



Dial-Log



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Jody Georgeson, EDITOR

Director's Report

By Jody Georgeson

No, I haven't been promoted! Mary is on a well-deserved vacation in Australia, so I'm writing her column this issue.

We met with the grant administrator from the State Historic Fund and provided our first two deliverables required to receive 40 percent of the \$15,000 grant award for the Virtual Tour of 931 14th Street. The tour will be an exhibit in the Telecommunications Virtual Museum, and will be available on-line in early summer 2006. In the meantime, be sure to visit the other exhibits in the Virtual Museum at www.telcomhistory.org/vm.

Since this grant request was so successful, Mary's already applying for another Historic Fund grant - this one to restore the Alan True murals at the 14th Street building.

As you'll see in the following pages, the Seattle volunteers have been busy with special tours, and with restoring their truck and their "new" 250 PBX. Volunteers from Denver have been

traveling -- see one of their stories on page 5. The other will appear in the next issue of the *Dial-Log*.

There's a legend in the Middle East about a spindly little sparrow lying on his back in the middle of the road. A horseman comes by, dismounts and asks the sparrow what he's doing lying upside down like that.

"I heard the heavens are going to fall today," said the sparrow.

"Oh," said the horseman, "and I suppose your spindly little legs can hold up the heavens."

"One does what one can," said the sparrow. "One does what one can!"

In honor of the THG volunteers -- who continue to do *whatever* they can to help around here -- we are instituting a Telecommunications History Group Volunteer Hall of Fame. The first induction will take place as part of our annual Archives Month celebration (more on page 2).

Thanks to all of you who have sent in your membership renewals. And to those of you who haven't, it's not too late! We literally cannot stay in business without your support.

THG celebrates
Archives Month



October 2005

Archives Month is an annual, month-long observance of the importance of historical records to people's lives. A national celebration, Archives Month is sponsored by the Society of Rocky Mountain Archivists in Colorado and Wyoming. During September and October, cultural institutions throughout the two states will be holding special events in honor of our past. (To see a list of events and other information about Archives Month, please visit the SRMA web site at www.srmarchivists.org.)

This year's theme is *The past as prologue –learning the lessons of the past in order to successfully navigate the future.*

THG will be observing Archives Month with special exhibits in the lobby of 1005 17th St., an open house and tours of the archives.

This year also marks the grand opening of the THG Volunteer Hall of Fame. This will be an annual event to recognize and thank our wonderful volunteers. Two volunteers (to be

announced) will be inducted into the Hall of Fame this year.

☎ October 19, 1 pm - Volunteer Hall of Fame awards ceremony

☎ October 19, 2 – 4 pm
THG Archives open house and tours
(refreshments will be served)

We'd love to have you stop by to see our facility and help us thank all of our hard-working volunteers.

The Seattle Art & Garden Tour
By Don Ostrand

The Museum of Communications is located in south Seattle's Georgetown neighborhood. Annually, the Georgetown community holds an art and garden tour, which the museum has taken part in for several years. As this event has developed and grown over the years, it has been refined and now a tour map is used to guide the visitors. This year's event was Sunday, July 10th.

The community was blessed with fairly good weather and was full of visitors. The tour map identified over 50 locations taking part in the event, and we were on the map!



Our guided tours are one to two hours long depending on the visitors' curiosities and interests. Our docents typically narrate the tour with explanations on the functions and workings of the telephone systems and answering any questions participants may have.

Now that we're "on the map" and we have our signs out on the curb, we have visitors. We opened the museum at 10:00 AM. Our first guests arrived immediately and we were busy all day. The two most frequently-heard comments were "this is really neat" and "I didn't even know this existed". From all appearances, most visitors were amazed with the complexity of telecommunications -- where dial tone comes from; how the equipment recognizes what the telephone dial or Touch Tone buttons mean; and how their call is routed and completed. They were pleased that they could use our "hands on" demonstrations and watch what happens as they dial calls.

All the memorabilia, the old telephone sets - including the Silver Dollar payphone - the Hewitt display, our Plant Service Center with the Local Test Desk; cable records and line assignment; and all old photos also were viewed with enthusiasm. The British call box (telephone booth) and the "Call Box Caper" brought smiles to their faces.

We also demonstrated the recently acquired and restored 750 PBX along with the other operational customer premise equipment.

And of course the five docents that made their tours enjoyable were thanked over and over again. When we closed at 5:00 PM, we counted 57 visitors. (However, only 30 had signed our guest book.)

It was a busy day, a rewarding day!

The Telephone in Fort Morgan

A few weeks ago, we had a request from the Fort Morgan Museum for information about early telephone service in their town. The following is a summary of what we found. Fort Morgan is a farming community about 80 miles northeast of Denver. Service in Fort Morgan was similar to that in many similar communities on the Great Plains.



Telephone service came to Colorado in 1879, just three years after its invention, and gradually expanded from Denver north to Greeley and South to Colorado Springs and Pueblo. At the end of 1895, there were no Colorado Telephone Company (CTC) lines east of Denver. However, many communities and groups of farmers established private lines. In the interest of "Universal Service," the company encouraged the formation of mutual companies by the citizens of these areas. As capital permitted, CTC would extend its lines to connect to them. A Colorado Telco exchange opened in Fort Morgan in June 1900, with 37 subscribers.

Because the company was so helpful, few competitor companies were formed in the area. One short-lived company (Morgan County Independent Telephone Company) did attempt to compete.

According to J.S. Holme (in his 1930 unpublished manuscript *The Colorado Telephone Company 1876-1915*), "Through the efforts of an ambitious telephone promoter, two competitive exchanges had been built in Fort Morgan and Brush. In 1906, we purchased their plant at sheriff's sale." A new building was built in that year at 331 Main Street. At the same time, the exchange was changed from magneto to common battery technology. (Rather than having a magneto, charged by cranking, at each phone and at the central office, one large storage battery maintained at the central office provided all the electrical power. This did away with the crank and made smaller phones possible.)

Ditch companies built their own private lines to keep in touch with their personnel and with farmers. They were connected with CTC as service reached those areas. Special arrangements and fees were made for beet dumps, used only a few months out of the year, at harvest time. In 1904, CTC offered the special deals to rural customers to encourage them to join the network.

A 1906 audit report for CTC reported on farm telephones in Morgan County. Of the 300 farms in the county, 145, or 48%, had telephones. There were no other telephone companies in the county.

In July 1911, CTC and Rocky Mountain Telephone Company merged to form the new Bell System company, Mountain States Telephone & Telegraph Co. Customers now had seamless calling to a fourteen state area of exchanges from the Canada to the Mexican borders.

The Fort Morgan exchange was upgraded to dial switching service in 1940. Customers could now call local numbers directly. Until the mid 1950s, long distance calls still required the

assistance of an operator. In 1973, 8-party lines still existed in Morgan County. By 1975, all of these had been upgraded to 4-party lines (with an option of 2-party or private line at an additional charge.)



Kayo, the hero
from *The MST&T Monitor*
August 1935

According to Roderick Reid in *A History of the Telephone in Colorado, 1879-1911*, "Dogs often play an important part in helping the trouble man restore service. In fact, in some places dogs have been taught to perform certain duties in cases of emergencies. Take, for instance, the dog "Kayo" who won heroic distinction by carrying the first wire over Bijou Creek to restore service when Fort Morgan, Colorado was visited by a severe flood in the summer of 1935.

"At a point where the pole line was washed out, the roadbed [sic] was 900 feet

wide and filled with quicksand. No man could wade it nor could he throw a line across it. Even a kite failed in its purpose.

After several tries, someone thought of Kayo and it was decided to tie the wire to his collar and let him swim across. His master went along the opposite side of the bank, calling to Kayo who saw only one way to reach him, so without thought of peril he jumped in. Despite hard tugging and occasionally touching his feet to the muddy bottom of the stream, he finally made it across. This was repeated three times that day and again the following day where breaks had occurred in the line. To Kayo went a lot of credit for restoring service to that community."

The Fort Morgan Museum is at 414 Main St., Fort Morgan, CO 80701. They can be reached at 970-542-4010, or see their web site at www.ftmorganmus.org.



A Return to the 19th Century by Horseback

By Herb Hackenburg

Mary Riffle answered the phone. She yelled across the walkway (I'm a bit hard of hearing), "Herb, it's for you."

Thus, an unusual adventure for the Telecommunications History Group began.

A Wilderness Ranger from the USDA Forrest Service in Hungry Horse, Montana was on the line. "I found your web site on the Internet and I'm hoping you will be able to help me."

He went on to explain that the Forrest Service had an operational magneto telephone line in the Bob Marshall Wilderness Area of the Flathead National Forrest. While the 75- to 100-year-old phones worked, transmission quality was poor. He added that Forrest Service employees maintained the corrugated iron wire line that connected the phones, but there was no one who knew how to repair the phones themselves. Could THG furnish a couple of volunteers to repair the old phones, so the network would be in top working condition in time for the Forrest Service to celebrate its 100th Birthday?

The phone line was "grandfathered" into place, but couldn't be modernized. Also, there is no electrical grid in this part of the country. The single-wire, ground-loop technology, the dry cell battery and the hand cranked magneto electrical power is the same as Alexander Graham Bell used in the 19th century.

I thought of a recently retired Mountain Bell/ U S WEST/ Qwest telephone engineer and THG volunteer who was born and raised in Montana and told the ranger I thought THG could help him. I told a very happy ranger that I'd have the THG volunteer call him directly.

My next call was to **Roy Lynn**. Roy was a television engineer for the Mountain Bell Public Relations Department when I met him in 1973. When Roy answered the phone, I explained the deal. The deal was pack mules, horses, guides, lodging, food, water, and "the best fishing in the continental U.S." furnished by the Forrest Service for an 11-day round trip to the

headwaters of the South Fork of the Flathead River and back to the Spotted Bear Ranger Station.

Roy said, “When do we start?” Roy had a partner in mind and suggested that I find someone to teach them about repairing magneto phones. I had in mind **Ray Milton**, an antique telephone collector. I called Ray and told him the story. “Magneto phones are fairly simple, you can learn about everything you need to know in a couple of hours.” I told Ray that Roy would be contacting him to set up a training session. Meanwhile, Roy was contacting **Milo Masura**, a co-worker at Qwest. Milo’s a genius at fixing just about anything. And even though Milo hadn’t ridden a horse in decades, he was ready to hit the trail.



Ray Milton (left) trains Milo Masura (center) and Roy Lynn (right) to repair a magneto telephone.

The venture was an overwhelming success. Here are two days of entries from Milo and Roy’s daily journal [Herb’s notes in brackets]:

Day 6—Traveled from Salmon Forks to Big Prairie. One beautiful place. BP is the second central office along with Spotted Bear. Weather was decent, but the trail was muddy. Paralled the phone line for 3 to 5 miles, found 4 downed logs [felled trees holding the phone line], it is a wonder the system is working so well.



Hittin' the trail

On arrival at B.P. immediately verified our suspicions of a poor battery circuit in the main office. Replaced battery, oiled generator, loosened carbon granules in the transmitters. [The 125-year-old time-tested method used to loosen carbon granules--the repairman firmly grasps the granule-packed transmitter and whacks it against a convenient hard surface.] The batteries were well over 15 years old; our meter showed they were operating at 20 percent voltage. Why was this line still working?

Checked phone in the ranger’s cabin—one of the most beautiful phones in the whole system. Found a dead battery and defective transmitter. Repaired same. Oiled the generator [magneto], cleared the contacts and the ranger’s phone was on the circuit. Circuit Main # 4 must be down to operator.



Dug into stores of equipment at BP and found several units worthy of return to Spotted Bear. We're now 39 air miles from Spotted Bear. GPS is great!

The evening air is so still!! Tad [Park Service wrangler] put a cowbell on his horse and we could clearly hear it more than a quarter of a mile away.

Day 7—The Day at Big Prairie!!

After six days in a row of go-go-go, we were assigned a rest day.

We dug into the stores of the phone parts and separated about 30 percent of the parts that we wanted to take back to Spotted Bear. We figure we might be able to get one or two of the old phones there back into operation.

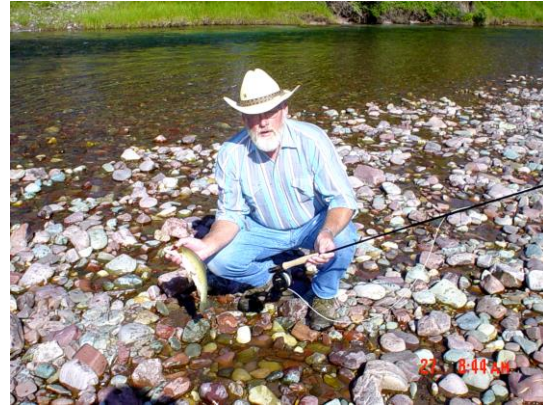


Milo admires the rangers' sign and the view.

We did not operate the phone line today due to crews removing downed timber. We will try the system out this evening. Got feedback from Tad that they [Forrest Service] were installing new lines between three buildings at S. B. If we can get the phones installed and working on this little demonstration circuit it should be the highlight of the "Spotted Bear Centennial Celebration."

Did laundry on the washboard; used hand-powered wringer and the clothesline, then fishing we went. Roy left his pole at the Salmon Forks bunkhouse, so we shared my [Milo's] pole. Roy caught about a 15-inch cutthroat, worthy of a picture--

which we took-- then released it as it was too heavy to clean and prepare. I caught a four-inch minnow and tossed it back without a picture. [Hikers later brought Roy's pole to Spotted Bear.]



Roy and his big fish.

We went over to see the wreckage of a Ford Tri Motor airplane that crashed in 1938. Quite a sight, took several pictures. Fed the horses their "horsy" treats. Quite a laid back day.



The wrecked Ford Tri-motor

Roy and Milo met with the Forrest Service management team at Spotted Bear. According to Milo, the meeting was brief and to the point--a forest fire nearby had a lot to do with that. The two THG volunteers had recommendations for improved line maintenance that were accepted by the Forest Service. The rangers were extremely pleased with their work and invited them to come back next

year. Word had spread throughout the Forrest Service and it was suggested that similar repair opportunities might be available in Alaska and Oregon, if they were so inclined. Roy and Milo closed out their volunteer tour by building and hosting an operational three-magneto phone exhibit at the two-day Forrest Service 100 Year Birthday Celebration picnic and parade at Spotted Bear.

In total the two volunteers spent 19 days with the Forrest Service, repairing a total of 12 magneto phones. They rode 130 miles on horseback and brought two 50-pound, cast iron encased, Western Electric magneto field phones back to THG for further repair.

Read more about Roy and Milo's trip, and see more photos, at www.telcomhistory.org.

The Museum of Communications

By Don Ostrand



5 Crossbar Switching equipment in the Museum of Communications

Mercer Island is an island in Lake Washington. In the early days Mercer Island telephones were served via a submarine cable from the Rainier Office (our Panel equipment location). As population increased on the island, the company planned and installed a #5XBAR switching system in a new building near the center of the island.

One of our museum volunteers, **Don Fagerholm**, worked at Rainier and lived on Mercer Island. When the new location was established, Don was assigned to it. He was involved with the initial cutover, and the on-going operation and maintenance of the unit. When modern technology caught up with Mercer Island, Don was part of the crew that put the #5XBAR to sleep. Along about that time, Don elected to retire.

The story doesn't end there. Don is one of our museum volunteers. And yes, our #5XBAR equipment in the museum is from Mercer Island. So Don was allowed to select the frames to be moved to the museum, select any and all outdated - but necessary to us - documentation, and assist in the move of all the equipment and materials.

The story still doesn't end. Now that the equipment has been moved to the museum, Don and the entire crew reinstalled Mercer Island in the museum. (We even use the Mercer Island prefix.)

It's difficult to describe the complexity of the cabling and wiring involved in any central office switch. Typically, the Western Electric Company would ship with each job the necessary cabling and wiring plans. In the case of the museum, we gathered just enough equipment to make a basic switching unit that would process calls in a normal manner. It took a long time to install, wire and test the equipment. Then one day we picked up the phone and had "dial-tone". A major event had just taken place. From the first dial tone to a completed call and expanding to many features of the # 5XBAR is an on-going effort.

A telephone call between central offices requires that both ends of the call talk the same (machine) language. The Panel to the # 5XBAR and the # 5XBAR

to the Panel require a language called "Revertive Pulsing". This is a unique language. As Panel was phased out over the years, the Revertive Pulse equipment had been removed from all the offices here in Seattle. Revertive Pulsing equipment to install in the museum's #5XBAR office was finally located in New York City. An associate living there was granted permission to remove two #5XBAR Revertive Pulse Senders and two Revertive Pulse Incoming Registers. They were shipped to us and were immediately installed and restored to operation. With that feature now working, the museum is the only place in the known world where one can see and hear calls being placed between two historic switching units using Revertive Pulsing.

Another enhancement in the #5XBAR is coin control. An associate in Ohio donated coin control equipment that he had no use for. These circuits were in less than outstanding shape and required extensive restoration. We have done that and can now demonstrate how our industry collected or returned money deposited at coin phones.

And the work goes on and is fun.

In the next issue: The # IXBAR Story

Buckywalter

A unique language called Boontling emerged in the Anderson Valley in Northern California around the turn of the 20th century. It has some similarities to rhyming slang in its design, but is more personalized.

In the 1800's, Anderson Valley was an isolated and quite provincial farming and logging community. Life was hard, and entertainment was a luxury. Sometime around 1880, a small group of

Anderson Valley residents created a few slang words to use in their private conversations, both for their own amusement, and to confound anyone who might overhear them *harpin'* (talking). They created new words as they went, trying to *shark* (stump) their companions. Over time the vocabulary grew, as did the number of people familiar with it. Eventually, every resident of the valley had at least some knowledge of *Boontling* (Boonville Language), as the lingo came to be called.

For many, Boontling actually became their primary language, and they had difficulty reverting to English when circumstances required it.

Boontling flourished in the valley for as much as forty years, and can still be heard, when some of the *codgy kimmies* (old men) get together. There are very few *Boont harpers* left, and its use has dwindled greatly, but evidence of the language can still be found, if you know where to look. The word for "pay phone" is Buckywalter: the first phone in town belonged to Walter and it took a Buffalo nickel (Buckeye). Pay phones in some of the towns still have a sign above the phone box saying *Buckywalter*.



By the way, my niece Sylphi tells me cockney for telephone is "dog and bone."

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