

# The Radio Club of America

1909



2011

## 2011 Technical Symposium *Program*

In conjunction with the 102nd  
Anniversary Awards Banquet of  
*The Radio Club of America.*

Dallas/Ft. Worth Marriott Hotel &  
Golf Club at Champions Circle

Saturday, Nov. 19, 2011  
9 a.m. to 3 p.m.

# 2011

## PRESENTATIONS AND SCHEDULE

**Moderator:**

**Andrew M. Seybold**

- 9:00 a.m. – 10:00 a.m.**    **“Hams With Class”** by Carole Perry and  
**“Fractal Antennas”** by Austin Schaller
- 10:10 a.m. – 12:00 p.m.**    **“In-building and DAS Communications  
Review”** by Jack Daniel and  
**“P-25, Some Clarification”** by Paul Z. Gilbert
- 1:00 p.m. – 2:15 p.m.**        **“Deploying Public Safety Broadband LTE  
in Texas”** by Cynthia Wenzel Cole and  
**“Inflatable Satellite Communication Systems”**  
by Paul Gierow
- 2:15 p.m. – 3:00 p.m.**        **“Today’s Wrap-Up”** - a free-for-all discussion and Q&A session  
addressing any wireless technology topic with the moderator, presenters,  
and special guests.

### **The Radio Club of America makes history again!**

The digital collections of the Radio Club of America along with the Antique Wireless Association and the Antique Radio Club of Illinois were submitted as a group to the Smithsonian Institution. These three important radio archives were accepted into the Smithsonian’s permanent collections in July. They will be housed in An-dover, Md., at the Smithsonian Institution Libraries Research Annex in the Science and Technology collections. This is the primary location in the libraries for its radio and communications documents. (The collections were also accepted by the IEEE Library.)

The digital records encompass all the publications of RCA, including its Proceedings of the Radio Club of America and other books; all available digital issues of the AWA Review and AWA Journal (f/k/a the Old Timers’ Bulletin) and the AWA’s Telegraph Anthology; and the publications and organizational records of ARCI, includ-ing ARCI News, movies of the Muchow Museum, pictures of Radiofest, equipment contests and other examples of collector activities.

*Encourage a staff member or friend to join The Radio Club of America today!* Contact Karen Clark at 303-948-4921 or visit [www.radioclubofamerica.org](http://www.radioclubofamerica.org)



THE RADIO CLUB OF AMERICA, INC.

# Biographies of presenters:

## **Moderator: Andrew M. Seybold is CEO and Principal Consultant of Andrew Seybold, Inc.**

Andrew Seybold is one of the most respected and influential champions of mobile wireless innovation. Since 1983, he has served his clients and the industry as an analyst, consultant, commentator and author, and as an active participant in industry trade organizations. Seybold has and does serve on a number of advisory boards including Motorola's prestigious Visionary Research Council.

He is widely known throughout the wireless communications industry for his keen perspective, his sense of what customers want, need and are willing to pay for and his track record for accurately predicting trends in mobile wireless technology and convergence. Seybold is a frequent speaker at leading industry events such as CES and CTIA Wireless, and at corporate events for Fortune 1000 companies. He was elected a Fellow in the Radio Club of America in 2000 for his contributions to the wireless data industry, and in 2010 received the RCA Sarnoff Citation. Seybold was elected to serve on the RCA board of directors starting in 2011. He is a member of the board of directors of the Santa Barbara Amateur Radio Club, a long time commercial member of APCO and serves on the board of directors of Commnexus San Diego. For the past two years Seybold has been donating his time and efforts to assist the Public Safety community with its nationwide broadband system. He presently serves as the Vice-Chair of the APCO Broadband Committee, represents the National Sheriff's Association on the Public Safety Advisory Council for the FCC's ERIC organization, and serves as the communications advisor for the Public Safety Spectrum Trust, the National Sheriff's Association and the International Chiefs of Police Association.



## **Cynthia Wenzel Cole**

Cynthia Wenzel Cole is under a full time contract arrangement as an Interoperability Architect for the Texas Department of Public Safety, Interoperable Communications Program Office under the Chief, Interoperable Communications, Mike Simpson. In her current role she is working on various aspects related to the early deployment of Public Safety LTE in the newly allocated 700 MHz public safety broadband spectrum. Prior to starting her own company, Cynergyze, Cole was a Director of Product Management at Motorola, specializing in Project 25 standards, technologies and interoperability. Cole holds a BS in Electrical Engineering, RF Design, from the University of Michigan.



## **Jack Daniel**

Jack Daniel has over 50 years experience in private land mobile wireless communications and is a leading advocate for public safety radio system professionalism. He has been published over one hundred times and a repeated speaker at APCO. Daniel has given in-building technology and code training classes at IWCE, BiCSI, NFPA, IFC, and elsewhere to audiences ranging from novices to industry experts. Material from his web site ([www.RF-Solutions.com](http://www.RF-Solutions.com)) is being used as reference material world wide, including by the U.S. State Department communications training group. He is the owner of Jack Daniel Company. His company is known as a national leader in advancing the use of high reliability in-building and underground radio communications systems. He is



## 2011 Biographies of presenters (cont.)

active in system designs for public safety and enterprise users, including RF over Fiber optic signal distribution. Daniel has over 20 years experience with FCC regulated in-building systems, and was mentored by Dan Kegiebien, the engineer who designed the first FCC certified signal booster in the United States. He was part of the team that originated the very first in-building code and has provided assistance in the development of the current IFC and NFPA In-building codes. He entered into land mobile communications as a field tech for Jerry Stover at Communications Engineering Company. Daniel is active in public safety and national code making associations including APCO, NFPA, ICC, IAFC, NPSTC, and IAPC. He is a Life grade member of APCO, and is a Fellow in the Radio Club of America.

### **Paul A. Gierow**

Paul Gierow is President and CEO of GATR Technologies, a company that manufactures inflatable satellite communication systems. Gierow holds BS and MS degrees in Mechanical Engineering and is a registered Professional Engineer; and has spent 20 years as an executive and engineer developing and managing projects for the national space industry prior to his starting GATR. He currently holds four patents, with additional patents pending, related to deployable structures, and has published more than 20 papers related to inflatable and deployable structures for terrestrial and space applications.



### **Paul Z. Gilbert**

Paul Gilbert is an Engineering Specialist III for the Texas Department of Transportation (TxDOT), Traffic Operations-Traffic Engineering Section, Radio Operations Branch located at the TxDOT Cedar Park Campus in Austin, Texas. For TxDOT, he is responsible for the FCC licensing, FAA tower issues, design and management of TxDOT's tower program, oversight of the agency

VHF/UHF/800 radio system and HF SSB emergency radio system, TxDOT's Emergency and Interoperability Communications, Texas Radio Coalition membership for TxDOT and radio product development and testing for TxDOT. He represents the American Association of State Highway and Transportation Officials (AASHTO) on the TIA P-25 Steering Committee. Gilbert has 32 years of experience in public safety and communications fields including 16 years in the radio broadcast and TV cable industry. He is a former Volunteer Fireman and Paramedic with the Snyder Fire Dept for 11 years. He holds an Extra Class Amateur Radio Operator license, KE5ZW. Gilbert is a member of APCO International, the Radio Club of America, American Radio Relay League, Electronic Technicians Association International, and the Motorola Trunking Users Group. He is the AASHTO Texas Public Safety Frequency Coordinator. AASHTO is one of the four FCC sanctioned Public Safety Frequency Coordination Services. Gilbert holds a B.S. of Education, Journalism, from Southwest Texas State University.



### **Carole J. Perry, WB2MGP, Fellow and director of RCA.**

Carole Perry is currently Co-Chair of RCA's Education Committee. Perry created the RCA Young Achievers Award, which is awarded to students in grades 12 or below who have demonstrated technical expertise and creativity in wireless communications. At RCA's Centennial Awards Banquet in 2009, Perry was presented with RCA's President's Award. In



## 2011 Biographies of presenters (cont.)

1996, RCA awarded her its “Barry Goldwater Award.” The Quarter Century Wireless Association presented its “President’s Award” to Perry in 1993. In 1991, she was the recipient of the “Marconi Memorial Award” given by the Veteran Wireless Operator’s Association. In 1987, Perry received the prestigious Dayton Hamvention “Ham of the Year” award and the American Radio Relay League “Instructor of the Year” award. After a 16-year career as executive vice president for RapidCircuit Inc., an electronics manufacturing company, Perry in 1981, joined the staff of Intermediate School 72 in Staten Island, NY, where she created the curriculum for “Introduction to Amateur Radio,” which she taught until her retirement in 2004. Perry currently serves as a columnist for WorldRadio magazine, and has moderated the “Youth Forum” and “Instructor’s Forum” at the Dayton Hamvention for the past 22 years.

### **Richard J. Reichler, coordinator of the RCA Technical Symposium.**

Reichler has also served as chair of RCA’s Sections/ Industry Conferences Committee and served for 9 years as a director on RCA’s Board. He is a Fellow and Life Member of RCA, and

in 2006, he received RCA’s Special Services Award. He is currently president and founder of RJR Wireless, providing consulting and special project services to the antenna site industry.

Reichler has been a presenter, speaker, and writer on issues relating to the business of antenna site management. He

was previously general manager of the Southern California Region of American Tower, plus vice president and a corporate director of Meridian Communications. He is also currently a director and vice president of the Brookwood Office Park Owners Association. He successfully passed the CPA examination but is not a licensed or practicing Certified Public Accountant. Rich received a Bachelor of Science



Degree in Mathematics - Computer Science from the University of California at Los Angeles (UCLA).

### **Austin Schaller**

Austin Schaller is a junior at COVA high school in Boulder, Colorado. At an early age, he acquired a fascination for electronics and amateur radio that was originally sparked by his grandfather, Frank de Vall, W0BIW, when the two of them spent time working on projects together. In 2009, he discovered the Boulder Amateur Radio Club

for juniors (BARC Jr.), and since then, has been actively participating in their weekly educational activities. With the support of BARC Jr., Schaller passed his Technician, General, and Extra class licenses in eight months. Shortly thereafter he became an Elmer and taught kids the basics of electronic theory in preparation for

obtaining their ham radio license. During the same year, Schaller was invited to speak at the Youth Forum at the Dayton Hamvention, directed by Carole Perry, on the topic of “Fractal Antennas.” After being invited a second time to speak at the Youth Forum in 2011, he talked about PIC Microcontrollers and their potential for ham radio applications. In June of 2010, Austin obtained an internship at FreeWave Technologies and learned several programming languages that contributed to the design and development of FreeWave’s company products and engineering systems. His programs were used to test the performance of products that engineers were experimenting with. Example tests he developed include sensitivity, RF susceptibility, and power-output tests. Now seventeen, he likes to spend time in a number of hobbies. Classical guitar has been a relaxing pastime that he has been engaged in for over nine years. He continues to build homebrew projects, recently building a powerful desktop computer and collaborating with BARC Jr. to build an Edge of Space Sciences telemetry beacon.



# 2011

## NOTES & ACKNOWLEDGEMENTS

**Thanks to all of the people that helped produce this event, and particularly:**

- The moderator and each of the presenters.
- V.G. Duvall, Fellow – for handling onsite logistical matters, e.g. furniture, equipment, lighting, welcoming guests, etc.
- Bruce McIntyre, Fellow & Vice President – for miscellaneous assistance before and during the event.
- Karen Clark, Fellow & Executive Secretary – for handling registration, some document preparation, A/V ordering, room booking, etc.
- Diane Weidenbenner for editing and publishing the color program document.
- Andrew M. Seybold, Fellow – for providing the main laptop PC (loaded with the presentations) and helping line up the program.
- Paul Gilbert – for some photographic services and some assistance with onsite logistical matters (including providing a backup laptop PC).
- Carroll Hollingsworth, Fellow – for helping find presenters and volunteers.
- Tim Duffy, Fellow & a Director – for general management of awards banquet and all related activities.
- Rich Reichler, Fellow & a former Director - for coordinating/producing this event.

**We also express our gratitude for the audio/video recording.** Each year from 2002 through 2008, AC Video Services (“ACVS”) (Andy Conte, Fellow) [<http://www.takeonenetwork.com/acvideo/>] [(800) 710-8804 and (973) 661-1976] has made an audio/video recording of this event since this provides a nice historical record and enlarges the audience. These yearly recordings are available for purchase (currently in the form of DVDs) from ACVS.

**The PowerPoint presentations and/or papers** presented at this event might also be published by the RCA and be available via its Internet website, its journal (The Proceedings of the Radio Club of America), etc.

**Continuing Professional Education Credits** might be available for people attending this event.

### **Opportunities and request for future help.**

Please contact Rich Reichler ([RJRWireles@aol.com](mailto:RJRWireles@aol.com)) to provide information about any possible sponsors, speakers, helpers, or ideas for a future RCA Technical Symposium.

In support of its charitable, educational, and scientific missions, RCA has set up this event. The RCA welcomes contributions of financial and human resources to help its education/scholarship funds and other programs.

For the radio/wireless industry, the RCA (established 1909) brings radio people together, provides educational materials, grants scholarships, promotes scientific advancement, preserves history, and recognizes excellence. People wanting to join RCA, contribute to its education/scholarship funds, etc., may contact RCA at (303) 948-4921, or [www.RadioClubOfAmerica.org](http://www.RadioClubOfAmerica.org) or email at [Info@RadioClubOfAmerica.org](mailto:Info@RadioClubOfAmerica.org).

# 2006-2010

## PAST SYMPOSIUM TOPICS

### Highlights of recent past RCA Technical Symposiums:

These events showcase the diverse technologies and many talented individuals that exist in the radio industry. Here are some of the topics and presenters that have been part of recent RCA Technical Symposiums.

#### 2010

“Current state of 700 MHz Broadband for Public Safety” presented by John Facella

“Can Broadband Replace Channelized Wireless?” presented by Andrew M. Seybold

“AWA & RCA: Preserving The Past & Creating A Vision For The Future” presented by David Bart

#### 2009

“NASA – JPL Spacecraft Explorer I; 50 Years later Cassini” by Henry L. Richter

“100 Years of Radio Development” by Bruce Roloson and Felicia Kreuzer

“Innovations in Amateur Radio” by Carole J. Perry

“The Rebirth of LMR” (about NXDN, etc.) by Peter Moncure

“What’s New in Transmission Technology” by Dennis Martinez

“Trends in IP Convergence: IP Technology for Mission Critical Networks, and Mesh Technology Primer” by John Facella

“Public Safety Broadband, Compelling Applications” by Michael W. Hunter

#### 2008:

“See How Antenna’s Work” presented by Dale P. Clement

“Future Evolution of Cellular Telecommunications” presented by Kenneth C. Budka

“Wireless Telecommunications Requirements of Critical Infrastructure Providers” presented by Mark Madden and M. Kelly McNair

#### 2007:

Presentation by Dana Dulabone about advanced wireless technologies for personal communication systems

Presentation by John Chapin about software defined radio

#### 2006:

Presentation by Hugo Gaggioni about high definition television (“HDTV”) broadcast technology

Presentation by Leonard R. Kahn about the state of the art of new AM broadcast technology



# Good things are meant to be shared!

Have you enjoyed the Technical Symposium today?

If so, why not jot down three friends' names that you'll invite to join the Radio Club of America awards banquet and symposium next year?

The Radio Club of America's membership has grown over the years by word-of-mouth. Invite your colleagues to join the Club in 2011-2012.

Then, invite them to next year's banquet.

## Enjoy the dinner and awards banquet!



The Radio Club of America  
PO Box 621074, Littleton, CO 80162-1074, Phone: 303-948-4921, Fax: 303-972-1653

[www.radioclubofamerica.org](http://www.radioclubofamerica.org)