

Dial Log



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Jody Georgeson, editor

Director's Report by Jody Georgeson

Why does history matter?

In *The Age of Edison: Electric Light and the Invention of Modern America*, Ernest Freeburg writes, "Wireless Internet, hybrid cars, smart -phones, high-speed rail, video streaming. We imagine ourselves at the apex of a technological revolution. But nothing at present can compare to the societal upheavals experienced by those at the end of the 19th century. Today we largely undergo variations on a theme — faster, easier, cheaper. Those in the Gilded Age, however, witnessed mind-bending changes in transportation and entertainment hardly imagined beforehand."

What's more, all of those modern technologies are direct descendants of the inventions of the 1800s, including the telephone.

History helps us understand people and societies. It helps us understand change and how the society we live in came to be. It contributes to moral understanding and provides identity to a group of people. Above all, history is stories. For example, did you know that Thomas Edison developed the carbon transmitter that was the basis of telephone transmitters for more than a century?

THG preserves the documentary and artifactual record of our industry so that we can understand the technology and organizations that built our modern communications systems. We harbor the stories of the people who made possible wireless Internet, smart-phones, video streaming and all of our other devices and capabilities.

You can help preserve this important history by continuing to be a member, or by contributing to our endowment fund. Most importantly, you can volunteer to help us preserve our history. Many volunteer opportunities are available: designing and setting up exhibits; refurbishing and maintaining equipment; database entry; guiding tours; conducting research; working with audio, video and photographic documents; and various other efforts.

"We study the past to understand the present; we understand the present to guide the future." -- William Lund

THG Directors

THG's board is instrumental in the planning, marketing and fundraising for the organization. Here's a list of the current members:

Darrow, John C. Secretary	Senior Software Developer (ret.) - Qwest
DeMuth, Laurence W. Jr.	EVP, General Counsel & Secretary (ret.) - U S West, Inc.
Dintenfass, David	Owner/Operator, Full-Track Productions
Doerr, Howard P.	EVP/CFO (ret.) - U S West, Inc.
Herbolich, John J.	Telecommunications Director-Network (ret.) U S West Inc.
Jones, Stephen	Systems Integrator III (ret.) - Ericsson
Laird, Pamela W.	Professor, Business History – U C Denver
Malkoski, Paul	I.S. Project Mgr (ret.) - Qwest Instructor, Community College of Aurora Project Mgr., Colorado Historical Society
Masztaler, Joan	Director (ret.), Wholesale Services - Qwest
McClellan, Scott	VP Washington (ret.) Qwest
McKenna, Robert	Assoc. General Counsel (ret.) CenturyLink
Nearing, Michael W. Vice President	Senior Engineer - CenturyLink
Sampias, Ernest J. Treasurer	CFO (ret.), U S West DEX
Sandquist, Ted	Director (ret.), Public Relations - U S West, Inc.
Shea, Jack President	Executive Director (ret.), Benefits - U S West
Whiting, Jo Lynne	Vice President (ret.) - Qwest Dex

Device permits Deaf to Hear Talkies

This article, which was sent to us by THG Board President Jack Shea, appeared in a 1929 magazine "The Motion Picture."

Special acoustic equipment for theatres to enable the deaf to hear as well as to see motion pictures has been designed by engineers of the Bell Telephone Laboratories and is now being used experimentally.

The equipment consists of a Western Electric receiver with a wire headband to attach over the ear. A special potentiometer, shaped like a fountain pen, is held in the hand. By pressing a button, the user can regulate the volume of sound according to his individual needs. Wiring on the back of the theatre seat makes the necessary connection with the sound reproducing equipment in the theatre.

Experimental use of the equipment is now under way at the Paramount Theatre in Brooklyn. Electrical Research Products, Inc., a subsidiary of the Bell Telephone Laboratories, installed the device and announcement has been made that the device will be sold nationally.

The following report has been issued by the publicity department of Western Electric:

"The equipment is being installed in the Paramount Theatre only after repeated tests that have proved its effectiveness.

"It was tried out last month at the tenth annual meeting of the American Federation for the Hard of Hearing at the Museum of Arts Building in Cleveland, before 300 delegates from the United States and Canada. Dr. Harvey Fletcher of the Bell Telephone Laboratories and representatives of Electrical Research Products, Inc., conducted the tests.

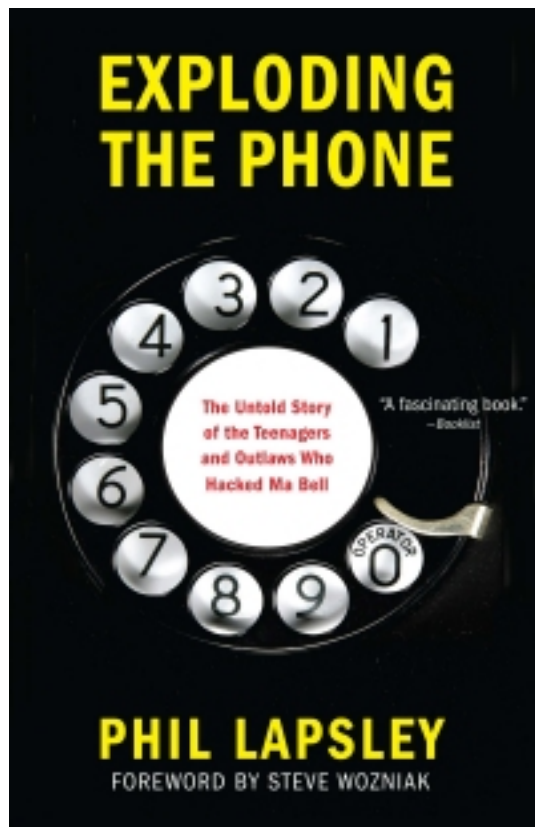
"Out of 218 questionnaires returned, 57 per cent stated that the use of these head phones resulted in perfect hearing. Twenty-nine per cent reported 'Fair' and only 7.5 percent stated 'Poor.' The remaining 6.5 per cent consisted of delegates who, according to their own statements, were deaf beyond hope of improvement by artificial or mechanical means."



Correction

Last issue, in the review of Phil Goodstein's new book, *Park Hill Promise*, we erroneously reported that "Raymond" Morris lived in the area. His real name was **Ray Marion Morris**. Thanks to his daughter, **Ray Morris Benton** for the information, and our apologies to the family.

By the way, we are in the process of redecorating the offices on the 14th floor of the MST&T headquarters building. In one of the vice president's offices, we have hung pictures of Mr. Morris as he appeared when he first started with the company in 1917, and another when he was Vice President during the 1940s.



Exploding the Phone:

The Untold Story of the Teenagers and Outlaws Who Hacked Ma Bell

Exploding the Phone by Phil Lapsley was published by Grove/Atlantic in February 2013. It is available in both hardback and e-book. The author used the THG archives when he was researching this fascinating subject. He and his fellow members of the Association of Telephone Experimenters (“phone phreaks”) recently visited THG’s Museum of Communications.)

Before smart-phones and iPads, before the Internet or the personal computer, a misfit group of technophiles, blind teenagers, hippies, and outlaws figured out how to hack the world’s largest machine: the telephone system. *Exploding The Phone* is their story.

Author **Phil Lapsley** traces the birth of the telephone, the rise of AT&T’s monopoly, the discovery of Ma Bell’s Achilles heel, and follows the kids and outlaws who used it for fun and profit. Along the way you’ll meet an oddball cast

of characters ranging from FBI agents to whistling blind kids, from informants to entrepreneurs.

The book received a starred review from *Kirkus Reviews*. *Kirkus* is a legendarily tough book review magazine and its starred reviews are reserved for books of “remarkable merit.” In the words of the reviewer:

A rollicking history of the telephone system and the hackers who exploited its flaws. [...] Lapsley deftly escorts readers through the development of the modern telephone system (and how it was exploited), covering intricate details of phone technology with prose that is both attentive to detail yet easy to understand for general readers. Perhaps more importantly, the author weaves together a brilliant tapestry of richly detailed stories—the people and events he describes virtually come to life on the page. Taken as a whole, the book becomes nothing short of a love letter to the phone phreaks who “saw joy and opportunity in the otherwise mundane.” A first-rate chronicle of an unexamined subculture.

Find out more about the book, see a video of Phil discussing the history of phone hacking, and other fun stuff at the official web site: <http://www.explodingthephone.com>

American Bell

By John Swartley



This was the first use of the globe design on the new logo

American Bell Telephone actually started on March 20, 1880 as successor to National Bell Telephone and was formed to carry on the consolidation of Bell and Western Union. The company remained the parent company of the Bell System until December 30, 1899. On that date American Telephone & Telegraph (AT&T) took over the business and property of the American Bell Telephone Company. AT&T became the parent company of the Bell System, while continuing as the long distance operating company. American Bell was dissolved by decree of court December 16, 1921.

American Bell probably got its second start with the Carterfone decision, reached by the FCC June 26, 1968. The FCC struck down existing interstate telephone tariffs, which prohibited the attachment or connection to the public telephone system of any equipment or device that was not supplied by the telephone companies. The suit centered on the desire of Carter Electronics of Dallas to interconnect private mobile radio systems to the nationwide exchange and message toll network. I was working in Boulder, Colorado when we heard about the decision. We did not realize the impact this decision would have on the Bell System and its employees.

The next step in American Bell resurgence was the landmark decision in the Computer Inquiry II, April 7, 1980. The FCC proceeding divided all the services between "basic" and "enhanced" and scheduled the de-tariffing of terminal equipment. On March 1, 1982 the Commission ruled that AT&T could offer terminals and enhanced services only through a separate subsidiary. We heard the Computer Inquiry term a lot and didn't pay much attention to it.

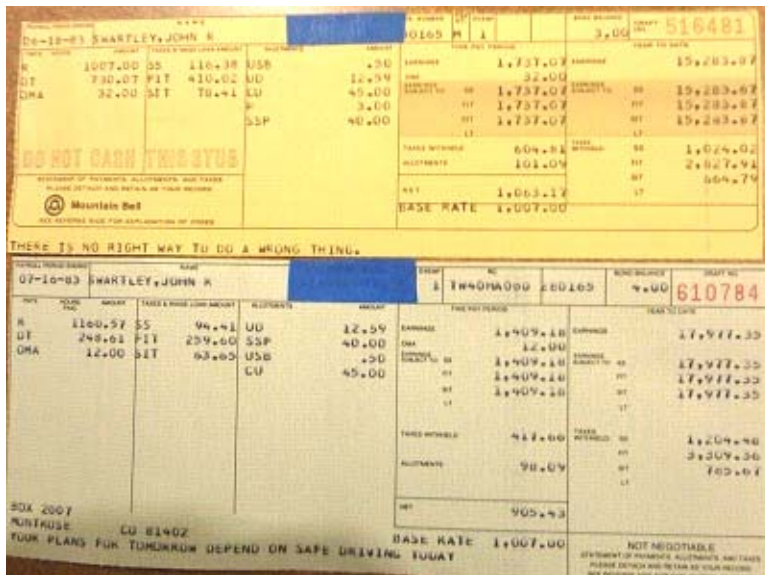
October 7, 1981, by a vote 90 to 4, the Senate passed S. 898, the Telecommunications Competition and Deregulation Act. This required the Bell System to provide all services other than basic local and long distance service through separated affiliates. The FCC unanimously supported a bifurcated (divided into two branches) approach to the de-tariffing of customer premises equipment. New equipment was scheduled to be de-tariffed by January 1, 1983.

On June 15, 1982, AT&T announced the formation of American Bell, Inc. to offer new customer premises equipment and enhanced telecommunications services in compliance with the FCC Computer Inquiry II decision, to be effective January 1, 1983.

The American Bell Company was divided into two principal divisions. The Consumer Products division that operated over 400 Phone Centers (PC), sold and serviced basic phones, automatic dialers and other instruments. The Advanced Information Systems (AIS) had subdivisions of General Business Systems (GPS), which served users of forty lines or less; and the Nation Business Division (NBD) that provided service to the larger customers. Deregulation brought a whole new world of equipment to the market.

In October 1983, American Bell introduced the Merlin 206 and 410, which used four pair wiring instead of 25 pair. Although the Horizon PBX was released in August 1982, deregulation allowed it to be reconfigured in several ways to suit customers' needs. We were starting to see how technology was changing the telephone industry.

Although American Bell started January 1, 1983 my paychecks from them didn't start until July 1st. In the small town of Montrose, Colorado we did not see much change to our work habits. I still had to take my turn covering rural residences on weekends throughout 1983. Then came January 1, 1984. American Bell was replaced with AT&T Communications, and all HELL broke out. There was no company name on my pay stub from ABI.



My last Mountain Bell and first American Bell pay stub

Since I more or less turned out the lights on AT&T in Montrose, I ended up with a American Bell coffee cup and office chair. I have searched for phones, ads, etc. that had the American Bell logo on it for my collection. So far I have not found any. I found one still in service once but figured they would frown on me taking it.



By serendipity, this t-shirt was recently donated to THG by Elaine and Jim Corso.



A Tribute to Herbert H. Warrick Jr.

September 10, 1923 – October 2, 2012

By Don Ostrand

The Warrick family was a telephone family; Herb's father H.H. Warrick Sr., Herb and his brothers, Don and Bob, were all employees of Pacific Telephone and Telegraph. Herb's career in the telephone industry started as a bicycle messenger in Seattle. Upon his retirement he was AVP Special Services & Engineering.

During the early 1980s Herb served as "Director – Network Engineering and Planning." During that time Pacific Northwest Bell launched two major modernization projects that were designed to replace all the Electromechanical Switching Systems with the state-of-the-art Electronic Switching equipment. Herb was the mastermind of those projects. Having long dreamt of preserving some of the old vintage equipment in a museum setting, Herb was able to foresee that at the end of the two modernization projects the representative, meaningful examples of the equipment that had served the Pacific Northwest region would all be gone. If a museum of vintage telephone equipment was to be built this would be the last opportunity to secure the equipment. Herb launched a third project to accomplish that goal.

After considerable background work in 1984 and '85, a gala luncheon was held in September 1986 where Herb announced his thoughts and plans for the preservation effort. All of the officers of Pacific Northwest Bell were on board and supportive. Thus began the Vintage Telephone Equipment Museum.

The luncheon brought together interested parties from AT&T, Western Electric and Pacific Northwest Bell under the banner of the Charles B. Hopkins Chapter #30 of the Telephone Pioneers of America. The luncheon was served in the space which now houses the Museum of Communications. Lunch was catered using rented tables and chairs and temporary lighting in an otherwise totally empty floor of the Duwamish wire center. It didn't take much to convince the assembly that now was the time to act. There were about 75 people in attendance, all willing to volunteer their expertise and time in support of this unique project.

Herb's plan was a joint effort between Pacific Northwest Bell and the Charles B. Hopkins Chapter #30 of the Telephone Pioneers of America. A side-effect of the modernization projects was that some central offices now had excess floor space. It was decided that 6,600 square feet on the third floor in the Duwamish wire center would be made available to the Pioneers to build a museum. As the vintage equipment was removed from service and written off the Company books, the Pioneers would have first choice to select materials for the project. The selected pieces were donated to the Pioneers and delivered to the museum site, saving them from destruction.

Back in the early days of Herbs' career, he was a technician in the Rainier Valley exchange in Seattle's south end. He lived in the Ravenna neighborhood in the north end. One winter day, the snow was flying and had piled up, halting the transit system as well as all taxis. Herb's dedication and devotion to his job compelled him to get to work. So he set out on foot, walking some five hours in deep snow, and did indeed make it to work on time.

The Rainier exchange was a Western Electric Panel Switching System. Panel equipment was employed in very few cities west of the Mississippi; Seattle was one of

those cities. With Panel equipment being so rare—and with this having a special spot in Herb's early career—it was a must-have for the museum project. To add to our good fortune, the Rainier Panel Switching System had been retired in place and was still available for the museum to recover.

The nature of Panel was that it was assembled on-site, unlike later switching systems that were factory-assembled and designed to be shipped as complete frames. This meant that the Panel frames could not be tipped or turned to fit through doorways. This presented a tremendous challenge. After a thorough review of the equipment location and discussion of any and all options for removal, a determination was made that the equipment bays must be removed intact, and that attempting to split the bays into small components would not be feasible. The only problem was that the bays are 11 foot 6 inches tall and 10 to 12 feet wide—but the equipment exit door was just eight feet tall.

It was time to bring Herb into the dilemma. There were three options. Worst case, we could abandon the idea of acquiring the Panel equipment. A better alternative would be to disassemble it and hope to reassemble it later. The best option would be to request that the side of the building be opened up to 12 feet so that we could remove the equipment intact, with minimal disassembly.

Given that nearly all Panel equipment had already been scrapped by the mid 1980s, the Rainier exchange was a one-of-a-kind treasure—abandoning it was not an option. Disassembling and reassembling it would be extremely difficult since all the color-coded wiring had faded beyond recognition and could not be trusted to be reconnected correctly during restoration. Thus the temporary building modification was the only reasonable option. Herb asked that we summarize our dilemma in a written proposal and that we include a request to enlarge the 8-foot equipment door to 12 feet. This was done by removing enough bricks at the top of the door to accommodate the Panel equipment removal, with a similar modification on the third floor at the museum site. Success again—thanks to Herb's influence and support, the project continued.

When Herb retired, he started a second career in the alarm business. During that time he was always available to advise and counsel the volunteers when roadblocks arose. His involvement always influenced the favorable resolution of the issues. This was another example of Herb's dedication and devotion to the preservation of telecommunications heritage and history.

Upon retirement from his alarm company, Herb had more time. He frequently visited the museum. He would come in, take off his hat and coat and make the rounds, visiting with the volunteers or just touring the museum. On other occasions he would pull up a chair and talk, giving us an opportunity to discuss issues and/or the future needs of the museum. He never left the museum without saying, "job well done."

The future financial stability was an active issue. As the result of our discussions, Herb provided funds that established the Museum of Communications Endowment LLC. His intent was to secure the future of the Museum of Communications in Seattle. This is another display of his passion to preserve the telecommunications heritage.

As one can see, we owe a debt of gratitude to Herb for his ongoing role of support, his leadership and guidance, his foresight, his dedication and his generosity and above all, his friendship.

Thank you Herb... your legacy lives on.

Notes from The Museum of Communications



How many of you watched the Oscars? How many have seen “Argo” the Best Film winner? If you view it with a watchful eye, you will see the 608 type PBX switchboard that we supplied as well as a white AE desk set that John Goodman answered near the end of the film. We’re not sure if we were credited, but this is something we mention when visitors tour our museum (as well as Johnny Depp’s photo on our Model 15 TTY, used in the 2011 film “The Rum Diary”).

Still in progress is another filming where our coin-counting machine might be part of a cable-television film telling the story of the “Brassiere Brigade.” This profiles the 1950 theft of thousands of dollars by female Southern Bell employees (later terminated and charged with grand larceny) who “shortstopped” rolled coins before counting by concealing them in their bras.

Another effort is in support of the Johnson Space Center in Houston. Lockheed Martin Corporation is building a display of the evolution of our space program which includes communications aspects over time. They are interested in photos of early-to-current telephone apparatus. Stephen is working with them to photograph selected items from our working equipment.



We wish you and your families a busy, happy Spring full of fun and flowers!