



IEEE Milestone Award Program

First Wireless Radio Broadcast



Saturday, 13 September 2008

Brandt Rock and Marshfield, Massachusetts

First Wireless Radio Broadcast by Reginald A. Fessenden, 1906

On 24 December 1906, the first radio broadcast for entertainment and music was transmitted from Brant Rock, Massachusetts to the general public. This pioneering broadcast was achieved after years of development work by Reginald Aubrey Fessenden (1866-1932) who built a complete system of wireless transmission and reception using amplitude modulation (AM) of continuous electromagnetic waves. This technology was a revolutionary departure from transmission of dots and dashes widespread at the time.

The Fessenden Milestone Organizing Committee

Gilmore Cooke, Chair
Lori Jeromin
Thomas Vaughn
Valencia M. Joyner
John Kaczorowski
Paul Zorfass
Tom Aprille
Robert Alongi
Linda Scott

The IEEE acknowledges the following for their contributions to this IEEE Milestone Celebration

- SOWP - Society of Wireless Pioneers
- Carl E. Russell
- Dave Riley
- Edward F. Perry
- Vintage Radio and Communication Museum of CT

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IEEE Boston Section
One Center Street, Suite 203
Wakefield, MA 01880
(781) 245-5405
sec.boston@ieee.org
www.ieeeboston.org

Program

Morning

8:30: Registration & coffee

9:00: Welcoming remarks by Lori Jeromin, Boston Section Chair

9:20: Previous milestones by Gilmore Cooke

9:35: Introduction of keynote speaker by Valencia M. Joyner

9:40: Keynote speaker, "Fessenden at Brant Rock" by Dr. John S. Belrose

10:40: Introduction of IEEE President, Dr. Lewis Terman by Dr. Karen Panetta

10:45: Milestone award ceremony presided by Dr. Lewis Terman

11:00: Acceptance by: Dave Riley, amateur radio; Cynthia Krusell, Town historian and Marshfield archivist; Edward F Perry, Jr., commercial radio broadcasting; and Nancy Blackman, family owning the site.

11:20: Recognition of local guests by John Kaczorowski

11:30: Group photographs

Afternoon

12:00 to 12:45: Buffet lunch for registered attendees

12:30 to 12:45: "Brant Rock Then and Now: A Visual Rendering" by Michael Thompson

12:30 to 1:30: Tour to Brant Rock tower and return to Courtney's

1:00 to 4:00: Crystal sets built and demonstrated for boys and girls (10-14)

2:00: Short presentations

- Valencia M. Joyner, Women In Engineering Society chair person
- Paul Zorfass, Chair of Communications Society Chapter
- Eric R. Wandel, Broadcast Technology Society
- Chatham Marconi Maritime Center, a history narrated by Walter Cronkite
- NE Steam & Wireless Museum's Fessenden artifacts by Michael Thompson

The First Wireless Radio Broadcast for Entertainment and Music in 1906 will be marked As Milestone in Electrical Engineering History.

On Christmas Eve 1906, Canadian-born American inventor Reginald A. Fessenden transmitted from Brant Rock, Massachusetts, the first radio broadcast for entertainment and music. On 13 Sept., the IEEE and the IEEE Boston Section will celebrate an IEEE Milestone in Electrical Engineering and Computing commemorating the accomplishments at Brant Rock and honoring early radio innovations. The award ceremony will take place in Marshfield and Brant Rock, Massachusetts, where the original radio tower once stood.

Fessenden, his wife Helen, secretary Miss Bent, and crew assembled at the Brant Rock station on the evening of 24 Dec. and, at 9:00 p.m., after signaling ships at sea to await a transmission, Fessenden began the broadcast by playing "O, Holy Night" on the violin. Mrs. Fessenden and the secretary experienced stage fright so Fessenden provided the voice, the music and read a poem. He ended by wishing his listeners a Merry Christmas and asking those stations that heard the broadcast to write him. The broadcast was heard as far away as Norfolk, Va., a distance of more than 450 miles and was replicated on New Year's Eve.

This pioneering broadcast was achieved after years of development work by Fessenden (1866-1932) who built a complete system of wireless transmission and reception using amplitude modulation (AM) of continuous electromagnetic waves. This technology was a revolutionary departure from transmission of dots and dashes widespread at the time.

President IEEE Lewis Terman will formally award the Milestone Plaque for the First Wireless Radio Broadcast commemorating the accomplishments at Brant Rock and honoring early radio innovations. The award ceremony will take place in Marshfield and Brant Rock, where the original radio tower once stood. After welcoming remarks, there will be a presentation by radio historian, John S Belrose (VE2CV) from the Radio Sciences Communications Research Centre in Ottawa, Canada.

About IEEE

IEEE (Institute of Electrical and Electronics Engineers, Inc.) is the world's largest technical professional society. Through its more than 375,000 members in 160 countries, the organization is a leading authority on a wide variety of areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics. Dedicated to the advancement of technology, IEEE publishes 30 percent of the world's literature in the electrical and electronics engineering and computer science fields, and has developed nearly 900 active industry standards. The organization

annually sponsors more than 850 conferences worldwide. Additional information about the IEEE can be found at <http://www.ieee.org>.

About the Boston Section History Committee

The IEEE Boston Section is aware of the rich electrical history within its borders. An ad hoc history committee has been established to research and nominate significant innovations in electrical and electronic engineering to the IEEE History Center (www.ieee.org/web/aboutus/history_center) in order that they be recognized as milestones. Information on previously awarded milestones can be found under Conference and Special Events on website, www.ieeeboston.org.

Historians and researchers wanting to understand the significance of a particular milestone plaque are encouraged to access our collection of milestone documents donated to the Boston Public Library by the Section History Committee. These documents reside at the main central library at Copley Square. They are retrievable by milestone names as key words. The collection consist of nominating records, research papers, and other references. Those wanting additional information on the collection may contact Gil Cooke at gilcooke@ieee.org



WIE is the largest international professional organization dedicated to promoting women engineers and scientists.

**WIE-Boston is proud to support the
IEEE Milestone for
First Wireless Radio Broadcast for Entertainment
and Music in 1906**

For further information contact the WIE-Boston Chair:
Dr. Valencia M. Joyner, valencia.joyner@ieee.org

The logo for the IEEE Broadcast Technology Society is a red banner. On the left side, there are three concentric white circles of increasing size, resembling a signal or broadcast pattern. To the right of these circles, the text "IEEE Broadcast Technology Society" is written in a bold, white, sans-serif font.

IEEE Broadcast Technology Society

"The technologies to deliver information and entertainment
to audiences worldwide, at home and on the go. "

The IEEE Broadcast Technology Society would like to congratulate the Boston Section for bringing the IEEE Milestone dedication to fruition. The ***First Wireless Radio Broadcast by Reginald A. Fessenden in 1906, at Brant Rock, MA USA***, paved the way for the future of telecommunications as we know it today. Best wishes for a very successful event!

The IEEE Broadcast Technology Society is committed to being the world's leading technical professional membership organization in Broadcasting and related technologies and the Society of choice for individuals in this field.

The mission of the IEEE Broadcast Technology Society is to serve its members by helping them to maintain and enhance their technical proficiency and professional standing through the activities of the Society and its chapters worldwide.

For more information on the IEEE Broadcast Technology Society or the IEEE:

Kathy Colabaugh, Senior Administrator
IEEE Broadcast Technology Society
445 Hoes Lane, Piscataway, NJ 08854
Tel: +1 732 562 3906
k.colabaugh@ieee.org
www.ieee.org/bts



Celebrating 60 Years of Enabling the Wireless World

*The IEEE Antennas and Propagation Society is
proud to support the commemoration of the
First Wireless Radio Broadcast
by Reginald A. Fessenden*



Find out more about the Society at
www.ieeeaps.org



Chatham Marconi Maritime Center

The Chatham Marconi Maritime Center was established in 2002 to play a leadership role in the community in preserving and operating the former Marconi/RCA wireless receiving station in Chatham, MA. We propose to preserve the historic integrity of the operations building with portions of its antenna field. Our adaptive reuse will reconfigure the interior space to create a museum and an education center. Exhibits in the museum will trace the evolution of wireless communication from its earliest days, through the middle of the 20th century when the Chatham station was the busiest marine radio station on the east coast, to the present time when wireless devices are ubiquitous in our daily lives. Our education program will be based on science and technology partnerships with local schools that will provide an opportunity for both active and retired professionals and teachers to support and encourage young people in the classroom and at the center.

IEEE Milestone Sponsors

IEEE Boston Section

IEEE Broadcast Technology Society

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IEEE Women in Engineering

IEEE Communications Society

IEEE Life Members Committee

Chatham Marconi Maritime Center

Gilmore Cooke

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