
TTS in the Metropolitan Newspaper

A case history of two years' TTS operation in the *Chicago Tribune* which answers many of the questions encountered by Linotype representatives; the reprint of an address to the ANPA Mechanical Conference by Harold F. Grumhaus, Asst. Production Manager, *Chicago Tribune*.

WHEN I reviewed our Teletypesetter operation a few weeks ago in connection with the preparation of this report, I reached one very definite conclusion . . . and that was that I seemed to know a great deal more about a Teletypesetter operation before we installed one than I do today. We started producing live type from our Teletypesetter operation in May, 1951. Since that time a considerable number of newspaper representatives from various parts of the country have visited our plant for the purpose of seeing our Teletypesetters in operation. Each visitor has asked the same general questions: what prompted the *Tribune* to install Teletypesetters; how do we train our Teletypesetter perforator operators; what production do we get; and what is our general reaction to the operation?

I suppose that all of us have asked ourselves these same questions, either before we installed Teletypesetters, or because we might be considering the installation of such equipment or perhaps just from curiosity. In any event, it occurred to me that the answers to these general questions might be of interest to you.

The *Tribune's* TTS Equipment

BEFORE summarizing the answers to the questions, I will first attempt to give you a mental picture of our operation by explaining that our Teletypesetter equipment consists of 8 Teletypesetter Multiface Tape Perforators, 8 transmitters, 1 electric control switching panel, 8 reperforators, and 8 Comet type casting machines equipped with Teletypesetter operating units.

The tape punching machines which we use are called Multiface Tape Perforators. We must, of necessity, use this type of a perforating machine instead of a standard perforator because our type face (8-point Regal #1 on a 9-point slug) is a non-unit type. Standard perforators are designed for a unit type face. There is little difference between the operation of a multiface and a standard perforator but our experience has indicated that where a unit type face is used, a standard tape perforator is generally sufficient for newspaper requirements.

These tape punching machines are located in a separate room adjacent to our composing room and like our composing room it is acoustically treated. Our tape is relayed from the tape punching machines to the type casting machines by means of transmitters and reperforators and as a result, we actually perforate two tapes for every line of type that is cast.

The transmitters are approximately 10" x 18" in size and are located on a specially constructed desk alongside the tape punching machines. The reperforators are located alongside the Comet type casting machines.

The electrically controlled switching panel, which directs the perforated tape from a transmitter to a reperforator, was designed by our electrical engineer. This switching panel is extremely flexible in that it enables us to transmit tape from any one of our eight tape punching machines to any one or all of the reperforators. Communication between the monitor, who attends the type casting machines, and the tape punching operators is conducted over an inter-communication system and by a series of signal lights located on the electrically controlled switching panel.

Movement of copy between the copy desk and the tape perforator room and the proof room is accomplished by means of an automatic belt conveyor.

Why Install TTS?

Now for the answers to the general questions. Our decision to install Teletypesetters was based upon two factors which are actually inter-related.

- (1) We were and still are faced with an increasing shortage of manual operators for type casting machines.
- (2) We have had a continuously expanding need for more and more type for classified ads.

After reaching this decision we notified our composing room employees of our intention to install Teletypesetters and offered them the first opportunity to learn the tape perforating operation.

The Tribune's Training Program

OUR training program is composed of three phases:

- (a) Typing proficiency.
- (b) Instructions and practice on the tape perforators.
- (c) Advanced training on the tape perforators which involves the handling of live copy and requires certain production minimums.

Under the first phase, employees are required to type a minimum of 50 words a minute on a standard typewriter before they are permitted to obtain instruction and practice on our tape perforators. Our original group of tape perforators were recruited from our composing room force on the basis of their typing proficiency after attending typing school. Those who had previous typing experience took a refresher course while those who had no such experience took a complete typing course.

Under the second phase, the initial group of employees were given instructions and practice on our tape perforators by an experienced instructor furnished by the Teletypesetter Corporation. Since that time, employees desiring to become tape perforator operators are trained by one or more of the initial group of tape perforator operators as soon as they meet the typing proficiency of 50 words a minute.

Under both the first and second phases, all practice and instruction on either typewriters or tape perforators must be conducted outside of an employee's regular working hours at his own expense. However, a group of our machinists received a complete course in maintenance at a Teletypesetter Corporation school during their regular working hours.

Under the third phase, employees who have qualified for advanced training are required to produce a minimum of:

225 lines per hour of 7 point or larger type during the first two months of operation.

260 lines per hour of 7 point or larger type during the 3rd and 4th months of operation.

300 lines per hour of 7 point or larger type during the 5th and 6th months of operation.

350 lines per hour of 7 point or larger type during the 7th and 8th months of operation.

375 lines per hour of 7 point or larger type within four months after they obtained a production of 350 lines per hour.

During this period employees are paid in accordance with the number of lines of type produced starting with 60 percent of the rate established for tape perforator operators. While this training program covers a period of 12 months after an employee enters advanced

training under phase 3, only one employee either in the initial group or in the subsequent expansion failed to produce a minimum of 375 lines per hour—or the equivalent thereof—in a shorter period and this one employee was replaced as soon as it became evident that he would not be a proficient Teletypesetter operator. The average time required for our employees to produce a minimum of 375 lines per hour was less than three months. Two employees accomplished it in four weeks while one employee needed twenty-six weeks to reach this proficiency.

Employee Cooperation Helps

ALTHOUGH we had had several successful dry runs before we decided to produce live type, the first week of producing live type was typical of all new operations—if not worse. This is mentioned for the sole purpose of stressing the point that the manner in which the problems were solved during the first week of operation did more than anything else, in our opinion, to promote a successful Teletypesetter operation in our plant. It developed a team and in our opinion the creation of a team and a cooperative team spirit is an essential requirement for a successful Teletypesetter operation. In our case employees became enthusiastic and determined that this operation must work. Frequent meetings were held with management during the first several months of our operation and all problems and recommendations were thoroughly discussed. A spirit of cooperation prevailed throughout.

Management was quick to adopt every practical suggestion that was submitted by the tape punching operators, by the monitors and by the machinists, with the result that we soon had a smooth functioning and successful operation.

Production Now Averages 375 Lines

THE FACTOR in which we are all interested is production. While no one is ever completely satisfied with the production they obtain, particularly today, in the face of steadily rising operating costs, we can honestly report that we have with a few exceptions been obtaining an average minimum production of 375 lines per hour—or the equivalent thereof—since the 7th week of our Teletypesetter operation.

It is interesting to note how our production increased as the operators became accustomed to the operation. The first week our average room production was 189 lines per hour. The second week it was 213 lines, the third week 252 lines, the fourth week 276 lines, the fifth week 325 lines, the sixth week 348 lines, the seventh week 380 lines. Since that time our production has averaged a minimum of approximately 375 lines per hour. (This, in our opinion, is sufficiently in excess of

the production we obtain from our manually operated machines to make our TTS operation worthwhile.)

These hourly production figures of our Teletypesetter operation, like those of our manual operation, are computed on the basis of the actual time worked off the hook. This excludes such non-productive time as rest periods for tape punching operators as well as machine delays and other non-working time for manual operators.

Advantages Found with TTS

TELETYPESETTERS have also aided us materially in the publication of our Thursday paper which contains a separate neighborhood section for three different zones and our Sunday paper which contains a separate neighborhood section for five different zones. While several of the pages in these neighborhood sections contain different ads for each zone some of the news stories are frequently repeated in each zone. When this occurs the tape covering the articles to be repeated is transmitted to 3 or 5 type casting machines, as the case may be, and cast simultaneously. This enables us to make up all 3 or 5 pages at once and save considerable makeup time. Before we installed Teletypesetters we set the type once and put it in the form for one of the zones. After the page was molded the type was moved to the form for another zone and so on until all pages for all the zones had been molded.

Another benefit from the multiple use of tape which is not measured in our production is the casting of:

Heads for our classified section, the terms of subscription, market heads, letters used for alphabetical list of market quotations, sport captions, guide lines for baseball batting averages, photo credit and copyright lines, and numerous other items amounting to a total of 20 or more columns per week.

This is accomplished by punching one tape of the required material and running the tape through the operating unit on the type casting machine over and over until sufficient lines have been cast. When the tape shows signs of wear it is run through the transmitter and a new tape is reperfected.

"Still an Experiment with Us"

TELETYPESETTERS are still an experiment with us and as a result we are extremely careful in the computation of our production. If we were not careful we would be kidding ourselves in the same manner that an enthusiastic golfer who always shoots in the hundreds continually tells his friends he shoots in the eighties. A golf score in the eighties provides good conversation but if that 100 golfer ever plays against an 80 golfer the 100 golfer better be prepared to pay. It's just as easy to imagine what would happen if we informed management we were getting production of 400 lines per hour from our Teletypesetters and they discovered we were only getting 300.

The Teletypesetter operation is, of course, not completely free of problems. One of the problems we encountered and recently solved was the insertion of the one point steel cut-off rule between each classified ad. This rule is inserted by hand when classified ads are set on our manually operated machines. Until recently the rule was inserted by a bank man when classified ads were set on machines equipped with Teletypesetters. This has now been overcome through the development of a device by one of our employees which automatically drops the rule in its proper place at the proper time by means of a signal which the operator punches in the tape at the end of each ad.

We handle all classifications of copy on our Teletypesetters: classified ads; market tables; box scores; racing charts; live news matter and time copy. The volume of work in our composing room is such that copy is always available. This, in our opinion, is another fundamental requirement for an efficient Teletypesetter operation in a metropolitan newspaper.

Our initial operation consisted of 6 tape punchers and 2 monitors working one shift a day, 5 days a week. Today we employ two shifts a day six days a week and are now planning to expand this schedule. As previously stated, Teletypesetters are still an experiment with us. Based upon our experience to date, however, we believe that Teletypesetters will have a definite place in the economical production of a metropolitan newspaper.