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jprofitt@acuta.org

Big Data Means Big Advances

In today's slow economy, it is imperative that companies and academic institutions seek ways to become more efficient and to differentiate themselves in order to grow. One of these ways is through Big Data—large and diverse data sets that can be analyzed and from which meaningful information can be harvested for better decision making.

Today's economy may be slow, but the amount of data that organizations collect and have access to is skyrocketing. This has created an interesting environment for discussing Big Data, not only because the condition exists but also because of the ways that organizations can react. Clearly the advances in technology



Ron Kovac, Ph.D. Ball State University ACUTA President 2013-2014

have generated a large amount of data, but the analytics field has not evolved at the same pace. In fact, one of the current hottest and highest paying jobs is a data scientist. This person uses theories and tools from many of the traditional disciplines, such as data engineering, pattern recognition and learning, statistics, modeling, visualization, sociology, and math to seek clarity and assist decision making.

It doesn't matter how much data your college collects on students, alumni, and faculty; what matters is how that data can be turned into useful information to help maintain and grow your college. In 2012, Kiplinger wrote, "Services that can analyze digital information in new ways will see explosive growth. By some estimates, the market for such technology will grow by 40% a year until 2015." No doubt, the predictions of 40% growth will attract new investors and encourage creativity in this area.

Colleges and universities are constantly trying to determine how to make the most of their student, faculty, and alumni data. For instance, some try to build a reputation for excellence in meeting customer needs efficiently. They may choose a customer relationship management (CRM) system to get a better view of the student, alumni, and faculty base. Such tools can range from student systems such as Banner and Salesforce.com to solutions from Microsoft or Oracle. The tool is less important than the harvest of data.

New companies are opening their virtual doors to meet these needs, and current companies are expanding and adapting to accommodate this new arena. Some of the larger elephants on the block are SAS (software and solutions provider), Hewlett Packard (allows customers to gather vast amounts of data efficiently and use advanced queries and analytics), and 1010Data (cloud-based data-analytics platform).

Big Data is not going away. A recent study by Gartner found that there were more than 12,000 searches on their website in the course of 12 months for Big Data (Columbus, 2012). Keith Collins, President and CTO of SAS, recently noted, "Our economies are stronger when the banks have a better understanding of risk; our taxes are lower when the government lowers its fraud expenses; and our communities are healthier when disease outbreaks are pinpointed and treated earlier." Investment of time AND money is highly recommended and can prove very beneficial.

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Where do you start? At the foundation you must determine that you can handle big data sets. This means the ability to capture, curate, manage, and process large data sets in a reasonable elapsed time. This is a technical issue. The harder hurdle to overcome is to get the various data owners to share the data for the common purpose of the public good... or the university good. Imagine university parking data linked with weather, student grades, Googles' Trends and dining hall menus are all put into a common data set. Possibly predictions or correlations could be made to better help students perform academically or help the university avoid lawsuits. It's fascinating to hear that many organizations have more data than the Library of Congress. Think about what could be accomplished with this much data.

Watch for more information on Big Data in the ACUTA Journal and eNews as well as presentations at the upcoming St. Louis, Phoenix, and Dallas events. I wish you luck. Please share your ventures into this field with other members.

Nominations Open for 2014 Institutional Excellence Awards

The ACUTA Awards Committee is now accepting nominations for the 2014 Institutional Excellence in Information Technology Award. This award is presented each year to institutions that, through an evaluation process, are recognized as leaders in technology excellence and professionalism. Full information is provided on the ACUTA website at http://www.acuta.org/iea.

This year's award will be presented at ACUTA's 43rd Annual Conference in Dallas on April 1.

Please encourage your staff and colleagues to consider submitting a nomination form for an initiative on your own campus or one at another institution. The round one application deadline is Friday, October 25. Institutions selected to advance to round two will submit detailed information by January 15.

Up to three awards are given annually from three enrollment categories: category 1 for campuses with fewer than 5,000 students; category 2, 5,000 to 15,000 students; and category 3, more than 15,000 students.

Winners for 2013 were Sewanee: The University of the South for their Wireless and Network Infrastructure Project; Washington University in St. Louis for their Emergency Mass Communications Dashboard; and Indiana University for IUanyWare. Abilene Christian University received an honorable mention for their Virtual Lab.

This is a wonderful opportunity for an institution and its technology leaders to be recognized for their contribution to the success of the institution. Plan now to submit your application or nominate a colleague's project for this award.

The Institutional Excellence Awards are sponsored by Pinnacle, a Windstream Company.

ACUTA Seeking Presenters for Winter Seminar in Phoenix



Track 1: The Changing Landscape of Communication Technologies

Track 2: Empowering Collaboration through Technology

not required to be members of ACUTA.

All the details are available at www.acuta.org/wcm/acuta/pdf/071013a.pdf.

Download the speaker proposal form and submit your proposal via e-mail right away to mwest@acuta.org. Contact Michele West, ACUTA Director of Professional Development, at 859/721-1655 or mwest@acuta.org if you have any questions.

ACUTA is looking for ideas and proposals for educational sessions for its 2014 Winter Seminar, January 12-15. We welcome proposals from representatives of higher-education institutions and consulting firms. Applicants are

Please submit your application no later than September 10! Sessions should cover university projects and/or

trends in the industry, but should not promote the products or solutions of individual companies.

Webinar: The Evolution of Control Systems Security Brief

Tuesday, October 1, 2013 • 2:00 to 3:00 p.m. Eastern Time

This webinar will discuss the evolution of the Industrial Control Systems cybersecurity landscape, describing significant activities and events affecting industrial control systems and the most current threats to control systems environments observed in the last several years. The presenter will provide real world examples of the consequences of cyber incidents in critical infrastructure and outline the most recent cyber security recommendations by the Department of Homeland Security (DHS) Control Systems Security Program (CSSP) and the Industrial Control Systems-Cyber Emergency Response Team (ICS-CERT).

CSSP offers support in this area through ICS-CERT's continuous monitoring and response to cyber threats ranging from APTs to malicious insider activity. Working within the National Cybersecurity and Communications Integration Center (NCCIC) in coordination with US-CERT, the ICS-CERT deploys "fly-away" teams to provide onsite assistance to asset owners in response to cyber incidents. This webinar will emphasize lessons learned during recent and ongoing incident-response efforts, addressing such topics as:

- How asset owners can be better prepared to handle cyber threats by practicing defense-in-depth, developing appropriate logging procedures, practicing appropriate network monitoring, and knowing the available resources for combating this type of event
- How timely sharing information related to threats and analysis plays a critical role in empowering and protecting public and private-sector partners
- · How spear phishing attacks are used to gain footholds into well-protected corporate networks
- · How organizations can improve detection measures and evaluate all connections into their control networks

Presenter: Lisa Kaiser, ICS-CERT Chief Standards, NPPD/CS&C, U.S. Department of Homeland Security

Get details or register online today at www.acuta.org or call 859/278-3338.



Register to Attend ACUTA Fall Seminar

October 6–9 St. Louis, Missouri Renaissance Grand Hotel

Track 1: Turning ICT Service and Support into a Strategic Asset

ICT organizations continually evaluate, deploy, and support new services to meet campus needs. A key success factor in this process is an effective service and support organization that can help users maximize the value of both

new and old services. This track will explore what tools, training, processes, and back-end support ICT support organizations need in order to provide fabulous service to our campus constituency, as well as effective organizational models for providing this needed support.

Track 2: All Things Wireless, Mobile, and Cloud

The ability to access any piece of information from anywhere is today's most disruptive technology driver affecting higher education. This track will explore how our institutions can use cloud and network services, mobile and wireless devices, and personalized technology to save money, improve learning, and expand research capabilities quickly and cost effectively, as well as how we are adapting our ICT organizations to support services we didn't build, on devices we haven't bought or specified, for users who are doing more with technology at every turn.

Register online today! www.acuta.org/fs13



What Exactly Is a Microsoft Lync Phone?

Gary Audin, Delphi Inc.

The enterprise will probably have Lync in its Microsoft portfolio, using it for its messaging and presence capabilities. Lync has matured enough to add the voice application to the Lync network. Although there are software clients for voice, the desktop phone is still preferred in many situations. Selecting the best Lync phone is not a trivial decision.

There are many IP phones on the market; some work with proprietary signaling protocols while others work with standards like H.323 or SIP. Obtaining the most value from a Microsoft Lync implementation requires a Lync interoperable phone for accessing the functions and features of Lync. Microsoft itself does not manufacture IP phones, so a third-party phone must be fully interoperable with Lync.



Why a Desktop Phone?

A desktop phone is always on. That's not true for PCs, laptops, or tablets, which can hibernate when idled too long. From a financial viewpoint, desktop phones provide a much better ROI since they last for up to 10 years compared with 2 to 3 years for cell phones, tablets, and PCs, and only up to only one year for headsets. Desktop phones support multiline capability easily and have directly accessible buttons for most important functions. Desktop phones are required in schools, elevators, hotel pools, and common area in businesses. They are required to satisfy fire and safety codes.

The Lync IP Phone Definition

A phone that works with Lync must be able to operate over an IP network. Lync phones are NOT designed to connect to legacy analog PBXs or connect to the PSTN. They can connect via SIP to a PBX. A Lync phone can best be described as:

- · An IP phone
- Using the Session Initiation Protocol (SIP) for signaling
- Transmitting SIP over TCP, although Lync-qualified IP phones use UDP
- Operating with the RTAudio, G.711 and other standard codecs like G.722
- · Connecting to an Ethernet LAN or USB port on a PC
- · Working under the control of a server running Microsoft Lync Server 2013 or 2010 Enterprise Voice edition

What is Microsoft Lync Server Software?

Microsoft Lync is a unified communications server software platform. Lync connects compatible devices running Windows and other operating systems including mobile devices. Lync provides a single-client experience for presence, instant messaging (IM), voice, video, and Web conferencing both within the organization and externally.

Enterprise Voice is the voice services offering in Lync Server used with Lync IP phones. It delivers a voice option to enhance or replace traditional PBX systems. Lync Server uses the address books maintained by Microsoft Exchange Server and integrates with Lync features including rich presence, IM, collaboration, and meetings. Lync Server was previously called Office Communication Server (OCS), which evolved from Live Communications Server (LCS). Later this year, Lync users will be able to connect to anyone on Skype (which Microsoft owns), enabling communication with millions of people worldwide.

Microsoft Lync Server 2013 Enterprise Voice

Lync Server 2013 Enterprise Voice offers a number of new features. It is backward compatible with products qualified for Lync Server 2010 and Microsoft Office Communications Server 2007 R2, excluding the new Lync features. Most phone firmware is backward compatible with older versions.

What about Other IP Phones?

All IP phones, including Lync phones, can connect to an Ethernet LAN. IP phones may also connect to a USB port on a computer. In either case, the IP phones are powered via Power over Ethernet (PoE) over the LAN or USB power. Another option: Some IP phones can be powered by an external AC adapter.

Most modern IP phones use SIP for signaling. Most SIP phones operate over UDP. Lync signaling also uses SIP, but the SIP packets are carried over TCP.

continued

Continued from page 4

Nearly all IP phones support at least two voice codec standards, G.711 and G.729. They may also support wideband, high definition voice codecs including G.722, G.723.1, G.726, GSM 6.10, and iLBC. Lync phones can support the Microsoft codec RTAudio. RTAudio stands for Real-time Audio. It is proprietary to Microsoft, not a standard. It is a voice codec designed for real-time two-way VoIP communications. RTAudio is the preferred Microsoft audio codec and is the default codec for Microsoft's Lync platforms.

Desktop Phones for Lync: Two Classes

Microsoft has developed two categories for Lync phones: IP Phones Optimized for Lync or Qualified IP Phones Tested and Qualified for Lync. The qualification program supports partner-developed and -designed IP phones to ensure they interoperate with Lync based on publicly available Windows Protocols (WSPP) and Microsoft Office Protocols.

- Optimized Lync IP phones run the Microsoft Lync Phone Edition software on the phone and support PBX functions, access to calendar and contacts, conferencing, and extended functions when connected to the PC, and integrated security and manageability. Optimized phones are designed specifically for Lync. These phones have been firmware tested with the Lync Phone Edition software. These phones only work within a Lync environment and are limited to the functionality provided by Microsoft.
- Compatible and Qualified for Lync are IP phones containing firmware tested with the phone manufacturer's software. Compatible IP phones do not require gateways for interoperability. Qualified phones support core Lync features and also allow for customized telephony features and third-party voice applications. They are tested and qualified by Microsoft to provide direct connectivity, core call functionality, presence awareness, and server management and provisioning.

Both classes of Lync phones, Optimized for Lync and Compatible and Qualified for Lync, feature a range of phone models designed to meet specific business needs, including a basic desk phone, common area phone, or conference room phone.

Lync Phone Edition for Optimized Devices

Lync Phone Edition is part of the software that comes with Lync Server 2013 and 2010. This software runs on qualified devices (Optimized Lync IP phones). The software provides traditional and advanced telephony features, security, and manageability. Lync Phone Edition works with Lync Server 2013 and Lync Server 2010 in the same way.

Some phone manufacturers with Lync compatible and qualified phones have their own Lync firmware for their phones. This is usually an optional software module enabling them to connect directly and natively to Microsoft Lync. It also combines the advantages of open standards-based IP telephony by using the SIP protocol to seamlessly integrate with Lync and any other SIP based IP PBX in parallel.

Gary Audin is the president of Delphi Inc. delphi-inc@att.net, an independent communications consultancy. This article is the first in a series of guest-authored educational blog posts (at snomchannel.com) on using Microsoft Lync with Enterprise Voice. Future posts to the site will feature deeper dives into deployment and use scenarios of Microsoft Lync with snom IP desktop phones.

You know why you are a member of ACUTA.

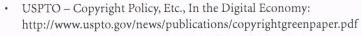
Do you know why your colleague is not?

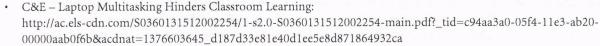
Do your friends a favor: Invite them to join ACUTA!

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.

- U.S. DOC Annual Report on Technology Transfer: http://www.nist.gov/tpo/publications/upload/DOC-FY2012-Annual-Tech-Transfer-DOC.pdf
- UT How to Fool a GPS System (Testing brought down a drone): Spoofing Detection System: http://radionavlab.ae.utexas.edu/publications/gps-spoofing-detection-system
 "Ted" Video by Todd Humphreys: http://embed.ted.com/talks/todd_humphreys_how_to_fool_a_gps.html
- EU Study of Traffic Off-Loading to WiFi/Spectrum Demand: http://bookshop.europa.eu/en/study-on-impact-of-traffic-off-loading-and-related-technological-trends-on-the-demand-for-wireless-broadband-spectrum-pbKK0113239/





- U. Mich Study Says Facebook Use Makes People Sadder: http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0069841#s2
- Europa 774% in Mobile Call Prices Across the EU: http://europa.eu/rapid/press-release_IP-13-767_en.htm
- Europa Europeans want more Mobile Bandwidth, but Cost?: http://europa.eu/rapid/press-release_IP-13-776_en.htm
- ATIS Reply Comments on Geographic Relation of TF #s: https://prodnet.www.neca.org/publicationsdocs/wwpdf/0820atis.pdf
- Intrado –Reply Comments on VOIP Number Access/911: https://prodnet.www.neca.org/publicationsdocs/wwpdf/0820intrado.pdf
- Vonage Initial Report on Direct Access to Number Resources: https://prodnet.www.neca.org/publicationsdocs/wwpdf/0820von.pdf
- Wiley Rein PR Telco on Legal/Policy Issues of the CACM: https://prodnet.www.neca.org/publicationsdocs/wwpdf/71713prtc.pdf
- CalNENA Calif. Wireless 911 Calls Have No Location Data: http://www.calnena.org/communications/To-FCC-08-12-2013/CALNENA-Location-Data-Phase-II-to-FCC-081213.pdf
- NECA Access (Quarterly Newsletter-Summer 2013): https://www.neca.org/Access.aspx
- NECA Reg Scan (weekly recap of State/Fed Regulatory): https://www.neca.org/RegScan.aspx
- NECA Guide to Telecom Rules: https://www.neca.org/Guide_to_Telecom_Rules.aspx



Randy Hayes Leg/Reg Affairs Committee Univ. of Northern Iowa randal.hayes@uni.edu



Overheard on the Listserv

The ACUTA listserv is a very reliable source for information that you would have trouble finding anywhere else. Our members use the listserv to seek out unbiased information from other users to help make informed decisions. Here is one example of the kind of exchange you will find on the listserv. If you do not "listen in" on the listserv, contact Aaron Fuehrer at afuehrer@acuta.org to learn how to sign in. Thanks to Tim and David for allowing us to share their conversation in the eNews.

QUESTION: I'd like to ask for help from those of you out there with hospitals and clinics. We are preparing to install cameras in a psychology clinic and a speech pathology clinic. In both places the cameras will monitor video and audio in the rooms where graduate students work with real patients. The cameras allow faculty to monitor and critique the students' work.

I'm pretty sure we have HIPAA issues here. If so, what is the "best practice" for safeguarding the server and cameras? Do you put them on their own secure VLAN? Could they co-reside on our video security VLAN (10.xx.xx.xx)? Or should we be looking at a physically separate LAN just for this server and cameras? Any advice is appreciated.

Just for informational purposes we are using Milestone system for the video recording server and Axis cameras. These are what we use campuswide for video security, and we are already familiar with them.

Tim Cottom, Asst. Dir., Telecom & Network Engineering Services, Indiana State Univ. (timothy.cottom@indstate.edu)

RESPONSE: Each of your ideas comes with a different price tag and risk. If you have sys admins that are confident of what they're doing, set the cameras up on a dedicated separate VLAN. The server itself can be on the same VLAN, or you could bring it onto a separate VLAN as well. The downfall to having two separate VLANs is you'll be routing traffic from the cameras to the server, so make sure you have enough router capacity to handle this. Also, make sure your backbone has enough capacity if the server sits in a server room in another building.

The upside is that the server can go out for software updates and users can interact with it to view footage with a clear set of ACLs that only impact the server and not the cameras. So then it becomes the prerogative of the sys admin. A lot is going to depend on how they have their existing servers setup and what their security model looks like.

Don't be surprised if your sys admins want to place these cameras on the security VLAN. Again, a lot depends on what type of security model your IT group has in place and how paranoid your admins are. You did good by standardizing on the security cameras. Standing up a separate network with new equipment is, of course, your more expensive path. However, the need for end users to interact with the video server and the server needing to go out and get updates brings the same risk right back. So no real gain for the expense here.

Your biggest risk will be your end users. If they've not already asked for it, how are they going to view the video? Are they willing to sit down at dedicated PCs that can be locked down? How much do you want to bet they're going to request iPads or some sort of tablet device to view video footage? And of course they'll want that to be on the wireless network. So most of what I mentioned above just got tossed.

No doubt your IT group can come up with a great plan to secure both cameras and server, but it will be management setting and enforcing policy that will truly determine how secure this system stays.

David Lutes, Dir., Info. Systems, Marymount Univ. (david.lutes@marymount.edu)

Board Report

The Board met via conference call on August 7, 2013, and approved the following items:

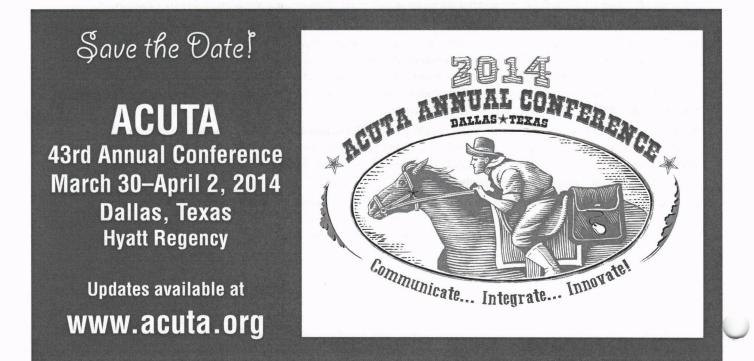
- 1. Financial Reports
- 2. Monthly Committee Minutes and Reports
- 3. Membership Reports
 - a. July Dashboard 2013
 - b. Membership Recruitment Status
- 4. 2013-2014 Membership Institutional & Corporate Recruitment Plans
- 5. MEC/DHS Recommendations
 - a. To develop a section of the ACUTA website with links to the DHS website and other pertinent information
 - b. To participate in the DHS's Joint Industrial Working Group on vulnerability mediation and create a secured networking for sharing information among members.
- 6. Committee Nominations, Reappointments & Special Consideration
 - a. Publications/Media Committee's Journal Advisory Board: Alan Crosswell, Columbia University
 - b. Legislative/Regulatory Committee Chair: Eric Breese, Chair
 - c. Program/Content Committee: Karl Riel, Eastern Washington University; Jose Dominguez, University of Oregon; Brian Savory, Optelian
 - d. Awards Committee: Eric Alborn, University of Wisconsin-Madison; Brian Benjamin, Crown Castle; Becky Macauley, e2Campus by Omnilert; Bruce Barrett, Community College of Rhode Island; Donna White Delay, Georgetown University; Dee Childs, University of Alabama in Huntsville; Frank Cafasso, Wagner College
- 7. Technology Review Task Force Report
- 8. 2013 14 Base Budget

President Kovac summarized his view of the organization's status with three words: optimism, urgency, marketing. And he urged us to remember that we must prioritize and focus.

Respectfully Submitted,

Corinne Hoch, ACUTA CEO

(Secretary/Treasurer Riny Ledgerwood was on vacation in August. Her report will return in the October eNews.)



Board of Directors 2013-14

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Gigamon, Milpitas, CA.....www.gigamon.com Mike Bork, Regional Govt/Ed Sales Director (708/514-1150)

The Gigamon® Visibility Fabric™ architecture enables the management of increasingly complex networks by providing pervasive and intelligent visibility into traffic traversing physical and virtual environments.

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)

- · ShoreTel Receives a 2013 Internet Telephony Excellence Award
- · Code Blue Unveils Versatile, Compact IP Emergency Speakerphones
- · Guardly Selects Alex Asnovich as New Vice President, Global Marketing
- ShoreTel UC Solutions & Applications Provide Reliability & Efficiency for Leading Law Firms
- Shore Tel Solutions Provide Strong Communications Foundation for Construction Customers
- Dali Wireless Introduces Industry's Most Advanced RF Router System
- · Utah State University Selects ShoreTel for Campus-Wide Unified Communications

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.

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