



TELECOMMUNICATIONS  
HISTORY GROUP

# CONNECTIONS *news*

www.telcomhistory.org  
Autumn 2019, Vol. 24, no 3

(303) 296-1221  
Jody Georgeson, editor

## **A Message from Our *Acting* Director**

There is a lot happening at The Telecommunications History Group lately. Lisa Berquist resigned as our Director to pursue new opportunities, and we wish her success and happiness.

We have some fun things planned this fall. We are celebrating the 90<sup>th</sup> birthday of the “Bell Palace” at 931 14<sup>th</sup> Street in Denver and have mounted a special display about the building’s construction and history, and about the 140<sup>th</sup> year of telephone service in Denver. If you are interested in seeing the display, the building, and our Denver museum, contact us about at [telcomhist@aol.com](mailto:telcomhist@aol.com) or on 303-296-1221.

I want to thank all our wonderful volunteers. Jon Berquist and Jack Beattie have taken on the job of inventorying and assessing all our videos and are now deciding which ones to digitize. Liz Kerr-Quintana has processed all our operator photos and Harold Hallikiner is selling duplicate books on EBAY. Ron Swanson continues to help us with research on different equipment; he seems to be able to find anything. Jim Hebbeln works at processing incoming collections. And Jody Georgeson, our archivist, works so hard and helps me so much. Her wealth of knowledge is amazing.

The skill of our volunteers in Denver and Seattle is a wonder to see. The Seattle volunteers are busy building working telephone switches and giving a lot of tours. The Seattle Connections Museum is a work of art and one-of-a-kind. Connections Museum in Denver is becoming very popular and we have had many tours also, the majority led by John Kure and Mike Nearing. Our volunteers are amazing, and we couldn’t exist without them.

If you are in Denver or Seattle, I hope that you drop in and see us. We have a lot to show you.

Have a happy and colorful fall.

Sincerely,

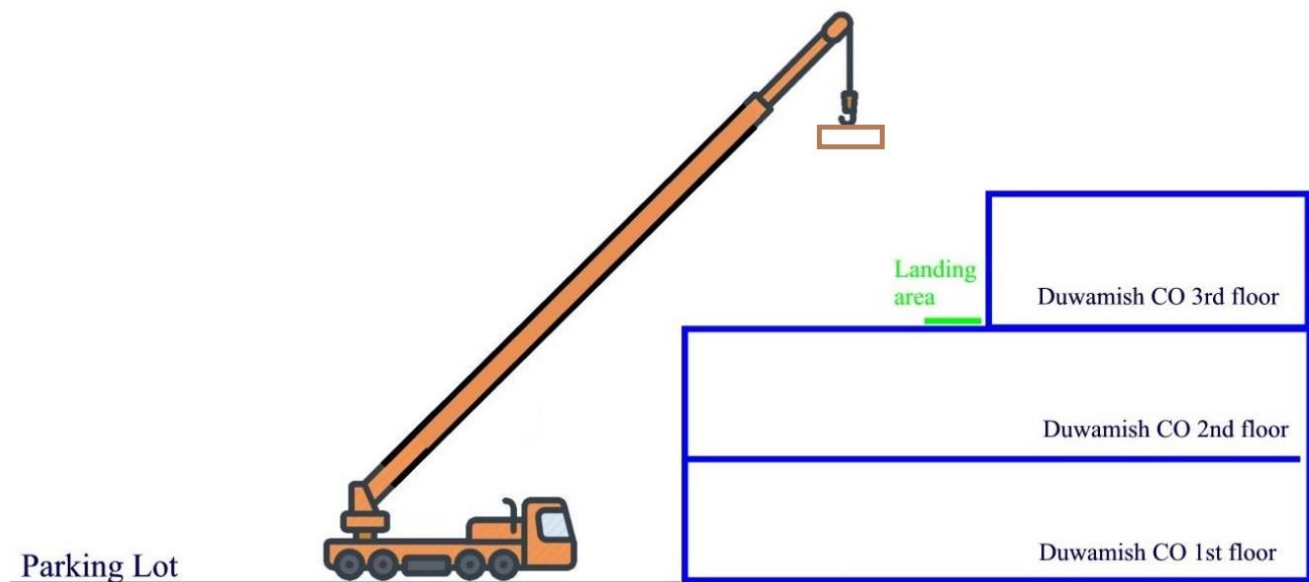
Renee Lang, Acting Director

## New Panel Frames installed in the Seattle Museum

In the Summer issue of Connections News, we told you about a trip that Ed Mattson and Sarah Autumn made to visit Don and Rita Capehart in Corsicana, Texas. While they were there, Sarah and Ed crated up two frames of switching equipment destined for THG's panel office in our Seattle Museum. Since we have the only working panel switch left in the world, the opportunity to enhance it with two types of equipment which we did not yet have was simply too good to pass up. The newly acquired panel coin control frame in particular is destined to become an important part of the experience for future museum visitors. Once it is working our visitors will be able to both see and hear what it was really like back when people carried nickels and dimes in their pockets and purses instead of carrying their entire telephone.

Interesting new artifacts arrive at our museum almost every week (mostly as unsolicited donations). But it has been at least 20 years since we acquired anything that was too large to fit in the elevator, so some special logistical challenges arose. The panel frames had to be hoisted into the museum with a crane. Of course, all of our existing panel frames (and crossbar frames) were brought into the museum by crane years ago, but Western Electric retiree Les Anderson is our only volunteer today who was at the museum from the start and has had previous experience doing jobs like this. So we were very happy that he was there to lend a hand and give us guidance. It was also very touching to see the excitement in Les's eyes as we carried out the work.

We also needed permission from our generous host CenturyLink before we proceeded. They wanted to see a detailed plan from us (called a Method of Procedure or M.O.P.) before we could get their approval. Of course, worker and volunteer safety and protecting the other equipment in and on the building would be critical parts of that plan.



A diagram from the approved "M.O.P."

After several months of waiting for the rain to stop and after all of the plans were carefully drawn up and the necessary approvals were granted, we arranged for the crates to be delivered from the warehouse where they had been stored and hired a top-notch local crane company (called Western Crane) to do the lift for us. On a sunny Wednesday at the end of June, all of that advance planning paid off and bringing the frames into the museum's third floor space went just as intended. The volunteers rewarded themselves with a lunch break once everything was inside, and then set to work hoisting the frames into their final positions within the panel area. You can see a video of the entire process on the museum's YouTube page: <https://www.youtube.com/user/museumofcomm> (The video title is "[Panel] Loading in our new frames")

We have all heard of the monumental feats that Western Electric installers once pulled off almost daily in order to get telephone offices ready for service, but few among our younger generation of volunteers had actually had even a small taste of that experience for themselves. So this was a great learning opportunity for many of us as well.

The additional frames are fully positioned in their new permanent home now, but our work is not done yet. These machines have not been in operation for at least 50 years. They need to be thoroughly cleaned and lubricated before they are ready to be put into service, and much of the wiring will need to be carefully restored. It will still be several months until they are running and fully integrated into our panel office, but we think it will be an enjoyable task!

A big thanks to all of our volunteers who came to the museum on a workday to help out. And most importantly, we would like to thank all the generous members of (and donors to) the Telecommunications History Group who help make projects like this possible.



Seattle volunteers with the first of the two frames once lifted on to the museum roof.  
(Left to right: Sarah Autumn, Astrid Smith, Peter Amstein, Les Anderson, Colin Slater, Dave (Western Crane), Eric Rhinelander) *Photo by David Dintenfass*

## National History Day in Colorado

For the past several years, THG has partnered with National History Day in Colorado. This year, we again sponsored a table at the kick-off breakfast, participated in teacher training, and will present an award for the best project having to do with communications.

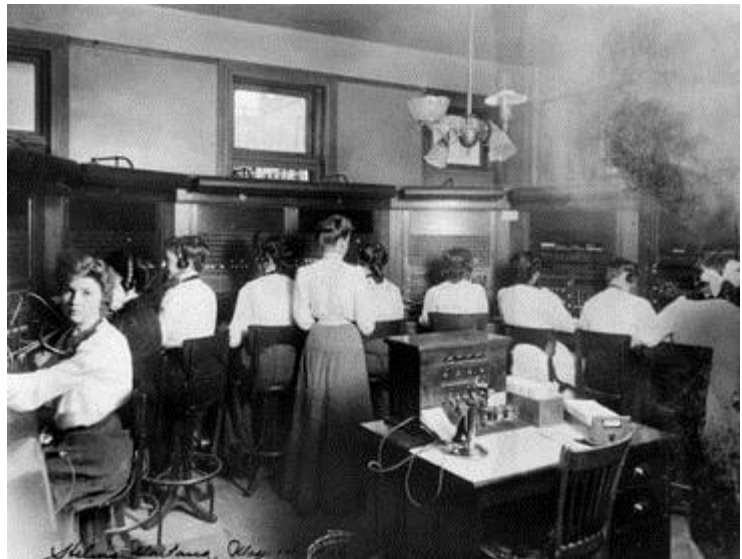


Banks of automatic (step-by-step) switches

One of the many resources Grace used to develop, prove and present her thesis was the THG Archives. We are proud to be able to assist young scholars through the National History Day Program.

Grace's web site can be viewed at <https://64573521.nhd.weebly.com/>

We had several outstanding projects in 2018-2019 having to do with communication, and the award went to Grace Bielefeldt for her website, *The Influence of Invention: The Triumph and Tragedy of the Automatic Telephone Exchange*. In it, Grace explores the efficiencies and benefits to the telephone industry and to its customers, contrasting those benefits to the unfortunate affects automation had on the lives of the young women operators.



"Hello Girls"

## THG Membership Renewal Coming Soon

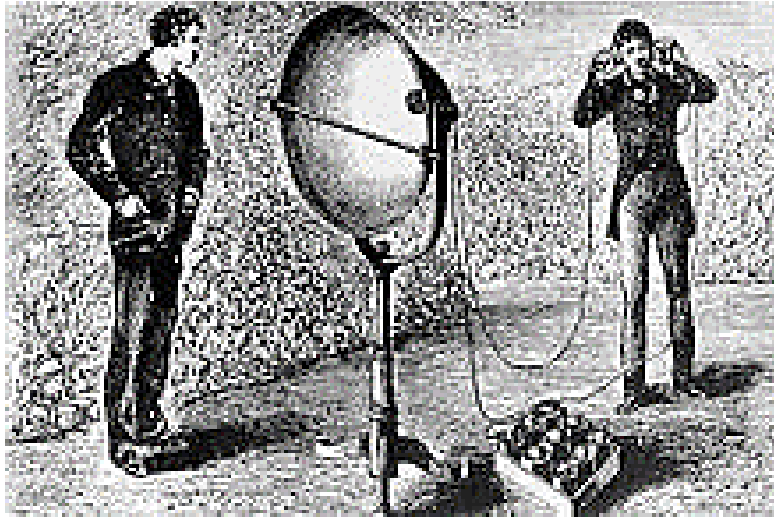
Please look for a letter in your mailbox in November. For those THG members who renewed their membership earlier this year, thank you! We will save THG the postage and not send you another letter if you have already renewed.

## Challenge Grant

A big thank you to all who participated in the Challenge Grant! We realized over \$27,000 to help us pursue our mission "to acquire, preserve, and promote the rich heritage of the telecommunications industry and to connect that past to evolving technologies and cultures". We can only do this with the help of people like you!



## Alexander Graham Bell's Photophone

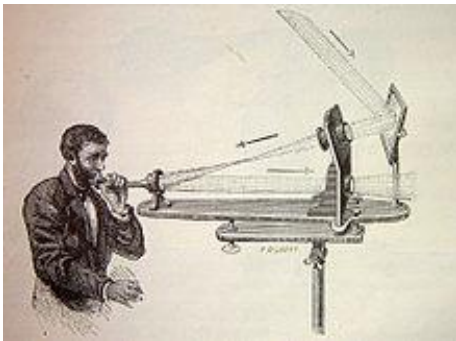


Speaking of National History Day, we recently had a request from a NHD participant in Washington State to interview us about the Bell's "photophone," which is widely considered to be the precursor to fiber optic communication. Bell himself considered it to be his most important invention, calling it "the greatest invention [I have] ever made, greater than the telephone".

The photophone was similar to the telephone of the day, except that it used modulated light as a means of wireless transmission while the telephone relied on modulated electricity carried over a conductive wire circuit.

According to Bell's description, "We have found that the simplest form of apparatus for producing the effect consists of a plane mirror of flexible material against the back of which the speaker's voice is directed. Under the action of the voice the mirror becomes alternately convex and concave and thus alternately scatters and condenses the light."

On February 19, 1880 Bell and instrument maker Charles Tainter had managed to make a functional photophone in their new laboratory by attaching a set of metallic gratings to a diaphragm, with a beam of light being interrupted by the gratings' movement in response to spoken sounds. When the modulated light beam fell upon their selenium receiver Bell, on his headphones, was able to clearly hear Tainter singing *Auld Lang Syne*.



The receiver was a parabolic mirror with selenium cells at its focal point. The world's first formal wireless telephone communication took place from the roof of the Franklin School to Bell's laboratory at 1325 'L' Street, making the photophone the world's earliest known voice wireless telephone systems, at least 19 years ahead of the first spoken radio wave transmissions.

Bell was very proud of the achievement and even wanted to name his second daughter "Photophone"; his wife Mabel did not agree. The child was named Marian and was called Daisy.

## PERSON TO PERSON

By Don Warsavage

*(Don and the Retiree Guardian have graciously allowed us to republish many of his stories over the years. We've let him know that he always has an outlet at Connections News, in case he gets the itch to write again.)*

### DIAL TONE

This will be my last submission of "Person to Person," to *The Retiree Guardian*.

You gave me many of your stories. You lived them and I wrote them down. I also wrote some of the stories of our predecessors in the Bell System. They were all true stories.

If you combine the stories I wrote, with many by other writers, along with the many tales of our company that have happened but never been written down, we can look back and see a picture of who we were.

The choice of a little boy back in the early fifties expresses part of that picture.



His name was Josef Carl Engressia Jr. [aka Joy Bubbles] As an adult he became famous. One of his talents was perfect pitch. He could whistle at precisely 2600 cycles which enabled him to access our long-distance network and call anywhere in the world for free. He was also blind from birth.

He had a very difficult childhood. He was sexually abused at school and his home life was not much better. Scarcely five years old, he desperately wanted to find something outside his own scary reality. He yearned for something calming, stable; anything that could be relied upon.

He chose dial tone.

That little boy, even in his perpetual darkness, stressed beyond his tolerance, sought out a telephone. He lifted the receiver and listened to the steady comforting hum of dial tone.

The system we built and maintained was like that: stable and dependable. We knew how important dial tone was. Whenever it stopped, Bell System employees set out to fix it. Many times, at personal risks to themselves and that's where many of our stories come from.

And we went beyond keeping dial tone humming.

Thousands of employees were awarded Vail Medals for "Noteworthy Public Service," They pulled people from snowstorms, from floods. They brought help those in emergencies.





The Telephone Pioneers saw to it that blind kids could hit and catch a beeping baseball. They could follow the sound and pick up a noisy Easter Egg. They could hear stories from Talking Books.

Volunteer Pioneer women could be seen in hospitals, rocking new-born babies to sleep so they could be tested for hearing



deficiencies while still infants. The machine the audiologists used was built by Western Electric.

The Telephone Pioneers volunteers have done, and continue to do, many more projects for those in need.

That sort of quality and dedication carried on after the breakup of the Bell System. A group of courageous, far-sighted retirees pulled together an organization of people who protected our benefits and our retirement. They hired a creative, dedicated attorney—Curtis Kennedy—who successfully fought the legal fights to protect our retirement years.

That group became The Association of U S West Retirees. And they continue their great work on our behalf today.

You can tell I'm proud of the work we did and the people who did it. I hope it showed in the words I wrote

So I wish to thank all the members of AUSWR and their Board of Directors, for publishing my "Person to Person" articles over the years. And especially the editors of *Retiree Guardian*, Kitty Kennedy and Pat Wiliams. They have always made my articles better.

And thank you to all of you who read my stories. I meant them all to be, "Person to Person."



*Have a beautiful fall season and  
a wonderful Thanksgiving!*



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