



TELECOMMUNICATIONS
HISTORY GROUP

CONNECTIONS *news*

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Jody Georgeson, editor

Director's Message

Spring is a time of growth and celebration. We at the Telecommunications History Group passionately believe our history is more relevant today than ever, and we are committed to continuing branding, marketing, and fundraising projects to increase visibility and share programs and services more widely than we have in the past. New marketing collateral and a newly designed website are on the 2018 agenda.

2017 brought the passing of Robert Timothy and Howard Doerr, along with several others like Herb Warrick and Don Ostrand in recent years. As time passes and our telecom community loses more of the individuals who were near and dear to us, we want to ensure that we are recognizing their contributions to our industry and to THG. Women's History Month is an excellent opportunity to showcase the stories of women and their impact in the telecommunications industry. Don't miss the wonderful articles in this edition.

This year marks the 30th anniversary of the first tour in our Connections Museum in Seattle. Plans are currently underway for an open house celebration so be sure to watch for further information as the details are finalized.

It is largely personal donations and volunteer hours that keep us afloat and support our operations. We are grateful for contributions, connections, ideas, and time from individuals like you with an interest in maintaining a history that holds special meaning for you and all of us.

Warm regards,

Lisa Berquist
THG Executive Director



Board of Directors

THG's Board provides voluntary service in the form of oversight and management of the organization. They are instrumental in the planning, development and fundraising that supports our efforts to preserve the history of the telecommunications industry.

Valued members Lori Dubois and Bob McKenna resigned in 2017. We're sad to see them go but thank them for their service and wish them continued success. We are happy to welcome John Kure to our Board.

Officers

President - **Jack Shea**, Executive Director, Benefits (ret.) U S West
Vice President - **Michael W. Nearing**, Senior Engineer, CenturyLink
Vice President - **John C. Darrow**, Senior Software Developer (ret.) U S WEST/Qwest
Secretary - **Jody L. Georgeson**, U S West (ret.); THG Executive Director (ret.)
Treasurer - **John W. Kure**, Executive Director, Qwest Public Policy (ret.)

Members

Peter Amstein, Software Industry Executive (ret.)
Laurence W. DeMuth, Jr., EVP General Counsel & Secretary (ret.) - U S WEST
David Dintenfass, Full-Track Productions
Phil Grate, Director-Regulatory & Legislative Affairs - CenturyLink
Lisa Hensley Eckert, Director of Public Affairs, CenturyLink
John J. Herbolich, Telecommunications Director Network (ret.) US West, Inc.
Pamela W. Laird, Professor, Business History, University of Colorado Denver
Philip A. Linse, CenturyLink
Ed Mattson, Medical Director (ret.)
Scott McClellan, VP Washington (ret.) - U S WEST/Qwest
Mary Retka, Director, Network Policy - CenturyLink
Cliff Stice, Vice President, MediaOne International. (Ret.), Chief Operating Officer, Telenet (Belgium)

In Memory – Betty Vigil 1934-2017

Betty Jean Vigil died on December 27, 2017 at her home in Longmont, Colorado. She brought love and humor to those around her, and she could always be counted on for wise and practical advice. She will be missed very much.



Betty was born December 3, 1934 in Fargo, North Dakota, to Emil and Marie Wick. Her father was a skilled carpenter, but during the Depression the family often traveled to find work. During World War II, the family lived in Portland, Oregon, where her parents worked in shipyards to support the war effort. In 1945 the family moved to her grandparents' farm in Frazee, Minnesota, where she spent the rest of her childhood. Her fond memories from those years include card games of Whist, and fishing, swimming and ice-skating on local lakes.

Betty was an industrious young woman, and she worked numerous jobs during high school. When she graduated, she used her savings to move to Minneapolis, where she worked in various jobs, and where she attended the University of Minnesota for two years. In 1966 she moved to Denver, Colorado, working in the legal department of Mountain Bell where she worked for the next 30 years. In the early 1970s, she became one of the first paralegals in Denver.

She and her husband, Albert, lived in Arvada and Westminster before moving to Longmont, Colorado in 2002. She enjoyed genealogy and collecting Native American art. She was always very involved with her children and grandchildren. In her later years, she even took up Facebook and SnapChat to stay in touch with her grandchildren; she often knew what her grandchildren were up to before their own parents did!

Betty was one of our first volunteers and was very active at THG for 25 years. Almost single-handedly, she arranged and cataloged our extensive directory collection. She could always be counted on to lend a friendly ear or to share a good laugh. Betty received the "THG Volunteer of the Year" award in 2006.

She is survived by her husband of 49 years, Albert Vigil, her sister Dorothy Wick, her four children, Theresa McHenry, Karen Parko, John Parko, and Barbara Vigil, and her nine grandchildren.

Betty asked that in lieu of flowers, donations be made to the Telecommunications History Group.



Connections Museum Seattle: a Brief History

By David Dintenfass

In just a few months, the Seattle museum will mark the 30th anniversary of our first tour. Now seems like a good time to recount some of our early history and how we came to be part of the Telecommunications History Group.

Connections Museum Seattle was established in Seattle in 1986 as the *Vintage Telephone Equipment Museum*. Originally conceived as one of three such museums, the Seattle museum was the only museum to survive the initial planning stage. Although there are other (generally smaller) telephone museums in the United States, our museum remains the only one to feature a large collection of working (but retired) Bell System electromechanical central-office equipment—including the famous Panel Office from the early 1920s.

The museum was created, built, and initially staffed by long-service and retired telephone company employees (mostly members of the Charles B. Hopkins No. 30 Telephone Pioneers of America).

Although the Museum has not benefited from direct corporate sponsorship, the former Bell System Operating Companies (Pacific Northwest Bell, then U S West, then Qwest, and now CenturyLink) have provided space, electric power, and other in-kind contributions.

In Seattle, the local Bell operating company since 1961 had been the *Pacific Northwest Bell Telephone Company* (PNB). In January 1984, PNB split from AT&T and along with Mountain Bell and Northwestern Bell, became part of U S West. It continued to operate as Pacific Northwest Bell until it became part of U S West Communications in January 1991. U S West Communications merged with Qwest Communications International, Inc. in June 2000 and changed its name to *Qwest*. In April 2011, Qwest was purchased by Monroe, Louisiana-based CenturyTel, which then chose the new name *CenturyLink* in early 2012.

What follows is a brief timeline of our most significant events.

November 1984: In a memorandum to two PNB vice presidents, Herbert Warrick Jr. (*PNB director, Network Engineering*) promotes the idea of three Telephone Pioneer museums in Seattle, Spokane, and Portland. Herb explains that the timing (1984) is ideal, as by the year 1990 all electromechanical telephone switching equipment is to be eliminated. This coincides with an unusual confluence of events to make such a museum practical. Specifically:

- The newer electronic switching offices require much less space, thereby opening potential museum space.
- The disconnection and removal of electromechanical offices by 1990 would make available components of Step, Panel, and both No. 1 and No. 5 Crossbar equipment for these proposed museums.
- The proposed museums would be operated by local Telephone Pioneer Chapters. PNB would provide the building space, the switch frames, frame erection, and interconnecting cable. The Pioneers would design the switching layout, install the equipment and do all subsequent maintenance.

August 1985: In a memorandum to PNB Director E. G. Barneich, M. D. Lindeman recommends that the Seattle museum be located at the Duwamish Central Office (7000 East Marginal Way South) on the third floor, with estimated construction costs of \$25,000.

August 1986: Herb Warrick invites members of the local Telephone Pioneers to become involved in a “Vintage Telephone Equipment” display museum in Seattle and to attend an inaugural luncheon on 3 September.

September 1986: Herb Warrick promotes the idea of a Telephone Pioneer museum in the September 1986 issue of *the Pioneer Herald*, the monthly newsletter of the Charles B. Hopkins No. 30 Telephone Pioneers of America.

3 September 1986: A buffet luncheon is served in the mostly empty space on the third floor of the Duwamish Central Office. This officially inaugurates the start of the museum.

October 1986: Work begins on the installation of the No. 5 Crossbar Office.

1986 to 1988: Volunteers from the Pioneers (occasionally supplemented by Western Electric and PNB employees) construct initial exhibits and supporting infrastructure for the museum; this includes electromechanical central-office switching equipment and the ironwork needed to support it.

February 1988: Don Ostrand (Seattle Pioneer Museum Committee) reports on the progress of the newly-established museum in the February 1988 issue of *The Pioneer Herald*. The Panel and Crossbar offices are installed, the Step Office is in the building and assembly work continues. Estimated opening of the museum is scheduled for the Fall of 1988.

July 1988: *Our first tour!* The first official guided-tour of the museum is held on the weekend of 22 July, hosted by the Pioneers and PNB. Attending are past presidents of PNB.

1988 to 2002: The museum continues to operate as the *Vintage Telephone Equipment Museum* (open Tuesdays, 8:30 am to 2:30 pm) in association with Chapter 30 of the Telephone Pioneers of America. The museum is mostly—but not exclusively—staffed by retired telephone company employees.

1999: U S West informs the museum that to accommodate the installation of a new No. 5 ESS electronic switch, the museum must vacate the Duwamish Central Office. Museum curator Don Ostrand works with the U S West Building and Engineering Departments to seek alternatives to the move. A compromise is reached—the museum will give up approximately 2,500 square feet of space on the second floor to make room for the new 5ESS.

30 June 2000: Qwest Communications acquires U S West Communications.

2003: The museum changes its association from the Telephone Pioneers of America to the Telecommunications History Group (THG), headquartered in Denver, Colorado. This move allows the museum to accept donations from the public, as THG is a 501(c)(3) not for profit organization. The museum is renamed *The Museum of Communications*. Don Ostrand continues to lead the museum.

2 Oct 2012: Our volunteers mourn the passing of museum founder Herb Warrick.

8 Sept 2013: The museum is officially renamed *The Herbert H. Warrick Jr. Museum of Communications* and a plaque is unveiled in Herb’s memory.

15 January 2014: Our volunteers mourn the passing of Don Ostrand, longtime museum curator.

2014 to present: Museum volunteers continue to administer and maintain the museum while beginning a successful outreach to increase the volunteer staff and attract new visitors—this includes changing visiting days to Sundays and sponsoring two shifts of volunteer-only hours on Tuesdays to maintain current exhibits and add new ones.

March 2017: After research and extensive discussion by the THG Marketing Committee, new names and graphics standards are developed and our museum is renamed ***Connections Museum Seattle***.

Nevertheless, She Persisted: Honoring Women Who Fight All Forms of Discrimination Against Women

March is National Women's History Month. The 2018 National Women's History theme honors women who have shaped America's history and its future through their tireless commitment to ending discrimination against women and girls. At THG we celebrate women in the telecommunications industry who have fought against discrimination, but also those who persisted in giving the best possible service to their customers and communities. Here are just a few:



Ada Lovelace

The daughter of famed poet Lord Byron, Augusta Ada Byron, Countess of Lovelace—better known as "Ada Lovelace"—was born in London on December 10, 1815. Asked to translate an article on Babbage's analytical engine, she not only translated the original French text into English, but also added her own thoughts and ideas on the machine. Her notes ended up being three times longer than the original article. Her work was published in 1843, in an English science journal. Ada used only the initials "A.A.L.," for Augusta Ada Lovelace, in the publication.

In her notes, Ada described how codes could be created for the device to handle letters and symbols along with numbers. She also theorized a method for the engine to repeat a series of instructions, a process known as looping that computer programs use today. Ada also offered up other forward-thinking concepts in the article. For her work, Ada is often considered to be the first computer programmer.

Violette Szabo

Paris-born Violette Szabo was a telegraphist at the Central Telegraph Office (in England) during the Blitz when she was recruited into the Special Operations Executive (SOE) to carry out espionage, sabotage and reconnaissance operations.

With D-Day approaching, Violette volunteered for a dangerous intelligence mission in Nazi-occupied France. Aged just 22, she was parachuted into the country in April 1944. She was twice arrested by the German security authorities but each time managed to get away.



Eventually, she and other members of her group were surrounded by the Gestapo in south-west France. Violette seized a STEN gun and ammunition, barricaded herself inside a house and exchanged fire with the enemy, killing or wounding several of them until she was captured. She was held in solitary confinement, interrogated and tortured. But she refused to identify her compatriots or give away any information of value.

She was deported to Ravensbrück concentration camp in northern Germany where she was executed by firing squad on February 5, 1945.

Dr. Shirley Ann Jackson



Dr. Shirley Ann Jackson, a theoretical physicist and famous black inventor, has been credited with making many advances in science. She first developed an interest in science and mathematics during her childhood and conducted experiments and studies, such as those on the eating habits of honeybees. She followed this interest to the Massachusetts Institute of Technology (MIT) where she received a bachelor, and doctoral degree, all in the field of physics. In doing so she became the first African-American woman to earn a Ph.D. from MIT.

Dr. Jackson conducted successful experiments in theoretical physics and used her knowledge of physics to foster advances in telecommunications research while working at Bell Laboratories. Dr. Jackson conducted breakthrough basic scientific research that enabled others to invent the portable fax, touch tone telephone, solar cells, fiber optic cables, and the technology behind caller ID and call waiting.

Currently, Jackson is the president of Rensselaer Polytechnic Institute, the oldest technological research university in the United States, and recently ranked by U.S. News and World Report as one of the nation's top 50 universities. The mission of Rensselaer since its founding in 1824 has been to "apply science to the common purposes of life." Dr. Jackson's goal for Rensselaer is "to achieve prominence in the 21st century as a top-tier world-class technological research university, with global reach and global impact."

Emma Nutt

In January 1878, the Boston Telephone Dispatch Company hired boys as telephone operators. Boys had been very successful as telegraphy operators, but their attitude and behavior were unacceptable for live phone contact, so the company decided to try women operators instead. Thus, on September 1, 1878 Emma was hired, starting a career that lasted about 35 years, ending with her retirement sometime between 1911 and 1915. (A few hours after Emma started working, her sister, Stella Nutt, became the world's second female telephone operator.)

Emma was hired by Alexander Graham Bell, who is credited with inventing the first practical telephone. She was paid a salary of \$10 per month for a 54-hour week. Reportedly, she could remember every number in the telephone directory of the New England Telephone Company. Customer response to her soothing, cultured voice and patience was overwhelmingly positive, so boys were soon replaced by women in telephone exchanges throughout the country.



Throughout the month of March, we will post stories on Facebook and Twitter of women in the telecommunications industry who have persisted. All of them are heroes.

He Installed the First Minneapolis Telephone

This is taken from an article first published in the January 1928 issue of "The Northwestern Bell"

Construction of the first telephone line in Minneapolis is recalled by the resignation in November of Zachariah T. Morrison from the position of superintendent of Minneapolis fire and police alarms, which he had held for 43 years. Mr. Morrison helped install the first telephone in the city.

Born in Maine, "Zach" as he is known to every fireman in Minneapolis, moved west with the telegraph, reaching Minneapolis in 1872. It was then a city of about 20,000 persons.

In 1877, Zach, then a telegraph operator, became acquainted with Richard H. Hankinson, known as the father of telephone service in the northwest, who was in Minneapolis directing the building of telegraph lines.

One day a friend of Mr. Hankinson, C.H. Haskins of Milwaukee, Wis., sent Mr. Hankinson some telephone receivers and told him to try them out.

Mr. Morrison helped Mr. Hankinson string a telephone wire a distance of three blocks in what is now the market district. They hooked up the telephone receivers and talked to each other – three blocks apart.

Mr. Hankinson and Mr. Morrison then strung a wire from Mr. Hankinson's home to his office. Mr. Hankinson secreted one of the receivers in his home and told his family nothing about it. Then he went down to his office and shouted into the crude receiver on the other end of the line. The receiver served as both receiver and mouthpiece in those days.

Within a few minutes Mrs. Hankinson rushed into his office, breathless. She had heard a spooky voice in the closet and there wasn't anybody there, she gasped.

Then Mr. Hankinson told her about the telephone.

To test out the first line, which ran from the Hankinson home to the old city hall, Mr. Hankinson had his wife, the leading soprano of the city, sing over the wire. He failed to recognize the first song, a classical number, but when Mrs. Hankinson sang "Old Hundred," he announced to the men standing around him that the test was a success and that Minneapolis had a telephone system.

Later in the same year, a second line was built along the Minneapolis and St. Louis railroad right of way from the Loring and Fletcher office to their flour mill. The Griggs and Sanders Fuel Company of St. Paul also installed a line from their offices to their yards in 1877. It was the first commercial line in St. Paul.

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Since the days when Mr. Morrison installed the first telephones, Minneapolis has grown into the largest telephone exchange in our territory, with 121,300 subscribers and 18 central offices.

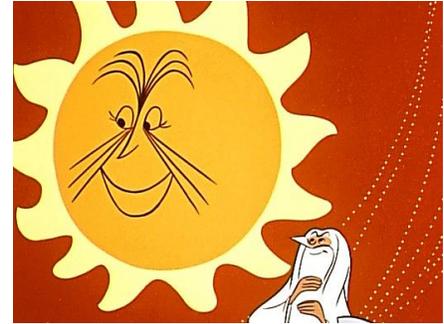
More about Zachariah and about telecom employees throughout the country can be found in our extensive collection of company magazines and memoirs in the THG archives.



Video Volunteers

Jon Berquist and Jack Beattie continue what seems to them the never-ending inventory of our video collection.

The Bell System Science Series were television specials made for the AT&T Corporation that were originally broadcast in color between 1956 and 1964. They have been described as "specials that combined clever story lines, sophisticated animation, veteran character actors, films of natural phenomena, interviews with scientists, and precise explanation of scientific and technical concepts — all in the pursuit of better public understanding of science." [You might remember them from Junior High science class!] Titles in the THG collection include: *Our Mr. Sun*; *Hemo the Magnificent* (Blood); *The Unchained Goddess* (weather); *Gateways to the Mind* (the five senses); *The Alphabet Conspiracy* (language); *Thread of Life* (heredity); *About Time*; and *The Restless Sea*.



Back in the day, managers could request a film to show at mandatory monthly safety meetings. In our collection, these are represented by such titles as: *Facts About Backs*; *Ditch Witch Trench Safety*; *Safe Pole Climbing*; *DWI Decision*; and *Some Days You Can't Make a Nickle* (performed and filmed by Administrative Services employees).

We have a lot of advertising materials from the several companies (Bell Labs, U S West, AT&T, and many Bell entities.). CWA is well-represented, as are the Telephone Pioneers. Historical material includes biographies of A.G. Bell, *Spirit of Service* (the story of Angus Macdonald), histories of the various Bell entities and of technologies such as *Transistor*; *Intro to Telstar*; and *Three Degrees* (radio astronomy). There are training films like *Our Corner of the World* (pluralism); *Who Killed the Sale*

(marketing); *Charge Coupled Devices*; and *SOF + Cutaways*. Some of the materials document disasters: *Rivers on a Rampage* (1956 flooding in NWB territory) and *Miracle on Second Avenue* (New York Tel's 1975 fire) are just two.

Through the years, the telephone has played a major role in the movies; sometimes it has even been the star. Our collection includes oldies like *Cyclone on Horseback* (1941) about stringing wire in the Wild West; *Sorry, Wrong Number* (1948) with Barbara Stanwyck and Burt Lancaster; and *The President's Analyst* (1967) with James Coburn. Newer titles are *Hanging Up* (a 2000 comedy starring Meg Ryan, Diane Keaton, Lisa Kudrow, and Walter Matthau); *The Operator* (2001); *Phone Booth* (2003); *Cellular* (2004); *When a Stranger Calls* (2006) and *The Changeling* (2008), in which Angelina Jolie plays a roller-skating telephone supervisor.

To access our videos or any of our archive materials, contact us at telcomhist@aol.com, or on 303-296-1221.





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