

November 2010

## Society of Broadcast Engineers Chapter 24 Newsletter

Madison, Wisconsin



Wednesday, November 17





### **HD MASTER CONTROL**

Rob Shevlot of Utah Scientific and Tom Sibenaller of Roscor have arranged to have a Utah Scientific representative speak to us on their HD Master Control switcher product line, covering integration of HD MC into the existing station environment.

Dutch Treat Dinner 5:30 PM
Perkins
1410 Damon Road
Madison, WI
(no reservation - just gather together)

Meeting and Program at 7:00PM Wisconsin Public Broadcasting Center 3319 W. Beltline Hwy Madison, WI

Visitors & Guests are welcome at all Chapter 24 events!



Thurs., Dec. 16 Holiday Party – Fitzgerald's



2011 Meeting Schedule Under Construction

### From the Chair...

>>> by Fred Sperry

I'd like to start off by thanking everyone who was able to attend this year's Broadcasters Clinic. Once again, Leonard Charles and the Program Committee did a great job of providing a variety of excellent sessions for the three day event. Linda Baun, Michelle Vetterkind and the entire WBA staff once again did a great job coordinating the event which is no small task.

Thank you as well to everyone who attended the SBE National events. The SBE SBE. Membership Meeting was well attended, and thanks to the coordination efforts of Paul Stoffel, the meeting was streamed live to the Internet. The event was administered by SBE Board President Vinny Lopez. Thanks go out to volunteers Mark Baldridge, Dick Madouse, Jim Hermanson, Steve Doebel and Paul Stoffel for "crewing" the television production using three cameras, an audio mixer and a Sony Anycast switcher system loaned from Joe Kaufenberg, Sony Electronics. Ouestions came in from several SBE Chapters including the newest SBE Chapter in Hong Kong! Nice job guys making this streaming event happen!

The SBE National Staff and Board of Directors went out of their way to recognize Chapter 24 for our contribution in hosting the National Meeting during the National Awards Dinner. There were also National Awards presented at this event to newsletter editor Paul Stoffel and the Chapter as a whole for "Best Chapter Newsletter." Leonard Charles also accepted the National Award for the "Best Regional Convention or Conference" for the 2009 Broadcasters Clinic.

The SBE National is branching out a bit and will be holding their 2011 meeting at a new location in Columbus, Ohio as part of the Ohio Association of Broadcasters Conference, so they are adding more locations to hold the National Meeting. John Poray did assure me that Madison will remain on their list of National Meeting locations. I heard a number of very positive comments from the SBE National Staff and Board regarding the Broadcasters Clinic, so I know they are anxious to return at some point in the future.

On another subject, I noted in my submission last month that I was hoping to have the updates for our Chapter By-Laws ready to vote on at the November meeting. It turns out there are more updates to be done than I anticipated, so it will probably be the January meeting before we vote on the changes. Stay tuned!

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## **Chapter Contacts**

## **Chapter Leadership**

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### **Committee Appointees**

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# **Meeting Minutes**

from the October 2010 Business Meeting

SBE Chapter 24 did not hold a formal meeting in October, but members of the chapter attended the 2010 Broadcasters Clinic held October 26–28th in Madison. Chapter 24 members also attended the SBE Annual Membership Meeting held from 4–5pm October 27<sup>th</sup>. The membership meeting was streamed live on the internet to the SBE National website, through the efforts of some Chapter 24 members. The National Meeting and Awards Dinner were held when the chapter would normally hold its meeting as part of the clinic. At the National meeting and dinner, Chapter 24 and the Wisconsin Broadcasters Association were recognized for their efforts in hosting the National meeting in conjunction with Broadcasters Clinic.

Submitted by Mike Norton, Secretary

## The Don Borchert Fellowship

>>> by Leonard Charles

To those who attended the 2010 Broadcasters Clinic, thank you for making it one of the best ever. Attendee and Exhibitor numbers were huge and comments about the program were very positive. The 2011 Broadcasters Clinic will be held October 11<sup>th</sup> thru 13<sup>th</sup> at the same site. Mark your calendar and join your colleagues for a great career experience.

On a sad note, Don Borchert passed away this past August. Don was the person who managed the Clinic for over 35 years and he is missed. The WBA and the 4 Wisconsin SBE Chapters announced at the Clinic a way to recognize

and honor Don and keep his name part of the Clinic forever. The Don Borchert Broadcasters Clinic Fellowship is an annual program that will provide all travel, lodging, and registration expenses to an individual that may not otherwise have been able to afford the trip. The WBA will provide registration and the four Wisconsin SBE Chapters will provide the travel and lodging funds for this Fellowship. We will be working with the Wisconsin SBE Chapters in Spring to begin soliciting applications for the first annual Don Borchert Broadcasters Clinic Fellowship.



Don Borchert
June 17th, 1927 - August 3rd, 2010

## FCC HOLDS SPECTRUM SUMMIT

>>> by Tom Smith

On October 21st, the FCC held an all-day summit on spectrum. The summit consisted of a morning and an afternoon panel. Missing from either panel was a representative from the broadcasting industry. John Leibovitz, Deputy Chief, Wireless Telecommunications Bureau, gave a staff presentation followed by the morning panel on the Economic Imperative for New Broadband Spectrum lead by Jason Furman, Deputy Director, National Economic Council with the following panelists: Simon Flannery, Telecom Analyst, Morgan Stanley; Peggy Johnson, EVP Americas, Qualcomm; Liam Quinn, Director/CTO Communications, Dell; and Neville Ray, Chief Network Officer, T-Mobile USA. The lunch speakers were Aneesh Chopra, Chief Technology Officer of the United States and Meredith Attwell Baker, Commissioner, FCC. The afternoon panel subject was a Discussion of Policy Solutions to Spectrum Demand lead by Tom Wheeler, Managing Director, Core Capital Partners and the panelists were Danny Sepulveda, Office of Senator John Kerry; Amy Levine, Counsel, Energy and Commerce Committee, U.S. House of Representatives; Peter Pitsch, Intel; John Chapin, Massachusetts Institute of Technology; Mary Brown, Cisco Systems; and Jonathan Blake, Covington & Burling.

FCC Chairman Julius Genachowski (http://www.fcc.gov/Daily\_Releases/Daily\_Business/2010/db1021/DOC-302331A1.pdf) and Commissioner Robert McDowell (http://www.fcc.gov/Daily\_Releases/Daily\_Business/2010/db1021/DOC-302340A1.pdf) also made comments.

Also on October 21<sup>st,</sup> the day of the summit, the Commission released a paper called the Spectrum

Forecast (http://www.fcc.gov/ Daily Releases/Daily Business/2010/ db1102/DOC-302324A1.pdf), which outlined the issues surrounding the projected spectrum shortage. Most of the information covered had been discussed in the Broadband Plan and other FCC reports. Discussed was the effect of cell size on spectrum usage, amount of spectrum for Internet data transmission and spectrum efficiency per hertz of bandwidth. The paper discussed at length the use of adding or in-filling additional cell sites to allow for greater spectrum reuse and the cost involved in adding additional sites versus increasing the amount of spectrum capacity. The FCC did state in their analysis that only one third of a carriers spectrum was available in anyone transmission sector which would require three times the amount of spectrum then what is needed to carry traffic in anyone area. The paper suggested that adding spectrum was more cost effective. The other spectrum efficiency item was to increase the amount of data per hertz. One surprising item in the report was data showing that spectrum efficiency for cell transmission ranged from .03-1.5 bits per second per hertz. The spectrum efficiency for ATSC DTV is over 3 bps per hertz of bandwidth. The FCC did have a table showing increased data rates per hertz with newer technologies such as 3G and 4G over 2G and earlier cellular technologies. 4G transmission was the most efficient with 1.5 bits or slightly more per hertz per second.

The report also showed graphs on projected increase of usage of mobile phones and devices for voice would be flat in the future, but that data would be growing at a rate that would require the doubling of the amount of spectrum needed to carry the traffic.

On the day of the summit, the FCC announced a Technology Advisory Council (http://www.fcc.gov/Daily\_Releases/Daily\_Business/2010/

db1025/DOC-302376A1.pdf) headed By Thomas Wheeler, Managing Director, Core Capital Partners and former head of the National Cable Telecommunications Association. Broadcasters on the council are Andy Setos, President, Engineering, Fox Group, representing Fox; Geoffrey Mendenhall, Vice President-Transmission Research & Technology,

**Summit** >>> continued on page 6



http://sbe.org/CertPreview.php



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### compiled by Tom Weeden, WJ9H

• As the last of the 33 miners who were trapped 2300 feet deep inside the San José Mine — located about 27 miles from the Chilean town of Copiapó in the Atacama Desert — rose to the surface on October 13, the world cheered in unison. The miners, who were underground for 69 days — the longest time ever for miners to be trapped and survive — all emerged relatively healthy.

According to the Radio Cub de Chile (RCCH), amateurs with the Radio Club Copiapó, CE1CPI, provided communication support between the authorities and emergency equipment operators inside the San Jose Mine complex, as well as with family of the trapped miners in the complex and authorities in Copiapó. "There are no other means of communication at the scene," said Radio Club Copiapó President Jose Maldonado Lazo, CE1RXY. "The group is working in the area of the mine with three phones, while amateurs in Copiapó "are covering all the needs of SENCO [a construction company], SAMU [ambulance and EMT], the Interior Administration and the fire and police departments."

Some of the 80 members of Radio Club Copiapó installed amateur equipment in the mine complex, and volunteers from the club had, from the moment the mine collapse first occurred on August 5, have taken shifts to provide communication support. "This, together with additional mobile police stations, hospitals and fire battalions, kept everyone abreast of all the needs and urgent requirements," according to Erico José Andrade, CE2EPB.

organization) and Amateur Radio on the International Space Station (ARISS) will be teaming up to orbit a new amateur radio satellite next February.



ARISSat-1/RadioSkaf V will have simultaneous 2 meter FM, CW, BPSK and transponder transmissions, including a CW (continuous wave) beacon, a single-sideband/CW 16 kHz transponder (UHF uplink/VHF downlink), BPSK telemetry (satellite status and experiment telemetry) and FM (announcements, slow scan television transmissions and telemetry). ARISSat-1 will have 4 SSTV cameras and software to select photos taken with illuminated pixels to be transmitted to the ground on the FM channel.

ARISSat-1 is scheduled to be sent to the ISS aboard Russian Progress vehicle 41P in January and deployed during an extra-vehicular activity in February. More information on this satellite can be found at <a href="http://arissat1.org">http://arissat1.org</a>>.

(Excerpts from the American Radio Relay League's <arrl.org> and the ARISSat <arissat1.org> web sites)





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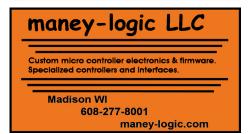
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• AMSAT (an amateur radio satellite

# FCC REVIEWS THE HISTORY OF PAST DECISIONS

>>> by Tom Smith

On October 29th, the FCC released two staff working papers. One was on auction methods and the second paper (http://www.fcc.gov/ Daily Releases/Daily Business/2010/ db1029/DOC-302496A1.pdf) was on the history of the decision-making process of the FCC over the past 70 years. This paper addressed the decision-making process of a number of subjects that the FCC has dealt with over the years, but the largest number of decisions that they have dealt with are those that pertain to broadcasting. The paper should be of interest to anyone who likes to read about the history of broadcasting.

The paper tells how the Federal Radio Commission's (the predecessor to the FCC) policies favored commercial broadcasting over noncommercial radio broadcasting in the 1920's and how the missteps in allocation policies in the early days (that favored local versus regional TV stations, as proposed by Dumont) limited the growth of TV to three networks instead of possibly seven networks. If the FCC had adopted the policy of large powerful regional TV stations instead of less powerful local stations, most stations would have been on the VHF band. The paper also covered the issues surrounding the growth of FM and the UHF TV band as well as cable, HDTV, cell phones, satellite TV and the Carterfone decision, which allowed phones and other devices to be purchased and connected to the phone network.

The paper is 36 pages including footnotes and does not discuss the effect of past decisions on current policy issues.

## SBE WILL FOCUS ON EAS EDUCATION

The SBE has reconfirmed its role with the Emergency Alert System will be to educate and inform its members, and serve as a technical resource to the broadcast industry. The national Board, which met last week in Madison, Wisconsin during the SBE National Meeting, unanimously passed a motion to create the, "EAS Education Committee."

SBE President, Vinny Lopez, CEV CBNT, appointed Ralph Beaver, CBT, to chair this committee. Beaver's involvement with EAS began with his work in broadcast emergency alerting in the state of Florida in 1973 and includes his recent leadership of the SBE's former EAS Committee.

"EAS is about to undergo significant changes with the adoption of the Common Alerting Protocol (CAP) and SBE members seek information about how to implement these changes and remain compliant with FCC rules," said President Lopez. "The SBE is in a unique position to gather and deliver this information through the work of this new committee. The SBE continues to serve as technical resource to the broadcast industry."

The SBE discussion e-mail list, called the EAS Exchange, continues to be an active resource of EAS information for SBE members and non-members alike.

(from an SBE National e-mailing)



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Dale Hatfield, Executive Director,

**Summit** >>> continued from page 3

Harris Corporation, representing Harris Corporation; and Lynn Claudy, Senior Vice President of Science and Technology, National Association of Broadcasters, representing the National Association of Broadcasters. Other members of the Council include Mark Bayliss, President, Visual Link Internet, LLC, representing Virginia ISP Association and West Virginia Broadband Cooperative; Nomi Bergman, President, Bright House Networks House; Peter Bloom, Advisory Director, General Atlantic; Vinton Cerf. Vice President and Chief Internet Evangelist; Google; John Chapin, Visiting Scientist, Communication & Network Group, Research Laboratory of Electronics, Massachusetts Institute of Technology, representing the Wireless Innovation Forum; KC Claffy, Adjunct Professor in the Computer Science and Engineering Department, UC at San Diego, representing the Cooperative Association for Internet Data Analysis; David Clark, Senior Research Scientist, Department of Electrical Engineering and Computer Science, MIT, serving as Special Government Employee; Richard Currier, Vice President and Chief Technical Officer, Loral Space and Communications; Brian Daly, Director, AT&T, Core & Government/Regulatory Standards, Chief Technology Officer - Strategic Standards, AT&T; Adam Drobot, Managing Director and CTO, 2M Companies; Tom Evslin, Member of the Board, Vermont Telecommunications Authority, State of Vermont, representing the Governor, State of Vermont; Charlotte Field, Senior Vice President - Infrastructure and Operations, National Engineering and Technical Operations, Comcast Corporation; Mark Gorenberg, Managing Director, Hummer Winblad Venture Partners, representing Hummer; Dick Green, Board Member, Liberty Global Inc.;

Silicon Flatirons Center for Law, Technology, and Entrepreneurship, University of Colorado at Boulder, representing Silicon Flatirons Center; Erwin Hudson, Executive Vice President & Chief Technology Officer, WildBlue Communications, Inc.; Ari Juels, Chief Scientist, RSA Laboratories / EMC; Kevin Kahn, Intel Senior Fellow, Director Communications Technology, Intel Labs, Intel Corporation; Gregory Lapin, Independent Consultant, representing American Radio Relay League; Richard Lynch, Executive Vice President and Chief Technology Officer, Verizon; Brian Markwalter, Vice President Technology & Standards, Consumer Electronics Association; John McHugh, Technical Director, OPASTCO; Randy Nicklas, Chief Technology Officer, XO Communications; Hilton Nicholson, CEO and Board Member SIXNET; Roberto Padovani, Chief Technology Officer, Qualcomm, Inc.; Daniel Reed, Corporate Vice President Technology Strategy and Policy and eXtreme Computing Group, Microsoft, representing Microsoft; Dennis Roberson, Vice Provost and Research Professor, representing Wireless Network and Communications Center (WiNCom); Jesse Russell, Chairman and CEO, incNETWORKS; Marvin Sirbu, Professor of Engineering and Public Policy, Industrial Administration and Electrical and Computer Engineering, Carnegie Mellon University, serving as Special Government Employee; Paul Steinberg, Chief Technology Officer for Motorola Solutions, representing, Motorola; Harold Teets, Senior Vice President, Information and Network Technologies, Time Warner Telecom, Inc., representing Time Warner Telecom; David Tennenhouse, Partner, New Venture Partners; Bud Tribble, Vice President Software Technology, Apple, Inc., representing Apple; Jack Waters,

Chief Technology Officer, Level 3 Communications LLC; and Robert Zitter, Chief Technology Officer, Home Box Office.

From the FCC the Designated Federal Officer is Walter Johnston, Chief Electromagnetic Compatibility Division, FCC and the Alternate Designated Federal Officer is Julius Knapp, Chief, Office of Engineering and Technology, Federal Communications Commission.

Doug Sicker, Chief Technologist of the FCC, will work with the Technical Advisory Council Chairman in developing its work program.

The Technology Advisory Council will help the FCC develop policies and recommendations to further the development of new technologies and the expansion of broadband and other communications services to the health care, energy and environmental conservation and education as well as the development of new jobs. The Council will also advise on spectrum issues.

Thanks to Leonard Charles for maintaining the Chapter 24 web site and to Steve Paugh for mailing the meeting reminder postcards.

December 2010 Chapter 24 Newsletter Deadline: Wednesday, December 1 paul.stoffel@wpt.org

edited using Adobe InDesign CS4

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## COMMISSION TO TAKE UP FUTURE OF TV BROADCASTING

>>> by Tom Smith

According to an interview with FCC Chairman Julius Genachowski with the Washington Post (http:// voices.washingtonpost.com/ posttech/2010/10/fcc to set stage for more broa.html), the Commission will take up the issue of recovering 120 MHz of TV spectrum for wireless broadband use at its November 30th meeting. The agenda for the meeting has not been posted on the FCC website. In the National Broadband Plan, the report set a timetable for addressing the Broadband Plan's affect on TV spectrum sometime in the third quarter of this year. In preparation for the proposed rulemakings, the FCC issued a freeze (http://www.fcc.gov/ Daily Releases/Daily Business/2010/ db1028/DA-10-2070A1.pdf) of all LPTV and translator applications except for those stations wishing a companion digital station to their analog station or an application to flashcut their analog station to digital. Stations with interference issues from a full power station may also apply for a channel change.

The FCC has permitted LPTV and translator applications for those

areas that are more than 75 miles from the top 100 cities in population since August of 2009. The FCC had planned on extending the opportunity to apply for LPTV and translators within 75 miles of the top 100 cities, this summer but canceled those plans after releasing the Broadband Plan.

### **SBE Board Approves Dues Increase**

At its meeting on October 26, the SBE Board of Directors approved a \$5 increase in membership dues, to \$68, for the Member, Senior, Associate and Fellow membership categories, effective January 1, 2011. The increase will be the first in four years. SBE president, Vinny Lopez, at the Annual Membership Meeting held the following day, cited normal increased costs of operating the Society as the reason for the increase.

(from an SBE National e-mailing)





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## **Certification Exam Session Dates**

For more information about SBE Certification, contact Jim Hermanson, services@jimhermanson.com, Chapter 24 Certification Chair, or contact Megan Clappe, Certification Director at the SBE National Office at (317) 846-9000, or mclappe@sbe.org.

### **EXAM DATES**

February 4-14, 2011 April 12, 2011 June 3-13, 2011 August 5-15, 2011 November 4-14, 2011

#### LOCATION

Local Chapters NAB Convention Local Chapters Local Chapters Local Chapters

### APPLICATION DEADLINE

December 31, 2010 March 25, 2011 April 15, 2011 June 3, 2011 September 16, 2011



## CHAPTER 24 SUSTAINING MEMBERS

### Recent Renewals

Belden, Inc.
Clark Wire and Cable
Heartland Video Systems

# Thanks to all our Sustaining Members

Alpha Video Canon U.S.A., Inc. Full Compass Systems GEPCO International, Inc. JVC Professional **Prooducts Company** maney-logic Midwest Media Group Resonant Results, Ltd. Roscor Wisconsin Ross Video Scharch Electronics Sound Devices, LLC Token Creek Productions WISC-TV 3 WMTV-TV 15 WKOW-TV 27 WMSN-TV 47

Wisconsin Public Television