

# JULY 2013

OUR SUSTAINING MEMBERS:

KTSM-TV

KVIA-TV

PO Box 3561 El Paso, TX 79923-3561 www.kint98.com

# NEWS H.B.SELENIO

Harris Broadcast supports statewide HD/SD contribution and distribution for Indiana PBS Indiana PBS member stations expedite real-time content sharing via new high-bandwidth fiber and IP video network.

Indiana Public Broadcasting Stations (IPBS), a consortium of eight PBS TV stations and nine NPR radio stations serving communities across Indiana, is now installing aHarris Broadcastnetworking solution to efficiently share and manage broadcast content across all 17 member stations. Based on a new cost-efficient, high-bandwidth fiber and IP video network, the project gives these Indiana PBS member stations unprecedented real-time content sharing, collaboration, and distribution capabilities for television and radio.

The complete Harris Broadcast solution includes the Selenio media convergence platform for HD/SD video networking, Intraplex IP Link 100 and 200 codecs for audio networking, and the Magellan NMS solution for network-wide systems control And management. The entire solution positions IPBS for the future with a configurable, expandable baseband/IP video platform that can adapt to new standards and operational requirements, as well as and interoperate with third-party technology.

Selenio will control production travel costs by easily enabling every station on the network to carry live interviews from another IPBS station, or otherwise share content over the IP network. He notes that The Indiana Channel is one IPBS program service that will benefit from live, real-time networking, as it packages member station-produced features on topics of interest that appeal to viewers statewide.

Harris Broadcast will configure the entire system at WFYI, the IPBS member station in Indianapolis, and will train station engineers at this location over a two-day period. Individual stations will later migrate their components to the field as the I-Light network service becomes available locally.



INDIANA PUBLIC BROADCASTING WILL USE THE HARRIS BROAD-CAST SELENIO AS PART OF ITS CONTRIBUTION AND DISTRIBU-TION NETWORK LINKING 17 STATIONS ACROSS THE STATE.

KRWG-TV		
KBNA-AM/FM	&	KAMA-AM

KHEY-AM/FM, KPRR-FM & KTSM-AM/FM

KLAQ-FM, KISS-FM & KROD-AM

KPAS-FM-ALGIE A. FELDER CSBE

KINT98.COM INTERNET RADIO NETWORK

BURST COMMUNICATIONS INC.- THOM JOHNSON

GIESLER BROADCASTING SUPPLY INC.

ENTRAVISION COMMUNICATIONS

SCMS, INC.-

TNT BROADCAST AND TELECOMMUNICATIONS CONTRACTORS, INC.-

KSCE-TV

RF Specialties of Texas Dan Sessler.

KCOS-TV

KELP-AM ARNOLD McClatchy.

MARSAND, INC.

Ho Tah Say. LLC













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Alvarado, TX 76009	

#### Troubleshooting media networks

Check the power, and then use these other tips. Jun. 1. 2013 Brad Gilmer | Broadcast Engineering

As professional media engineers, it is our responsibility to design, implement and maintain our facilities. Increasingly, this means that we are in charge of ensuring that our professional media networks are operating correctly.

Professional media networks differ from other IT networks in the following ways: First, they are used in professional media applications - sharing video and audio that is used on-air, for example. Typically, these networks are carrying high-resolution images and full bitrate motion video. Second, it is likely that these networks are being managed, meaning that there are some policies in effect that, for example, might prohibit using the network to access the Internet, or that might ensure that e-mail and other office applications run on a separate business network. These networks, along with traditional SDI infrastructure, form the backbone of the media operation. When the networks have problems, the operation is impacted, so being able to troubleshoot networks effectively is important.

If you are experienced in troubleshooting, you already know that the tools you use will vary from incident to incident, depending upon the nature of the problem. Troubleshooting these networks is no different. If you are new to network troubleshooting, you could be forgiven for thinking you need to invest in expensive network analyzers or other test gear in order to identify and repair network issues, and in some cases, this could be true. But, the good news is that, for the majority of cases, you probably already have the tools you need right on your computer. Let's get started.

#### **SBE CHAPTER 38 OFFICERS**

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Certification Committee: David Halperin.

Membership Committee: TBD TBD

Frequency Coord. Committee: Warren Reeves Owen Smith

Scholarship Committee: Rick Vilardell

Web Site Committee: Norbert Miles

Sustaining Membership: Antonio Castro Program Chairman: Warren Reeves

Newsletter: Antonio Castro

EAS Chairman: David Halpering

Executive Committee: Antonio Castro Carlos Sosa Walter Hanthorn



## EL PASO,TX CHAPTER 38 MEETING MINUTE DATE 6/11/2013 LOCATION: COMO'S REST.

*MEETING CALLED TO ORDER*: 12:18 PM, BY ANTONIO CASTRO, THERE WERE 9 MEMBERS.

*REPORT OF THE SECRETARY*: MINUTES ACCEPTED BY ENRIQUE LOPEZ, 2nd BY GLENN LEFFLER

**REPORT OF THE TREASURER**: CURRENT BALANCE OF \$ 5,995.05. ACCEPTED BY GLENN LEFFLER, 2nd BY ENRIQUE LOPEZ. SIGNATURE OF WALTER HANTHORN WILL BE INCLUDED AS A SUSTITUTION TO ENRIQYE LOPEZ.

**REPORT OF THE CERTIFICATION COMMITTEE: NO REPORT.** 

REPORT OF THE MEMBERSHIP COMMITTEE: NO REPORT.

**REPORT OF THE FREQUENCY COORDINATOR COMMITTEE:** NO REPORT.

**REPORT OF THE SCHOLARSHIP COMMITTEE:** WAITING FOR THE PROPOSED RECIPIENT FOR THE SCHOLARSHIP FOR JULY.

**REPORT OF THE WEBSITE COMMITTEE** 1379 HITS LAST REPORT, NOW 1425 (46 MORE FROM LAST MONTH).

**REPORT OF THE EAS CHAIRMAN : NO REPORT.** 

**REPORT OF THE PROGRAM COMMITTEE**: TO CONTACT A VISIT TO EL PASO ELECTRIC CENTER OF OPERATIONS. PAUL TERRY WILL HELP.

**UNFINISHED BUSINESS:** SENT BIO AND PICTURES OF WARREN REEVES, ELECTED CHAPTER ENGINEER OF THE YEAR., TO SBE NATIONAL .

*NEW BUSINESS OR ANY ITEMS FOR THE CHAPTER INTERES:* ENRI-QUE LOPEZ LAST MEETING, HE IS MOVING TO FLORIDA. WILL SEND LETTER OF DELETEING NAME TO WELLS FARGO BANK

*NEXT MEETING DATE AND LOCATION*: TUESDAY JULY 16, 2013, TIME : NOON PLACE: COMO'S ITALIAN RESTAURANT.

MEETING ADJOURNED: AT 13:56 PM.

Note from the treasurer: if you attended our ENNES workshops, you must know that most of the funds came from our chapter reserve, so, please don't ignore your contribution for this year. Memberships are the pillar for our activities. SEND YOUR FEES if you haven't Thanks.



### I am glad to present to our chapter what national SBE is publishing this month

## SBE Chapters Name their Engineers of the Year

Twelve chapters of the SBE have named their respective "SBE Chapter Engineer of the Year." The SBE, this year and going forward, has encouraged chapters to recognize one member with this honor. Each recipient is receiving a special certificate to recognize the achievement and is being included among the nominees for the national Robert W. Flanders SBE Engineer of the Year award. The winner of the national award will be selected by the national SBE Awards Committee and announced later this month.

Winners selected by local chapters include the following: Chapter 5, Atlanta, Ga. - William Magliocco, CPBE, 8-VSB, CBNT Chapter 9, Phoenix, Az. - Ralph Hogan, CPBE, DRB, CBNE Chapter 15, New York, N.Y. - Conrad Trautmann, CPBE Chapter 17, Minneapolis, Minn. - Donald Heppelmann, CBNT Chapter 36, San Diego, Calif. - Gary Stigall, CPBE

#### Chapter 38, El Paso, Texas - Warren Reeves

Chapter 54, Tidewater, Va. - Charles Stutsman, CSTE, 8-VSB, CBNT

Chapter 70, Cleveland, Ohio - Edward Miller, CPBE Chapter 78, Blue Ridge, Va. - Richard "Al" Stephens, CSTE Chapter 80, Fox Valley, Wis. - William Hubbard, CPBE, CBNT Chapter 109, Des Moines, Iowa - William Hayes, Chapter 131, Inland Empire, Calif. - Paul Claxton, CPBE, CBNE

### Next meeting:

WHEN? TUESDAY JULY 16, 2013. TIME? NOON (12:00 PM) WHERE? COMO'S ITALIAN RESTAURANT

PRESENTATION SUBJECT T.B.D.





#### Is it plugged in?

Let's assume you are called in to look at a system on your professional media network. The operator tells you, "I can't access anything on the network." Where do you start?

We are all familiar with the first questions you are typically asked when you contact computer technical support: 1) "Is it plugged in?" 2) "Is it turned on?" When you are troubleshooting, this is the first place to start: Does the Network Interface Card (NIC) indicate that you have a good electrical connection? Usually, you can verify this by looking for an LED next to the place where the network connection plugs into the network device. No light, no joy. Period. In almost every case, if you do not have a link light, there is something physically wrong with a cable or a connector. In some rare cases, you will not get a link light because something in the networking hardware did not initialize properly during the boot sequence. In any case, you will have to find and fix the problem if you do not have a link light.

If you have a link light, the next step is to see if the device's operating system (OS) recognizes that a network connection is present. (See Figure 1.)

Ethernet adapter Local Area Connection:	
Connection-specific DNS suffix :	
IPv4 Address : 192.168.1.34	
Subnet Mask: 255.255.255.0	
Default Gateway : 192.168.1.1	

Figure 1. This shows a properly configured network adapter

The LED is a low-level indication that a link has been established. If network card drivers are damaged or improperly configured, the OS will not be able to access the network even though the link light is lit.

Many network engineers prefer to use a command line interface to troubleshoot network problems. If you are not comfortable doing this, I would strongly recommend that you spend time learning how to access a command prompt on whatever troubleshooting systems you use, and that you become familiar with a few simple commands. It will save you time.

The commands if config or ipconfig will show you the status of all of the network interfaces on your device in \*NIX and Windows, respectively. Look for the status or media state entries. If you see "media not connected" or "inactive," these indicate that, as far as the OS is concerned, no network exists. (See Figure 2.)

Ethernet adapter Local Area Connection: Media State.....: Media disconnected Connection-specific DNS Suffix...: Figure 2. Though a cable is connected to the system, a network adapter can still show the media in a disconnected state. Here, a connector wire was broken.

In almost every case, when you see this indication, you also do not have a link light, so the trouble is either physical or in a low-level driver. Plug a laptop into the same cable. Do you get a link light? If yes, then you may have a driver problem on the computer. If you do not get a link light, then you know that either the cable or connector is likely to be bad.

If you have a link light, and the status of the connection is "active," check to see if the computer has an IP address that makes sense. You probably know the IP address range of the network, the gateway and the netmask. If not, you can either find someone who can give you this information, or you can go to another computer on the same network, open a command line interface and enter either ifconfig or ipconfig, depending upon the OS.

Computers get IP addresses in two ways: Either someone manually configures the computer (a likely scenario in a professional media network), or the computer gets its address from a Dynamic Host Control Protocol (DHCP) server. In any case, if the computer does not have an IP address, has an IP address that does not match the host network, or does not have gateway and network entries that make sense, then the computer will not be able to access the network, even with an active network connection.

One common problem is not being able to "pull" a network address from a DHCP server. There are many things that could cause this problem, but without the correct IP address, netmask and gateway entries, your computer will not be able to operate correctly.

What if you have a link light, the status of the NIC is "active" and you have valid network parameters assigned to the NIC, but you still cannot access the network? Well, now it is time to get a little more specific about what "access" means. If this is a computer on the Internet, you can try using the ping command. At a command line interface, if you enter ping followed by a name or IP address, your computer will make repeated attempts to contact the remote device. If everything is working normally, the remote device will reply, and you will see the results on your command line. But, note well that, many times, remote hosts are configured to generally ignore ping requests. 5

#### **Ping Google**

Fortunately, Google has helpfully configured its servers to respond to pings, so a quick ping google.com will tell you if you have connectivity to the Internet. If your computer is not connected to the Internet, note that internal gateways frequently are configured to respond to ping requests. Use ipconfig or ifconfig to determine the gateway address, and then send the gateway a ping command.

Sometimes, troubleshooting network problems can be confusing. Let's say that you cannot successfully ping google.com, but you can ping your local gateway address. You might conclude that the local network is okay, but that the Internet connection is down. Maybe yes, but maybe no. Let me explain. A critical component of any network that uses domain names such as google.com rather than IP addresses such as 192.168.0.33 is the Domain Name System (DNS). Put simply, DNS servers answer queries such as google.com with an IP address such as 173.194.43.5. If you can ping your gateway, but you cannot ping google.com, the Internet may be down, but it could also be the case that your DNS server is unavailable. Entering ping google.com generates a DNS request. The DNS lookup returns the IP address of a Google server, and the ping utility then pings the actual IP address. If your DNS server is down but your Internet connection is up, pinging google.com will fail, but pinging 173.194.43.5 will succeed. So, the problem is not with the Internet connection, but with the DNS server. This is just one example where it is important to understand how computer networking functions

#### Other resources

These are some basic network troubleshooting tips, but this is an expansive topic. So, that said, there are some additional resources and tools that may help vou track down network problems.

O'Reilly Publishing has a good book on the topic — "Network Troubleshooting Tools" by Joseph Sloan. I highly recommend this book.

Microsoft has a great article on its Technet site, taking you from simple to more complex problems in network troubleshooting. You can find the article

#### athttp://technet.microsoft.com/en-us/library/cc751203.aspx.

Sometimes, professional media networks are moving data at such a high rate that normal PC/MAC-based tools cannot keep up. In that case, specific networking analysis tools may be required. If so, two vendors of these tools are <u>http://www.packetstorm.com</u> and<u>http://ineoquest.com</u>.

-Brad Gilmer is president of Gilmer & Associates, executive director of the Advanced Media Workflow Association and executive director of the Video

Services Forum.