Big Data, Internet of Things: The Network Impact.

*Gary Audin is the president of Delphi Inc. (delphi-inc@att.net), an independent communications consultancy. This article appeared online at www.nojitter.com on February 28, 2014, and is reprinted here with permission from the author.*

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**ACUTA Seeking Presenters for Fall Seminar in Boston**

ACUTA is looking for ideas and proposals for educational sessions for its 2014 Fall Seminar to be held at the Boston Park Plaza October 26-29. Find complete details at www.acuta.org/wcm/acuta/pdf/031814a.pdf. For this seminar, the Program/Content Committee is especially interested in proposals that address the following areas:

**Track 1: Trends in Service and Technology Delivery**

University technology groups function to deliver services and technologies to their institutions. How these services and technologies are delivered is as varied as institutional sizes, reputation, and cultures. The Trends in Service and Technology Delivery track will explore how the “as a service” trend is offering new avenues for service delivery; how virtualization in the data center, network, and at the desktop is opening new opportunities for service delivery; how delivery of services doesn’t depend on physical assets; and how these delivery options are changing hiring practices within technology service departments.

**Track 2: Securing our Connected Environments**

Universities are among the most connected environments. With more devices and users who feel comfortable with this connectivity, universities face a daunting challenge to ensure that their users, resources, and environments are secure and protected. Track 2 will explore methods institutions are using to educate their faculty, staff, and students about securing their devices; technology solutions to monitor perimeters and borders for inappropriate activities; policy and procedural initiatives to govern appropriate access and use of technology or data; and best practices that enable ease of access without compromising security.

Contact Michele West, Director of Professional Development, at 859/721-1655 or mwest@acuta.org if you have questions.

*ACUTA eNews • May 2014 • page 6*
Info Links

Frequently, vendors, associations, governmental bodies, and others provide white papers and other informational documents which are announced through a variety of media sources. While some admittedly have a certain slant or opinion, others are quite objective; however, they often contain valuable information. Below are links to selected documents.

- Find Me 911 – PSAP Survey on Wireless 911 Location Accuracy:
  Open-Ended Responses from 911 Dispatchers & Managers:
- FCC – GPS, WiFi, and Cellphone Jammers:
  Press Release - $48,000 Penalty to Florida Man for Jamming:
- Akamai – State of the Internet 4th Quarter Report:
  http://www.akamai.com/stateoftheinternet/
- GAO – Deploying Broadband to Unserved/Underserved Areas:
- FCC – Small Entity Compliance Guide on Inmate Calling Svcs:
- Verizon – Data Breach Investigations Report 2014:
  http://www.verizonenterprise.com/DBIR/2014/
- Small Company Coalition – Universal Broadband Proposal:
- CC/Kenny – Attack on Settlement-Free Peering:
  https://prodnet.wnca.org/publications/docs/wwpdf/42114cc.pdf
- Ed Superhighway – e-Rate Recipients’ Telecom/BB Spending:
- FCC – Urban Rate Voice Survey Data:
  http://www.fcc.gov/encyclopedia/urban-rate-survey-data

If you have an idea or a topic for an ACUTA webinar or conference session, please send your thoughts to suggestions@acuta.org.
Thanks to Exhibitors and Sponsors at the Annual Conference

Thanks to the companies listed on this page that exhibited and/or sponsored at our Annual Conference in Dallas. As you have opportunity, please include them in your RFPs and thank them for their support of ACUTA.

911 Enable
ADTRAN
AFL
AirWatch
Alertus Technologies
American Time

American Tower
Apogee
Aruba Networks
AVST
Black Box Resale Services
Calero Software LLC
Campus Televideo
CEECO
CenturyLink Government
Ciena Corporation
Cloudpath Networks, Inc.
Connectivity Wireless Solutions
Cortelco
Cox Business Services
Crown Castle
Dali Wireless, Inc.
DAS Advisers
Dura-Line Corporation
e2Campus By Omnilert, LLC
Ford Audio-Video Systems
Fortinet, Inc.
Fujitsu Network Communications, Inc.
GAI-Tronics Corporation
Gigamon
Goodman Networks

Graybar
HellermannTyton
INcomm
IntelePeer, Inc.
Jabra
JTS
Lantana Communications
Level 3 Communications
Lumens Integration, Inc.
Mapcom Systems
Matsch Systems
MaxCell
Microsemi
Mitel
NEC Corporation of America
Oracle Communications
Parlance Corp.
PCR, Professional Computing Resources, Inc.
Phybridge Inc.
Plantronics, Inc.
RedSky Technologies, Inc.
ShoreTel, Inc.
snom technology Inc.
Sprint
Stealth Concealment
Solutions
Superior Essex, Inc.
Synetra
Talkaphone
Taqua, LLC
TE Connectivity
The Via Group
T-Metrics, Inc.
Unify, Inc.
Unimax Systems Corp.
Unite Private Networks (UPN)
VALCOM
Vantage Technology Consulting Group
VoIPLINK
WESCO CSC
Windstream
WTC Consulting, Inc.
Xirrus

Grow the Network: Tell a Colleague about ACUTA today!

ACUTA eNews • May 2014 • page 8
Check It Out
Press Releases, Job Postings, & Corporate Webinars

The ACUTA website lets you communicate with other members—share some exciting news, fill a position, or find just the right vendor. Check the website for the latest postings frequently. Here are items that have been posted since our last eNews.

PRESS RELEASES: www.acuta.org/wcm/acuta/pressroom/pr.pdf
Send press releases to Amy Burton (aburton@acuta.org)

JOB POSTINGS: www.acuta.org/jobs
Help your colleagues who are looking for work! To send job postings, go to www.acuta.org. Click on one of the jobs listed there and you will link to the jobs listed now and a link where you can post a job.

- Information Security Analyst, University of Connecticut, Storrs, CT
- IT Manager, University of Tennessee, Knoxville, TN
- Applications Systems Analyst/Developer, The University of Arizona, Tucson, AZ
- IT Security Analyst Senior, University of Central Florida, Orlando, FL
- Manager of Network and Telecommunication Services, Fort Lewis College, Durango, CO
- Network Support Specialist, Rose-Hulman Institute of Technology, Terre Haute, IN
- Chief Information Officer (CIO), Wichita State University, Wichita, KS

FREE WEBINARS HOSTED BY ACUTA CORPORATE MEMBERS:
www.acuta.org/corporatewebinars
Many free webinars are available through ACUTA Corporate Members. Check the website at www.acuta.org/corporatewebinars to see what is currently available. (Corporate members e-mail Amy Burton at aburton@acuta.org to get your free webinars listed.)

ACUTA Committees Offer Growth Opportunity

If you have never served on an ACUTA committee, you may not recognize such participation as an excellent opportunity for professional growth. ACUTA's agenda is planned and executed to a great extent by committees. From the Membership Experience Committee to the Legislative and Regulatory Affairs Committee to the Program/Content Committee—and everywhere in between—it is our members who choose the path for the association.

As our new president Mark Reynolds wrote on the listerv earlier this week, “If you are interested in serving on a committee, please let the ACUTA staff [or the committee chair] know. These committees are core for the association and what is delivered to us.”

Explore this level of participation for yourself. Study the volunteer participation form and see how you might grow professionally while you help ACUTA to grow. Check it out at www.acuta.org/volunteer.