

MUSEUM ITEMS RETAINED BY DTE

- Multiplex Perforator (Green Code Perforator)
- Model 11 Tape Printer
 - Morkrum - Two Units - One With Cover
- Model 12 Page Printer
 - With Motor Generator Set
- Model 14 Tape Printer
 - Special Model Used on Bell System TWX Switchboards
- Model 15 (BP) Page Printer
 - Early Model Manufactured by Morkrum-Kleinschmidt
- Model 19 Set - Consisting of:
 - Model 15 Typing Unit
 - Perforator Transmitter
 - Keyboard (PEX)
 - Model 14 Tape Transmitter (XD)
- Teletypesetter Perforator (TPE)
- Model TG-26 Tape-Keyboard Set - For U.S Army Signal Corp.:
 - Typing Reperforator (FPR)
 - Keyboard Base (FK)
 - Cover (FPC)
 - Transmitter Distributor (XD)
- Model 26 Page Printer
- TT-4/TG (XC-2) Page Printer
- Model 28
 - Brand New LP Typing Unit with Features such as Print Suppression
- Model 28 Automatic Send-Receive Set
- Model 28 ASR Set "Alpha RFI" with Electronic Numbering Display
- Model 33 - Gold Plated S/N 500,000

MULTIPLEX PERFORATOR (GPE)

This perforator, called a GPE (Green code Perforator) was designed about 1913 and continued to be produced for the next 50 years, a corporate record. It was magnet driven, and was very fast, being a "work horse" during two World Wars and the intervening Expansion and Depression eras.

This device is controlled by a typewriter keyboard and perforated paper tape in accordance with the Bandot code to form the message prior to transmission.

Its essential parts include:

- a) Punch block
- b) Magnetically operated punch hammer
- c) System of five selecting levers
- d) Typewriter keyboard
- e) Device for feeding the punched tape

The primary customer for these units was The Western Union Telegraph Company.



KEYBOARD PERFORATOR
MODEL 6PE
NICK NAMED BY ITS
USER! THE IRON
HORSE

MODEL 11 TAPE PRINTER

With the increased load being placed on telegraph circuits, the Morkrum Company developed a printing telegraph which would operate on the standard five-unit code but which was so simple that it could be used at stations which handled as little as fifty messages per day.

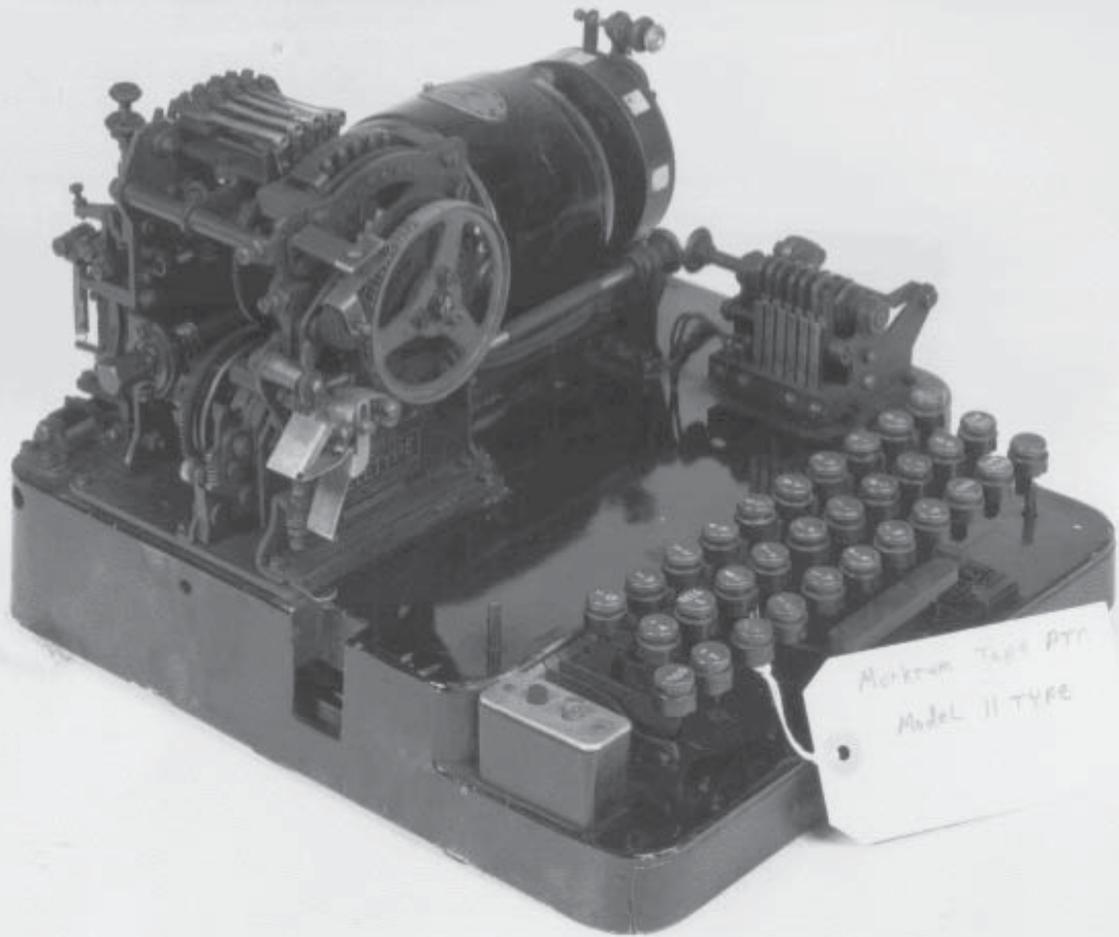
In view of the remarkable record of service of the printing unit of the Baudot system, it was decided to adopt a similar mechanism for the printing portion of this machine. This meant printing on a tape and the consequent gumming of the tape to the message blank.

The tape printer was considerably simpler than a page printer. With a type wheel tape printer of the Baudot class it was merely necessary to release the printing arm at the time determined by the particular code combination to secure printing or spacing or shifting. For this reason there was a considerable saving in line time with the tape printer.

In 1921 the Model 11, a compact machine operating at 40 words per minute was introduced for light duty service. It was the first machine to which the name "Teletype" was applied. One of the earliest installations of the Model 11 was in the Congress Hotel in 1922.

From 1921 to 1927, 883 of these machines were sold. The principal customers and use being hotels and message services.





Monogram Typewriter
Model II TYPE

MODEL 12 PAGE PRINTER

After the Morkrum Company first applied Howard Krum's improved method for operating start-stop permutation-code telegraph systems to the Green Code apparatus to control the selecting and printing operations of the Blickensderfer typewheel typewriter, other companies began to produce similar machines using, instead, typebar printing like the more modern typewriters. Observing this situation, the Morkrum Company started intensive development work to produce the Model 12 typebar printer, using the typebars and operating mechanism of the L. C. Smith typewriter and platen of Woodstock Typewriter.

The Printer was of the moving platen type, and always seemed to have problems with paper feeding. The Roll of paper was hung at the rear, and the "web" of paper coming off it was passed down under a "guide bar" to strip it from the roll and steer it up to the constantly moving carriage.

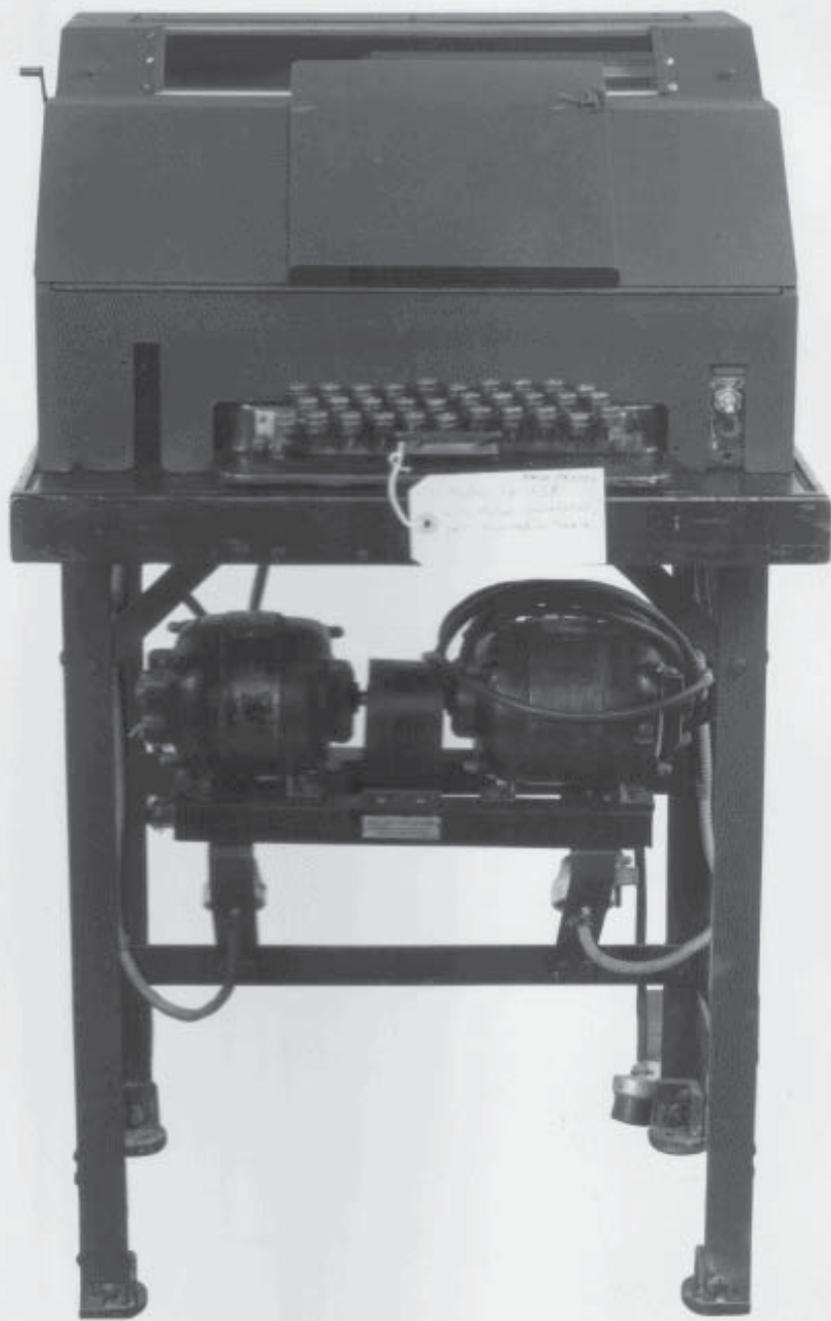
Separate motors powered the Typing Unit and the Distributor Unit that was used for Start-Stop service. The Typing Unit contained latching magnets that accepted signals from the Start-Stop or a Multiplex Receiving Distributor.

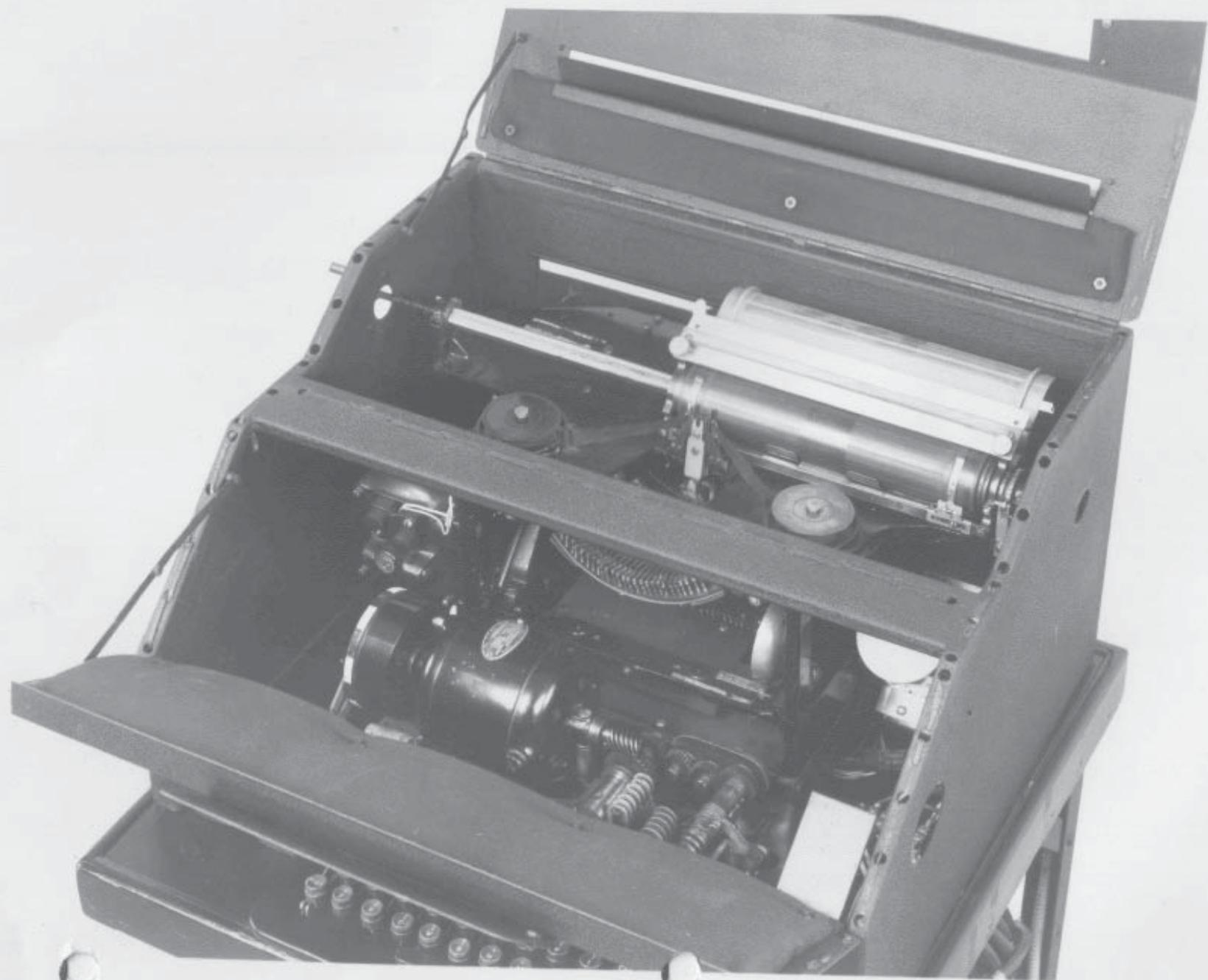
A close-up with the Set cover open reveals two distributors - one for transmitting and one for receiving, both were located on the keyboard.

Direct current for operating the D. C. governed motor and the many code magnets used in this machine was furnished by a motor-generator set located on the shelf below the printer. 11,900 of these machines were made between 1922 and 1943 and its principal users were:

The Western Union Telegraph Co.
The Postal Telegraph Co.
The British Post Office
The Australian Telegraph
The Associated Press

and the Chicago Police Department. The latter used these machines for 35 years.





MODEL 14 TAPE PRINTER

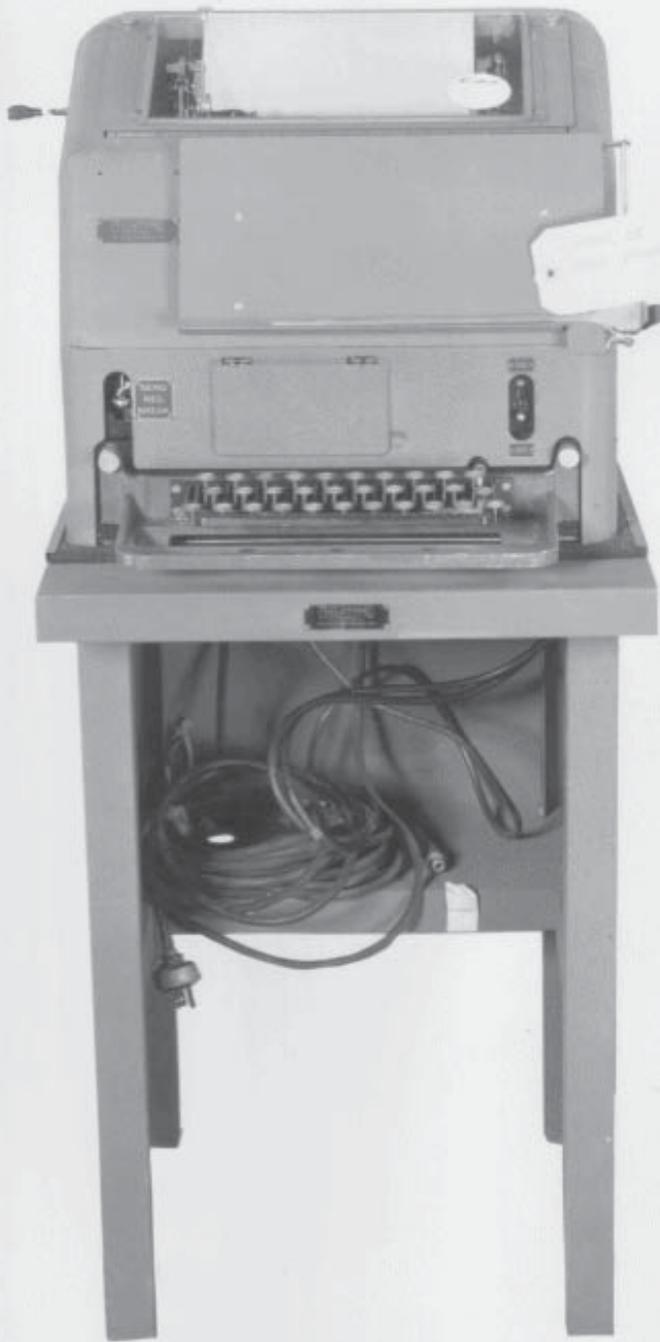
The demand for printing telegraph equipment was increased in 1925 when the Morkrum-Kleinschmidt Company introduced the Model 14 Tape Printer. The Morkrum Company had been working on the development of this single magnet, type-bar tape printer prior to its merger with Kleinschmidt. Although the typing assembly was almost identical to that employed in the Kleinschmidt 21A, the Model 14 had a radically different selector.

On this instrument, the depression of a key first set up a code combination corresponding to the characters to be printed or the function to be performed, and then engaged a clutch which connected a motor to a mechanism that transmitted the code combination in the form of electrical impulses to all of the machines connected to the sending instrument.

The electrical impulses actuated magnets on all of the machines on the circuit, including the sending instrument, and, through certain mechanisms, selected a particular typebar and caused the proper character to be printed on a narrow tape which was automatically spaced after each character.

The paper was arranged so that it could be placed in an upper or lower case position with respect to the type pallets, thus making possible the printing of 58 different characters. When the shift combination was transmitted, the paper was placed in position to print upper case characters and the release combination placed it in position to print lower case characters.

58,552 Model 14 Printers were made from 1925 to 1960, the principal customers being The Western Electric Company, and The Western Union Telegraph Company.



MODEL 19 SET

The Teletype Model 19 set combines facilities for direct interchange of typewritten telegraph messages, perforation of tape for subsequent transmission and automatic transmission of messages under the control of perforated type. The perforator transmitter keyboard which serves for direct sending may also be operated independently (whether or not an incoming message is being received) as a high speed perforator in the preparation of tape for subsequent transmission. Or if desired, tape may be perforated simultaneously with direct transmission. The incoming messages are received on a Model 15 page printer.

The tape transmitter or more commonly known as an XD is located at the left side of the table top on which the set is mounted. The tape punch and Character Counter are part of the keyboard and carried the Teletype Corporation code PEX.

The primary customers for this machine were the Bell System and the U. S. government.



MODEL OF 1917
SERIAL NO. 1000
PROPERTY OF THE
ARMY OF THE UNITED STATES
OFFICE OF THE SECRETARY OF WAR
WASHINGTON, D. C.

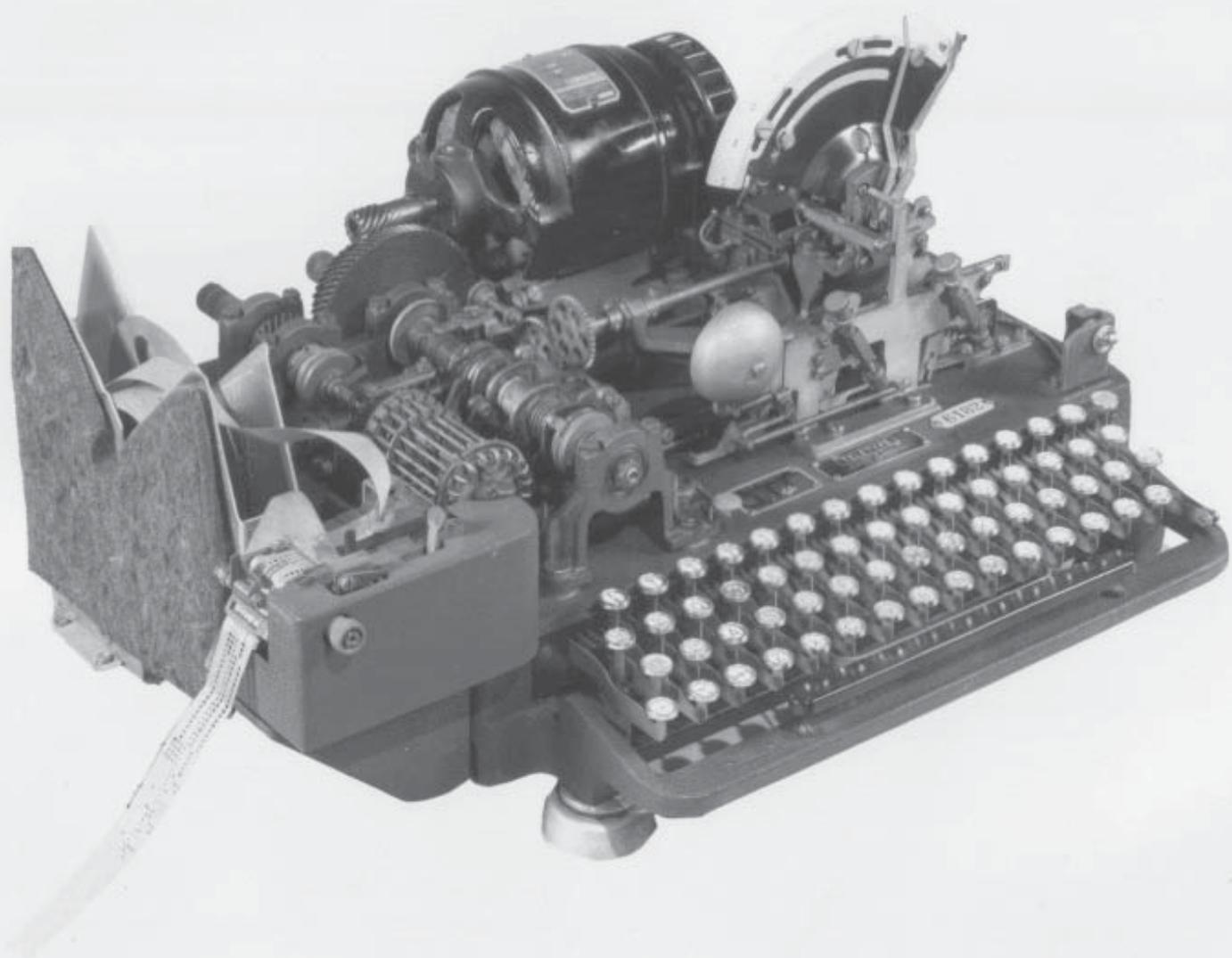
TELETYPESETTER PERFORATOR (TPE)

This 6 level keyboard perforator was developed in 1931 and was built by the Teletypesetter Corporation (A Subsidiary of Teletype Corp.) to provide perforated tape for automatic transmission or to control Linotype machines.

The Teletypesetter Perforator had four rows of character keys and punched extra wide tape with six code holes. Six level code provided for transmission of both Upper and Lower cases, as required for newspaper and book printing. Other characters were included, and the character counter mounted to the right rear allowed the typist to keep track of how many characters had been punched and what accumulated number of proportional width spaces had been utilized. (The character widths varied to give the best appearing copy when typeset, in the printing trades.)

A "pin-barrel" Selector at the left side of the unit provided special typesetting controls. The punched tape was sensed by a six-level XD unit, and the line signals then sent were perforated at the distant end of the telegraph circuit. The resulting tape was used to run a Linotype machine within a print shop, via a Teletypesetter Control unit that was also made by Teletype at first, and then by Teletypesetter Corporation.

The Teletypesetter Corporation sold approximately 5000 of these units and in 1958 "setter" was sold to Fairchild Graphic Equipment, Inc.



MODEL TG-26 TAPE - KEYBOARD SET

This set of equipment is a tactical teletypewriter made for the U.S.A. Army during World War II. It consists of a Model 14 tape transmitter distributor and a Model 15 typing reperforator.

Packaged as it is in a protective wooden case with carrying handles it was considered "portable."

This in conjunction with Teletype Corporation's TT-5/FG Model 15 page printer were very widely used throughout the world both during World War II and the Korean War.



MODEL 26 PAGE PRINTER

The Model 26 teletypewriter was a motor-driven single magnet, moving paper carriage, typewheel page printer. It operated on the five-unit selecting code, used the start-stop method of synchronizing and was used on the same circuits as the Model 15 at a machine speed of 368 operations per minute. The machine consisted of three major units, a typing unit, a base and cover.

The type pallets of the Model 26 were guided in grooves in the typewheel so that the selected type pallet might be moved mechanically toward the platen. The type pallet to be selected was determined by the setting of five code discs, which were actuated by line signals through the medium of the selector mechanism. The code discs were so arranged that notches on their outer edges would be lined up permitting a selected stop pin to move into the path of the stop arm located in the type wheel shaft. Then, the typewheel was stopped so that the selected type pallet would be positioned opposite the printing hammer which moved the pallet toward the platen.

Approximately 5000 Model 26 Printers were sold to Bell System for use in their TWX network between 1937 and 1949.



Model 20 (1914)
Remington 1914

TT-4/TG (XC-2) PAGE PRINTER

This experimental tactical page printer was essentially a repackaged Model 26. The keyboard appears to be from a Model 31 Printer; configured in this way, the machine became the Teletype Corporation Model 27.

The cover on this printer has been made "skin tight" compared to the cover on the standard Model 26 (see item 11). Also as per the later tactical printers of the day this machine had a milliammeter and a rheostat for adjusting signal line current.

Only 10 such units were made.



MODEL 28

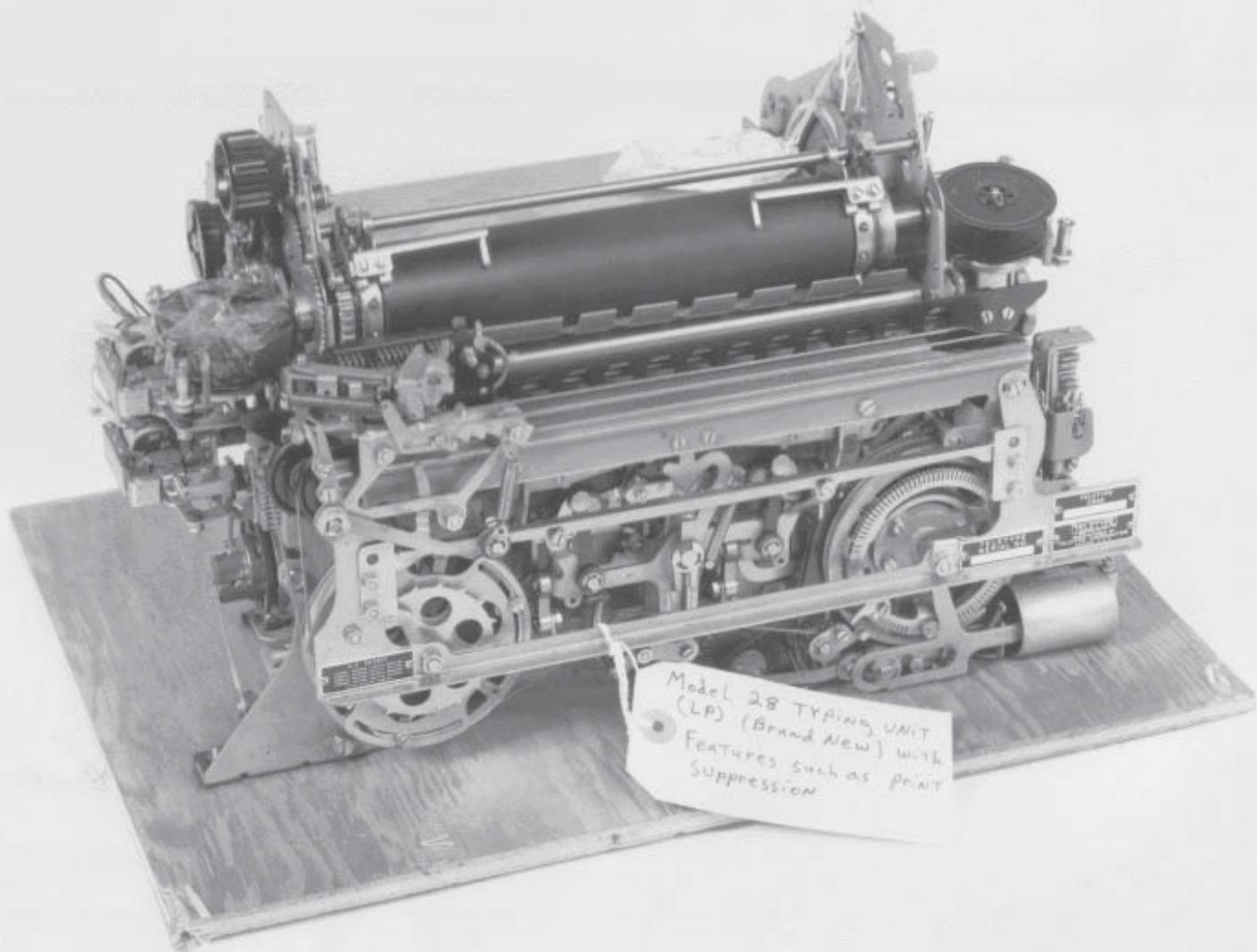
During World War II, Teletype Corporation undertook the development of an entirely new line of equipment - the Model 28. It was to run at 100 words per minute, while at the same time be quieter in operation and lighter in weight than any of its predecessors. Further, it was to have provisions for incorporating extra features and remote controls as well as withstand environmental handicaps such as arctic cold and tropical heat, shock, vibration and non-level positions inherent in operating aboard moving vehicles including shipboard. Finally, it was to be designed on the "building block" principle to permit maximum interchange of parts, mechanisms and units.

After a succession of models, laboratory tests, and extensive field trials, the first lot of the new Model 28 page printers were ready late in 1950. Urgent needs of the Armed Forces in the Korean crisis were given priority, and it was not until 1953 that the machine was available to the general public.

In looking at the new printer, perhaps the most striking feature was the replacement of the usual bulky type-basket with a miniature carriage consisting of a 1"x3" type-box and a tiny print hammer. Internally, there were other innovations. The machine had no structural castings; side frames and base plate were resilient sheet metal. Speed and quiet operation were built in, not only with light-weight parts but with the principle of harmonic motions - so that the machine ran more smoothly and easily at 100 words per minute than conventional designs at slower speeds. Clutches were all metal and called for oiling only once or twice a year, in contrast to two weeks for felt clutches.

Of exceptional interest is the provision for extra features and remote controls. This is handled through a mechanism called the "stunt box" ("stunt" being an old printing telegraph designation for nontyping functions). In effect a built-in sequential selector, this 9 3/4"x4 1/2"x2 3/4" unit has slots which can be equipped with trains of miniature parts or switches to perform an almost unlimited array of tasks. Basically, the stunt box will perform the following operations:

1. Mechanically initiate internal functions within the typing unit of the page printer set.
2. Electrically control functions within the page printer set.
3. Electrically control external equipment.



Model 28 Typing Unit
(LP) (Brand New) with
Features such as Print
Suppression

MODEL 28 AUTOMATIC SEND-RECEIVE SET

Since the Model 28 line of equipment was designed on the "building block" principal, the Model 28 ASR was a natural "bringing together" in 1957 of the whole new line of model 28 equipments. Model 28 ASR sets were made containing mechanisms for receiving page copy, reperforating and printing on paper tape, punching paper tape at up to 200 words per minute and for transmitting paper tape up to 100 words per minute. The large space in the lower part of the cabinet enabled the customer (often BELL SYSTEM) to install electrical and electronic control equipment.

Major customers were the BELL SYSTEM and the United States Navy.



MODEL 28 ASR SET "ALPHA RFI"

These machines were made for the government starting in the mid-sixties and were in production for over a decade. As can be seen they contained many pieces of auxillary equipment, the most saliant of which is the electronic numbering module seen at the lower left. In addition the set is equipped with an auxillary reperforator and a dual headed tape transmitter. (LXD'S) The "boxes" located in the lower compartment house the so called Alpha RFI equipment.

In the middle 60's Teletype Corporation began equipping the whole Model 28 line of products for certain government customers with devices that suppressed the radio frequency interference that normally accompany electrical equipment of this kind.

As a result of this effort, many millions of dollars worth of Model 28 Printers and associated equipment were sold.

Capitol

Bond

FOR BOTTOM COPY IN



Distant
Terminal

Model 20-A12
30-111142-1A1000
APC 201 with 201-1000
Switching Module

MODEL 33

The Model 33 Automatic Send-Receive Set provides facilities for punching and transmitting from tape, in addition to its capability as a send-receive page printer.

It was designed as a light duty machine, however through an effort to improve its reliability, it eventually became a "standard duty" machine.

The set features type-wheel printing, a four-row keyboard for the then new ASCII 8 level code*, and many sets were equipped with a telephone dial and a pushbutton control panel for use with the BELL SYSTEM mechanized TWX and DATA-PHONE services. A self-contained function mechanism for automatically controlling external equipment is also provided. Operating speeds of 60, 66 and 100 words per minute were standard.

As the computer came of age in the decade of the 60's, the Teletype Model 33 virtually became the computer industry's defacto standard Input-Output device. For Teletype Corporation, this resulted in unprecedented record sales, and in 1975 several production Model 33's were set aside and gold plated; these sets were displayed at trade shows throughout the country - this particular Model 33 is the 500,000th unit made.

*Teletype Corporation took a very active role in designing and fostering the use of the ASCII eight level code as a communications standard throughout the world.



Model 33 212
2/10/1968

ILLINOIS INSTITUTE OF TECHNOLOGY

Office of the President

December 17, 1986

Mr. Robert J. Gianni
Department Head-Systems Engineering
AT&T Teletype Corporation
5555 Touhy Avenue
Skokie, Illinois 60077

Dear Mr. Gianni:

I am pleased to acknowledge AT&T Teletype Corporation's gift of 6 teletype models and several teletype machines to Illinois Institute of Technology's Department of Mechanical and Aerospace Engineering.

Corporate support throughout IIT's nearly 100 years in Chicago has been invaluable in helping the university to position itself at the leading edge of technology. We take pride in the relationships we have developed with business and industry, as well as in the steady flow of graduates who, like you, have found their way to leadership positions in many of these organizations.

Again, thank you for providing this show of support.

Sincerely,


Thomas L. Martin, Jr.
President

TLM:rc

cc: Dr. Hassan M. Nagib
Mr. R.R. Seidlitz
Mr. A.F. Taibl
Mr. R.A. Tarbox

Pulling the Plug on the AP Ticker

Faithful Friend Falls Silent at Last

By Mike Harden

Something in the sound of the AP ticker always reminded me of a tap dancer who, if not especially imaginative, was predictable in a soothing way. More than sound, though, it was an aura. The clattering old model M-15 and M-20 Teletypes—long the mules of the wire services—were the journalist's constant admonition that news was being made every minute of every day. Catastrophes, coronations, championship fights clacked across the wire. The old machines often provided background noise for news broadcasts, lending a certain authority, a sense of urgency to the day's events. They were a staple of film directors looking for cinematic portrayals of journalists at work. The Teletype said it all, and when its bells chimed out a "Bulletin" or "Flash," it was like God clearing his throat.

No more.

By September, the Associated Press will have corralled the last 1,500 Teletype machines scattered about the country (UPI phased out the M-15s and M-20s about six years ago) and consigned all of them, save the few kept for sentimental reasons, to the dump.

"I'm glad to see them go," says AP's Director of Communications, Dick Atkins. "Those machines are older than I am." Atkins is 41.

The Associated Press began using Teletypes—a stepchild of telegraphy—during Woodrow Wilson's first term. They moved the news at 66 words per minute. AP now moves the news on Okidata teleprinters at up to 1,200 w.p.m., some of it through computers at 12,000 w.p.m., bouncing it off Weststar III and down to the open palms of satel-

Mike Harden is a columnist for the Columbus Dispatch.

lite dishes across the United States.

But there was something magical about the Teletype.

"It's part of our heritage in the business," says ABC's David Brinkley, who first used a Teletype when he ran a one-man United Press bureau in Nashville, Tennessee. Later at NBC, where some 20 of the machines chattered in one spot, Brinkley remembers, "You damn near had to have earmuffs to enter the room." But back in Tennessee, or during his days as a reporter at North Carolina's *Wilmington Morning Star*, the old M-15s and M-20s were the only "real connection with the outside world. It sort of stitched this country together."

"I liked the noise," adds Brinkley. "There was something satisfying about it."

Some 400,000 miles of cable linked AP Teletypes from Bangor to Bakersfield, Duluth to Dallas.

Dallas. That was a somber place for the old machines.

BULLETIN. DALLAS, Nov. 22 (AP)

Dallas bureau chief Bob Johnson typed those words on that day in 1963, drew his breath, yelled, "Bulletin!" then punched out, "President Kennedy was shot today just as his motorcade left downtown Dallas. Mrs. Kennedy jumped up and grabbed Mr. Kennedy. She cried, 'Oh, no!' The motorcade sped on."

At newspapers, television and radio stations across the country, the M-15s and M-20s clacked out the horrifying news. Johnson was called by AP's general news manager, Sam Blackman, in New York and told that control of the wire service's main national artery, the AAA wire, was being turned over to him. Johnson would move three flashes—the highest priority code—before the weekend was out: one confirming Kennedy's death, another

when Lee Harvey Oswald was shot, yet another when Oswald was pronounced dead.

In the days that followed the assassination, the old machines would fall silent only once. AP general manager Wes Gallagher ordered them mute while the president's body was being lowered into its grave in Arlington Cemetery.

For Johnson, now 62 and chief of AP's Albuquerque bureau, there are many stories tied to his memory of the old Teletypes. He filed for AP from Munich during the tragic 1972 Olympics and was managing editor during Watergate. Much of his 40-year career with the wire service is entwined with the clatter of machines that he first heard when he came to AP in 1946.

"They were the sound of the news," he says. "There was a certain glamour and aura. There was kind of a heady feeling. I think the noise of the machines had something to do with that. It's sort of like the sound of an old steam-engine whistle."

In 1961, the Teletype Corporation in Skokie, Illinois ceased manufacturing the machines and their replacement parts. AP was forced to cannibalize old machines when repairs were necessary. The M-15s and M-20s were doomed. The AP memorandum commanding their final phase-out was titled simply, "M-15 and M-20 extermination."

A few of the machines have been spared by sentimental journalists, old wire-service hands who have converted them into liquor cabinets or plant stands. They sit mute, filled with whisky or coiled in philodendron, like a beloved old relative robbed of voice by the years.

Mark Twain once said there was something in the sound of a boat on the river that hung over the heart like a star.

So it was with the old Teletype. ●

BUSINESS

AT&T artifacts find historic destinations

By JIM SZCZEPANIAK

Once upon a time, in the days before there was such a thing as a personal computer, there was something called a telegraph. There also was something called a typewriter.

One day the two were introduced. The relationship prospered.

Offspring of the marriage could speak to one another using words made up of letters of the alphabet, rather than dots and dashes. This made things considerably easier for the humans who communicated through the developing offspring.

One thing led to another. Mechanical teleprinters begat early video display terminals, which in turn parented vital components of today's personal computers.

A Skokie-based company had the foresight to keep track of this technological family tree over the years. Today, 15 museums are enjoying the benefits of that foresight.

THROUGH CHANGES in the products, along with changes in the company's name, the computer systems division of AT&T Information Systems (formerly Teletype Corp.) had amassed a research and development museum that one Smithsonian Institution curator recently termed "an extraordinary collection."

"At some time in the future, when we

Western Union and the Kleinschmidt estate.

Kleinschmidt Electric Co. merged with Morkrum Co. in 1924. Four years later, the company changed its name to Teletype Corp.

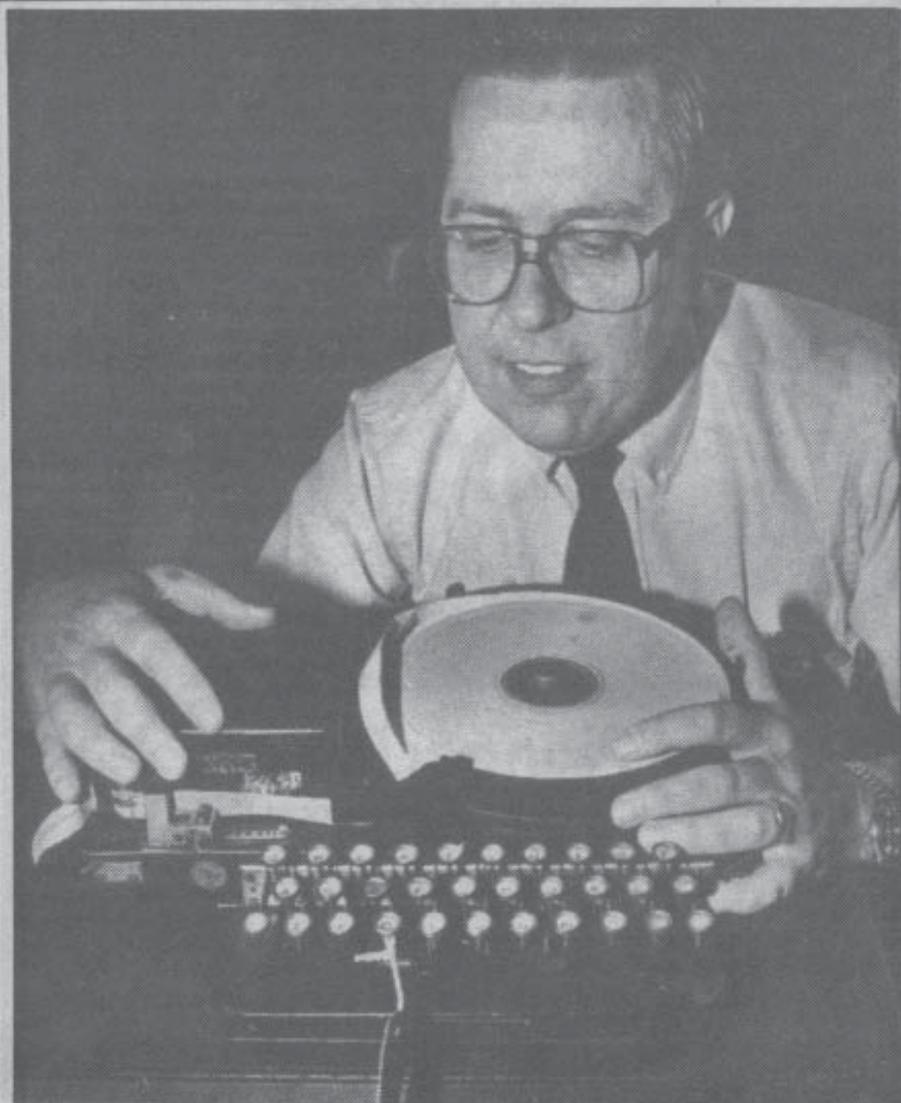
The Smithsonian was interested in some pieces to complete its collection, however, and Finn was instrumental in referring Gianni and Seidlitz to other institutions.

"We contacted museums that we knew had existing collections of this nature," Seidlitz explained. "Museums have limited funds and space so they must be selective in what they collect and exhibit. They're offered all types of collections they can't accept."

MUSEUMS WERE alerted to the collection pieces through a catalog assembled years before by Ran Slayton, then a senior engineer at Teletype Corp. Slayton and then-project director Ray Smessaert established the research and development museum and documented all of the pieces in the collection.

"The museums were amazed by the fact that our company had done the documentation," Seidlitz said.

"It's terribly useful to us to have the catalog," Finn said from Washington, explaining that most corporations do not keep running documentation on their products.



understand the nature of historical museums better, we will undoubtedly bemoan its passing," Bernard Finn said of the collection. Finn is curator of the division of electricity and modern physics for the Smithsonian's National Museum of American History.

AT&T's research and development museum was closed in the late 1970s — after the company's population outgrew the building and changing technology rendered the use of collection pieces as development models obsolete.

AT&T realized, however, that the collection, with some 700 pieces, had important historical value and should not be simply discarded.

BOB GIANNI AND Ray Seidlitz, both heads of research and development departments at the company, were selected to explore ways the equipment could best be utilized.

Seidlitz wrote a letter to the Smithsonian. Finn responded that his museum had already received similar equipment from

Documentation on some of the pieces AT&T's collection had been considered "lost for good," he said.

The AT&T collection included products dating back before the Morkrum days. Some pieces were more than 100 years old, and the collection included the products of industry competitors.

THE CATALOG contains photographs and descriptions of all those products — information that the recipient museums now have. They also have an account of how the pieces were allocated — an important consideration for institutions that lend and borrow pieces for exhibits.

In those cases where than one museum requested the same piece, "We made a composite list of the requests and told the museums to work it out among themselves," Gianni explained.

The collection's Blickensderfer typewriter was one of the most highly requested pieces. The Blickensderfer, introduced in 1893, was the world's first electric typewriter.

Business Briefs

SEARLE TO DEVELOP ANTI-BLOODCLOT DRUG

Skokie-based G. D. Searle & Co. announced it has entered into an agreement with Invitron Corp. to develop and market a potential new biotechnology-derived drug for the treatment and prevention of blood clots associated with heart attacks and other cardiovascular diseases.

Preliminary tests suggest the substance, known as a tissue plasminogen activator (tPA), may have substantial advantages over other versions of tPA currently under study, making it, in effect, a more advanced "second generation" tPA which could render obsolete those currently in clinical trials.

Under terms of the agreement, the tPA

will be jointly developed by Searle and Invitron, produced by Invitron, and marketed by Searle WORLDWIDE. The new biological entity was discovered by Monsanto Company in collaboration with researchers at the Oxford University in the U.K. Mondanto acquired G. D. Searle & Co. in October, 1985 and holds a major equity position in Invitron, a biotechnology venture in St. Louis.

Searle plans to initiate clinical trials with the potential new drug following completion of laboratory safety and effectiveness studies by year end.

CHAMBER PLANS SEMINAR, BUSINESS AFTER HOURS

The Skokie Chamber of Commerce will

AT&T's Ray Seidlitz explains how the Model 12 KSR teletypewriter, developed in the 1920s, was a breakthrough for the communications industry by combining a typewriter keyboard and printer. (Staff photo by Vicki Grayland)

A curator from the Milwaukee Public Museum "told me that he would walk all the way to Chicago and back to get the typewriter," Gianni said.

That museum has one of the most extensive typewriter and teleprinter collections in the country, Gianni said, but the Blickensderfer was one key piece the museum lacked. He and Seidlitz gave Milwaukee the nod on the typewriter.

"UNTIL RECENTLY it was generally thought to be extinct," Gianni said, "and ours was in excellent condition."

Gianni and Seidlitz retained several pieces from the collection for the Skokie building's archives, including a gold-plated Model 33 KSR. That model was introduced in 1962. Although it was designed as a ter-

minal-to-terminal teleprinter, it was widely used as a computer video display terminal after the appearance of the computer iode device, but before today's ubiquitous CRT video display units was designed. Teletype Corp. goldplated its half-millionth Model 33.

Most of the historically significant pieces now belong to the various museums, where "the likelihood of some pieces living on is much greater than if all of them were confined in one place," Gianni said.

"It's a personal satisfaction to Bob and myself to have a number of old artifacts in those museums," Seidlitz said.

"We worked on some of those artifacts," Gianni laughed "But it feels good to have our patents in some of those museums."

30th ANNIVERSARY

It's Skokie Federal's 30th anniversary, and it wants its customers to share in the excitement. The association is offering special three and five-year anniversary CD's that carry unusual gifts.

Depending on the amount of the deposit and the term of the CD, customers can choose such gifts as: a Sony portable cassette stereo, a men's or ladies' Columbia 10-speed bicycle, a world famous trading company exercycle, a Savana patio set, a Lazy Boy recliner rocker, a Toro self-propelled 21-inch Rear Bag Mower, a Sony 27-inch or 13-inch color TV with remote, a GE video camera, an Apple II C computer, or a Sony 27-inch Stereo Trinitron Monitor-Receiver.

sponsor a seminar on Casualty and Product Liability from 8:30 to 11:30 a.m. Thursday, May 22 in the North Shore Hilton Hotel.

Four experts in the field of insurance will form the panel of speakers. There will be a question and answer period.

The cost of the seminar is \$45 per person, and includes coffee, rolls and handouts. For information call 673-0240.

The chamber will hold its next "Business After Hours" mixer for members from 5 to 7 p.m. Tuesday in Skokie Federal Savings and Loan Assn., 4747 Dempster St.

The cost is \$3 per person. There will be cocktails and hors d'oeuvres served.