



Dial-Log



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Jody Georgeson, Editor

Director's Report

By Jody Georgeson

What a year it's been!

In Denver we:

- processed 20 new collections
- processed additions to 17 existing collections
- fine-tuned existing collections (preservation work and indexing)
- conducted research for over 50 people
- conducted tours of the 931 14th St. building and the Champa archives for approximately 150 people

Both our Founder and volunteer extraordinaire **Herb Hackenburg** and our secretary **Leah Be** moved on to greener pastures; **Marty Donovan** returned to us: we gained several new Board members. and we lost some members and gained many new ones. We have two new volunteers this year –**Mimi Dionne** and **Jack Bol** (both of whom have contributed stories to this issue of the Dial-Log).

A lot of our time and effort was spent on the Allen True exhibit and the resulting tours of our MST&T headquarters building. The volunteers outdid themselves by folding, stuffing and mailing nearly 50,000 letters to

potential members.

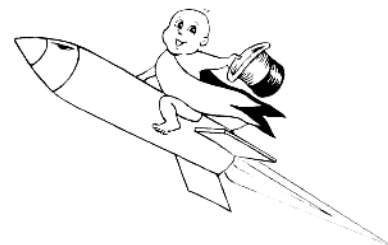
Roy Lynn and **Ron Pickens** put the final touches on our new AV Center. Now we can process our thousands of tapes and cassettes.

The Seattle group has loaned out many pieces of equipment for displays, plays and shows. Notably, they loaned an operational Model 15 TTY to the group filming a movie based on a Hunter S. Thompson novel, "The Rum Diaries," starring Johnny Depp. They continue to be busy with tour groups ranging from the Girl Scouts to Microsoft employees, and hailing from all over North America.

Together, our volunteers have logged nearly 8,000 hours in 2009.

In 2010, we will continue to preserve and publicize the history of our industry. We can only do this with the help of members like you. Thank you for your continued support.

We wish you and your families a peaceful holiday season and a prosperous New Year.



THG Acquires a New Collection!

by Mimi Dionne, MLIS, CRM, CDIA+, CA,
PMP

Mimi is the Qwest Records Manager and a Certified Archivist, addition to being a THG volunteer. We are very grateful to her for providing us access to this collection.

Thanks to the recent generosity of Comcast and Qwest Communications, the Telecommunications History Group is a proud owner of a new collection that outlines the formal records of subsidiaries of U_S West. Some of these were not previously known to the archives. Documentation for each subsidiary includes Board of Directors lists, Board of Directors meeting minutes, shareholder minutes, articles of incorporation, bylaws, qualifications to do business, name registrations, transition agreements, stock certificates, and dissolution and liquidation documents. Restructuring plans, correspondence, general and working documents are also included. The next step, of course, is to process the collection for accessibility of its patrons. Look for the announcement soon!

ALS Superior, Inc.
American Acceptance Corporation
Answers Iowa, Inc.
Canterbury Partners Ltd., Indiana
Cascade Mobile Communications Holdings, Inc.
DCRS Holdings, Inc.
DEK/Data, Inc.
Direct Investment Company
EPC, Inc.
Facilities Solutions, Inc.
Fargo-Moorhead Systems, Inc.
Financial Security Assurance Holdings, Inc.
GCTV Sub 1 Corporation
Grand Forks Systems, Inc.
GT Cogeneration Corporation
Hills Plaza Master Association
IPI Financial, Inc.
Kelley's Radio Telephone, Inc.
LaSalle Plaza YMCA Condominium Association
Local Touch Brand Publishing Company

Lund Products Sales Company
Meadows Warehouse Corporation
Mobile Radio Corporation
Monroe Cellular Telephone, Inc.
Multimedia Cable, Inc.
Northwestern Bellboard
Pacific Cellular, Inc.
Pacific Northwest Bell
Pacific Shores Company
Pacific Telecom Cellular of Colorado
Pierce Cellular, Inc.
Phoenix Plaza Restaurants, Inc.
Phoenix Plaza Commercial Association
Portfolio Acceptance Corporation
Rel Bellevue Ltd. Partnership
Russian Academic Development
Russian Business Skills, Inc.
Saturn Financial Services, Inc.
Scanticon Denver, Inc.
Scio Cellular, Inc.
TCI/US West Cable Communication
Telematics, Inc.
Telewest Communications PLC
Telewest Europe Groupjoint Venture
Telewest Scotland Holdings
Tyumenwestcom
UCI Enterprises, Inc.
U S West Basic Telephones Investments
U S West Cable Europe, Inc.
U S West Cellular of California, Recell, Technical
Services Inc.
U S West Corporate Communications, Inc.
U S West Enterprises, Inc.
U S West FSC Four, Ltd
U S West ITP Holding Company
U S West Knowledge Engineering, Inc.
U S West Marketing Resources International, Inc.
U S West Mobile Services, Inc.
U S West Network Systems, Inc.
U S West NewVector Group, Inc.
U S West Omega, Inc.
U S West Paging, Inc.
U S West PCS Holdings, Inc.
U S West Personal Communications
Development, Inc.
U S West Polska SP Z.O.O.
U S West Projects Investments
U S West Services Link, Inc.
U S West Systems, Inc.
U S West Venture Capital, Inc.
Waterloo Communications, Inc.
Western Cellular, Inc.

The Magneto Telephone of the Ewald Farm

By Dave Felice,
with assistance from Ron Swanson

As volunteers for THG, Ron and I are helping to sustain both family and telephone history by donating a Western Electric Model 317 magneto wall phone to the Wabash County Museum in Mt. Carmel, Illinois.

There are several varieties of the single-box magneto wall telephone, commonly known as the “317 style.” The actual Western Electric Model 317 from AT&T was introduced in 1907. It primarily features closed terminals on top of the earpiece.

While the donated 317 is not the exact model that would have been installed around 1900 in the Ewald household, it is very similar to the 317 style phone sets supplied by Western Electric and other manufacturers from around 1896.

George Ralph Ewald of the Sugar Creek area said he remembered the phone on his grandparents’ dining room wall. He also said that he helped his father, Ralph Waldo, maintain the lines for the cooperative company which provided service until about 1960.

George Conrad and Sarah Jane “Jennie” (Seiler) Ewald built their imposing two-story home and raised their large family in the house. It was originally located about one-half mile east of Bethel Cemetery, between Maud and Bellmont, in Wabash County. Years later, Bill Alka, a descendant, built his new home on that site.

Crank generates connection power

The first Ewald phone would have had open terminals on the earpiece. The caller would turn the magneto crank to provide power that sent a signal to an operator (“Central”) to request a connection to another subscriber. Initially, up to eight subscribers would share service on what was known as a

“party line.” A distinctive ring pattern would signal incoming calls.

The wall mounted single-box phone contained all the components including the newer “local” dry cell batteries. Many



households like the Ewalds used this style until the middle of the 20th century. Most of the phones were made of oak, but some were made of black walnut.

The actual vintage of the Model 317 telephone given to the Wabash County Museum is not known. What we know about the phone is based on Ron’s first-hand knowledge. Ron gave the un-restored phone to me after he read about the Ewald family in an earlier edition of Dial-Log. As an Ewald descendent, I donated the phone to the museum. My cousin, Doris, and her husband, George Beckerman arranged to transport the phone from Denver to Mt. Carmel.

Ron began a lengthy career with AT&T (the Bell System) in Illinois, working as what’s known as a combination technician, or “combo man.” The combo man would take care of both outside lines and Central Office switches.

Ron acquired the Model 317 phone from the estate of Dr. Lloyd Roth, a professor at Northwestern University (Chicago). It is believed that Roth obtained the phone from a location in either northern Illinois or Iowa. Most likely, the phone was built at the Western Electric facility, known as the Hawthorne Works, in Cicero, Illinois.

Multiple sources of equipment

When the original Bell patents expired in 1893, independent telephone companies started operating legally for the first time. In rural areas, such as Wabash County, there were probably several small independent cooperative or "mutual" companies.

The independents acquired equipment from Western Electric, Kellogg (based in Chicago), Automatic Electric (a predecessor of General Telephone), or another of about eighty independent manufacturing companies. Parts were generally interchangeable, based on AT&T standards. Western Electric sets were most widely used. Customers of mutual companies were allowed to retain ownership of their phone sets. The donated set has a replacement Kellogg mouthpiece.

The small independent operating companies soon started a process of consolidation, which continued for many years. In Wabash and surrounding counties, seven smaller companies formed the Wabash Telephone Cooperative in 1952. The Wabash cooperative still provides service in a small north-south strip in the middle of Wabash County, along with exchanges in Clay, Edwards, Effingham, Jasper, Marion, Richland, and Wayne Counties.

Other mutual companies were acquired by General Telephone of Illinois, which later became part of General Telephone and Electronics (GTE). Another round of consolidation and acquisition followed the

federal court ruling that required AT&T to split its nationwide operations by 1984. GTE and Ameritech, the former Illinois Bell, were the two largest phone companies in Illinois at the time. Eventually, Verizon became the phone service provider for most of Wabash County.

Huge manufacturing facility at Hawthorne

Western Electric's Hawthorne Works, named for a town later incorporated into Cicero, was known for its huge size. The sprawling factory complex, operating from 1905 to 1983, had a private internal railroad, known as the Manufacturer's Junction Railway. The railway moved products to the nearby Burlington Northern depot. Plant workers regularly used bicycles to get around inside the facility.

In addition to telephone equipment, Hawthorne Works manufactured consumer products such as refrigerators and electric fans. At its height, the plant had 45,000 workers. Built on 113 acres, Hawthorne Works was a self-contained community, complete with a water tower, hospital, fire protection service, and athletic facilities. A real estate developer bought the property in mid-1980, and replaced the factory with shopping center. An original tower remained at 22nd Street and Cicero Avenue.

Nearby Morton College now houses the Hawthorne Museum, at 3801 South Central Avenue, Cicero IL 60804, phone 708-656-8000 extension 320. Admission is free, tours are available by appointment. Contact Jennifer.Butler@morton.edu.

Further information

More details are available from Illinois Telephone History, published in 1991 by the Independent Telephone Pioneer Association. There is more on the history of GTE at <http://www.fundinguniverse.com/company-histories/GTE-Corporation-Company-History.html>.



Dale Norblom
2009 THG Volunteer of the Year

THG volunteers, staff and Board members gathered in early December at Laguna's Restaurant in downtown Denver. The luncheon was held to honor all of our wonderful volunteers, and to induct **Dale Norblom** into the THG Volunteer Hall of Fame.

Dale was one of our earliest volunteers, and continues to make a significant contribution. One of the most important things he does is populate our collections database. That's how we keep track of where each of our thousands of documents is located. Thanks, Dale, for all your hard work!

Thanks, too, to all our other volunteers. This year they have worked especially hard and long, preparing nearly 50,000 fundraising letters for mailing. We literally could not operate without them.

If you'd like more information about becoming a volunteer, please contact us at 303-296-1221, or at: telcomhist@aol.com

In Memory of Don Hoffman 1937-2010

Don had a long, varied career in radio and television before joining AT&T in 1965 in Billings, Montana. There he worked on microwave radio and long-distance transmission operations and on military switching systems. He moved to Basking Ridge, NJ, where he was involved with the development and deployment of the first digital microwave radio and fiber-optic systems.

In 1984, Don came to U S West in Colorado where he joined their research and development group to work on advanced network management systems, tele-medicine and video to the home. Don retired from the company in 1998, but continued to work as a consultant to the industry.

In 2000, he and his wife, Helen, returned to Montana to pursue their interest in genealogy and Western history.

Don was a volunteer at THG for several years, and remained a member and good friend. We'll all miss him.



Mystery Climbers

Our many responses to **Joe Hersey's** mystery climbers suggest that similar equipment was common in Europe and South America during WWII and into the 1960s. So, while we haven't completely cleared up the mystery, we are getting closer. Joe reports that **Stan Bartles** will soon return from his mission, and we hope that he can clear things up. We'll let you know what we find out.

Our New PBX by Jack Bol

What does a WECO 555 Manual PBX weigh? As volunteers **Jerry Wild** and **Jack Bol** found out, it weighs a lot; about 300 pounds. Jerry and Jack picked up the big box in Aurora, Colorado, from **John McNeely** who donated the fully complete PBX to the Telecommunications History Group.

Loading the PBX into Jerry's pickup was done without effort but un-loading it on a busy downtown Denver Street wasn't quite as easy and required the help of volunteer **Dave Felice**.

On entering the THG offices **Gerry Williams**, the security guard at 1425 Champa, exclaimed "That is a 555 PBX. My first job in Saint Louis was an operator on one of those with Blue Cross/Blue Shield in 1972. We had three of them lined up in a row." And the best part of the job, Jerry recalls, "is that through judicious use of the on/off switch, we could oversee the conversations."

This PBX was built by Western Electric and was used until the mid-1980s at the Saratoga Hotel in Lampasas, Texas. Of note are the red Honeymoon Buttons" used to prevent transfers of incoming calls to honeymooning couples, (or others who did not wish to be disturbed).

John worked in Sales & Marketing for Southwestern Bell. When he overheard the PBX crew talking about what a pain it would be to move and dispose of the board, he offered to take it off their hands, provided they gave him some documentation that he was getting it legitimately.

It was professionally moved from Austin to Denver along with his household goods in 1991, when he transferred to AT&T Bell labs at 120th & Pecos in Denver. It was displayed in his home until he donated it to THG last month.

Why Oh Why Did I Buy? by Lorene Van Horne

As a confidential stenographer in MST&T Traffic Engineering, Lorene was famous for her scrapbooks, jokes, and humorous poems. She recently shared this with us. She also shared some great photos of smashing her computer and lounging in her recliner, which unfortunately didn't reproduce well enough to publish here. Thanks, Lorene!

In Nineteen Hundred and Ninety-six
I bought my first PC.
I had no use or need for it
So why did I buy it? Beats me...

Unless it was it intrigued me
With all the things it could do.
I bought it and brought it home,
But the things it would do for me were few.

The main and biggest problem was
All instructions were written in Computereese.
That's the English language
As interpreted by the Japanese.

I have paid out mucho dollars
In tutoring, programs, up-grades and such,
And just where has this gotten me?
Well, I'm not even in touch.

Through the years I have fought this.
Everything about it seems perverse,
But I keep struggling with it. I mutter, bang my
head, and even curse.

I've threatened to use a big hammer
And pulverize it to bits,
But it still is cussed and ignores me
And in general gives me fits.

As I'm not making much progress,
There isn't anything left for me to do.
Either abandon this expensive toy
Or keep it and continue to fret and stew.

Since I'm getting nowhere with it,
That machine which is so perverse,
I'll just repose in my trusty recliner
And let things go from bed to verse.

Way Back When

100 years ago – 1909

- ❖ By the end of the year Bell and Bell-connecting telephones numbered 5,883,000.
- ❖ AT&T subscriber stations numbered 5,142,692, connected by nearly 4.5 million miles of wire.

75 Years Ago – 1934

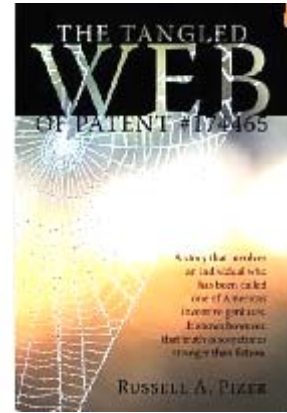
- ❖ Overseas telephone service was extended to Algeria, Morocco, Tunisia, Syria and Japan.
- ❖ The Federal Communications Commission (FCC) was established to regulate interstate telephone business.
- ❖ December 13 -Thomas A. Watson, Bell's assistant in the invention of the telephone, died at Pass-a-grille, Florida.

50 Years Ago – 1959

- ❖ The first transmission of motion picture film over transatlantic cable was accomplished. It showed the London departure of Queen Elizabeth II for Canada.
- ❖ Southern Bell introduced two-way mobile radio dialing service in Chattanooga, Tennessee.
- ❖ The Princess® phone, in white beige, blue, turquoise and – of course – pink, was introduced.

25 Years Ago – 1984

- ❖ Divestiture and the first year of the post-Bell System era...
- ❖ 5ESS Remote Switching Module was developed by AT&T Bell labs to bring digital switching to rural and suburban offices.
- ❖ Judge Greene ruled that the RBOCs could enter non-exchange, telephone-related businesses and new businesses such as real estate and computer sales.
- ❖ The FCC set a \$1 monthly subscriber line charge for residential and single-line business telephone customers.



The Tangled Web of Patent #174465

A book review by George W. Howard

“Oh what a tangled web we weave,
“When first we practice to deceive.”

This quote from Sir Walter Scott informs not only the title for author **Russell A. Pizer's** recent contribution to the history of the invention of the telephone, but the central theme of the book. Pizer argues that Bell's telephone patent was secured by way of deception, and that a search for the truth takes us through a “tangled web” of facts and their distortion.

In his newly published volume, The Tangled Web of Patent #174465¹ Russell A. Pizer starts out with a history of the scientific precursors to the telephone, informing us about the men who invented machines to carry the human voice over electrical wires, before Alexander Graham Bell's publicly-recognized telephone invention of 1876. The author has painstakingly presented not only quotes from old documents, but also very carefully reproduced the steel engravings that accompanied them, and that illustrate his text to a valuable degree. Mr. Pizer has performed an important office by republishing, in logical order, evidence of those prior inventions.

¹ (Bloomington, IN: AuthorHouse, 2009), ISBN 978-1-4389-8403-2 (187 pp. + 127 pp. of appendices + endnotes and index).

Unfortunately for Bell's reputation, in the process, Mr. Pizer exposes the deception practiced by Bell, his attorneys, his father-in-law (Gardiner Greene Hubbard), the Bell System, and by a modern biographer. The result of publishing the same misinformation for nearly 133 years is indeed a tangled web, which the author has unraveled to expose the truth.

Russell A. Pizer shows us that substantially all the questions about Alexander Graham Bell's invention of the telephone were explored within the first few years after patent number 174,465 was issued by the U.S. Patent Office in 1876. That history lies in records and publications that are no longer easily available to the inquiring academic, let alone the general public.² The author does us the service of restating substantially all the century-plus old arguments, but with a twist.

From the historian's perspective, the material presented by the author shows a large flaw in the historical record. Bell's supporters (including, primarily, the Bell telephone company that sought to monopolize the field not only of telephony, but of the history of telephony) crowed that Bell's telephone patent survived around 600 patent infringement lawsuits testing the

² Probably the singular and newest "evidence" concerning Bell's alleged borrowing of Gray's idea for a liquid transmitter, is to be found in Seth Shulman's The Telephone Gambit: Chasing Alexander Graham Bell's Secret (New York: W.W. Norton & Company, 2008). Shulman discovered that Bell's notebook drawing of Bell's first successful telephone transmitter was a duplicate of the drawing offered in Gray's confidential application for a caveat on the telephone. And Shulman noted that this entry, representing a totally new line of inquiry for Bell, was made upon Bell's arrival home from a trip to Washington, D.C., where he had visited with the Patent Office examiner Zenas Fisk Wilber.

validity of Bell's 1876 patent. However, an independent view of the matter shows that the litigation that tested the validity of Bell's patent was not thorough. Today, a competent litigator would insist on Bell's live testimony, in court, rather than accepting the written deposition from Alexander Graham Bell that was reportedly used in all the lawsuits. This is especially so since the lawsuit for which the written deposition was taken turned out to be a "friendly" suit between the Bell interests and those of Western Union.³ That suit resulted in a settlement where both parties combined to share in the financial rewards of the telephone monopoly. Both Bell Telephone Company and Western Union had a heavy financial incentive to keep alive the notion that Alexander Graham Bell was the first and sole inventor of the telephone.

An important part of Pizer's book is a review of the record from a House of Representatives' investigation that took place

³ Bell Telephone Co., et al. versus Peter A. Dowd. In Beginnings of Telephony, by Frederick Leland Rhodes, a career Bell employee, we are informed, at page 52: "To meet this attack [of competition] the Bell Telephone Company, on September 12, 1878, brought suit in equity in the Circuit Court of the United States, District of Massachusetts, against Peter A. Dowd for infringement of Bell's patents Nos. 174,465 and 186,787. Dowd was an agent of the Western Union Company, engaged in putting out telephones in Massachusetts. The Western Union Company assumed the defense of this suit, and in the course of its trial substantially all of the alleged defenses that were adduced in subsequent litigation involving the Bell patents were brought out. Among these was the claim of priority of invention for Gray, Edison, Dolbear, and others; the claim that Bell's telephone, as described in his principal patent (U.S. No. 174,465), was not capable of transmitting articulate speech; and the claim that Bell's invention had been anticipated in a long list of prior publications, including descriptions of a so-called 'telephone', devised by Philipp Reis."

in 1886. This investigation arose out of political controversies in connection with the Rutherford B. Hayes administration's commencement of a lawsuit to annul the Bell telephone patent of 1876.

The record included evidence to the effect that Bell had bribed a Patent Examiner to show Elisha Gray's confidential telephone patent caveat to Bell. It was also alleged that the Patent Examiner allowed Bell to then amend his patent application to include the variable resistance theory, which was the theory that proved commercially important. Moreover, the alleged exposure of confidential information in Gray's caveat was supposed to have given Bell enough information to transmit the human voice with Gray's liquid transmitter, and claim the discovery as his own. (Bell's transmission of the human voice did not occur until after the patent for the telephone had been awarded to him.)

Bell's testimony before the House committee is found in whole in the book. The author contends that Bell's testimony was less than a resounding claim by Bell to the invention of the telephone. The author also shows Gardiner Greene Hubbard's testimony on his role in the telephone enterprise, to have been remarkably vague. Hubbard, of course, was Bell's father-in-law and Bell's business partner, who had political connections in Washington, D.C. It was Hubbard's political connections, and those of the lawyer he chose to prosecute Bell's interests at the Patent Office, that probably had more to do with the success of Bell's patent application, than possibly any other factor.

Russell Pizer has meticulously listed all the players in the drama, and gives us a history showing the string of scientists and discoverers who laid the ground work for the invention. He carefully compares the various claims and exposes the incompetence of both the U.S. courts and the U.S. House of Representatives in adjudicating the sundry claims. Historians would like to find a

transcript where certain questions were posed to the various witnesses. Historians will be disappointed to learn from this book that many of the most important questions were never asked, and therefore never answered.

Pizer has compared the commentary made by various authorities with the facts as found in testimony and legal documents. Bell's biographer, Professor Robert V. Bruce, late of Boston University, wrote about Bell's invention of the telephone, and his views were favorable to Bell. Russell Pizer subjects Professor Bruce's comments to comparison with the record. Not only has the author presented us with the many facts, but he has analyzed them, and offered criticisms of various "authorities" on the subject.

Russell Pizer has likewise meticulously cited his sources of authority for various statements he makes. The book has a number of appendices that include transcripts of testimony, legal documents, related short commentary articles, and reports. This is one of the rare books that impels the reader to actually read the introduction and the appendices. This volume has a good index too, which is not all that common, unfortunately.

For those interested in the history of the invention of the telephone, this book should be of great interest. At the very least, it supplements previous arguments with citations, with the full text of relevant documents, and with a reasoned opinion awarding to Antonio Meucci the invention of the telephone.

For those interested in the history of telephony or in the history of science, this book is a valuable addition to the historical record, and is well worth reading.

This book is available at Barnes and Noble and at Amazon.com. Its price varies, but the softcover book is around \$20; the hardcover closer to \$28. You can order on-line.



DU ART! PRESENTS
THREE VIEWS OF TRUE

SATURDAY, JANUARY 23, 2009 10:00 A.M. - 2:00 P.M.

THREE INSTITUTIONS, THREE TOURS AND TALKS

As an illustrator, as a painter, as Colorado's foremost muralist of his day—Allen True set out to capture on paper, canvas, and walls the character of a region transforming itself into the modern West.

Join DU Alumni and curators Peter Hassrick (Denver Art Museum), Julie Anderies Denver Public Library) and Alisa Zahller (Colorado History Museum) for a guided tour of Allen True's West at the Denver Art Museum, the Denver Public Library and the Colorado History Museum.

DU ART! Members, faculty, \$50
General Admission, \$60

*Tour price includes an afternoon luncheon and building tour at the Mountain States Telephone Company building, where 13 of True's murals are located. **

The tour will meet at 10:00 a.m. in the lobby of the Hamilton Building of the Denver Art Museum

For more information and to RSVP, call (303) 688-4754 or email jpanderies@gmail.com

DU ART! supports the School of Art and Art History at the University of Denver through student scholarships, educational opportunities, and community enrichment.



*One of the 13 murals in the 931 14th St.
Building.*

