

Printing Week means the usual for O & E staffers

By Sandra Armbruster
staff writer

"They don't make 'em like they used to" is a common complaint about modern, technological items. When it comes to newspapers, however, that expression reflects good news.

Since this is Printing Week, we'd like to tell you about that progress and what it takes to deliver a newspaper to you, our readers.

Most people credit the beginning of printing to Johann Gutenberg, who introduced movable type to Europe about 1440. According to Edwin Emery in "The Press and America," Gutenberg was beaten to the inkpot by about 400 years. It was Pi Shung who first used movable type in China around 1045.

The invention of movable type was important. Before that, literature was reproduced by handwriting or by carved blocks — a costly and slow process.

Movable type made books and, eventually, newspapers available to the public at a reasonable price. To this day, low cost and availability, or circulation, without restraint are two cornerstones of a free press guaranteed by the U.S. Constitution.

The first, primitive newspaper was

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published somewhere in northern Germany in 1609, but in 1568 residents of Venice paid for news bulletins with a coin called a "gazetta." Some papers today still call themselves "gazettes."

PRINTING HAS come a long way in the last thousand years from hand-carved blocks to a computerized operation. Reporters, who were originally called "intelligencers" in the early 1600s, still gather news much the same way they always did — by talking with the folks who make the news.

That's just about where all similarly steps. All writing, whether by a reporter or the personnel who record classified advertisements, is done on a video display terminal. Each terminal has a keyboard, much like a typewriter, and a screen like that on your television.

Writers can correct spelling. (Oops, we make mistakes, too), move type around, change type to italics or make it boldface.

Once the writing is finished, a computer is used to justify margins and actually "sets" or prints the type on long sheets of special photographic film.

Meanwhile advertisements, which pay for the cost of publishing, are stored in computers while other computerized display screens called Ray-comps are used to construct the advertisements.

A special pen called a graphic digitizer is used to design the advertisement, add borders, outline the ad and make sure the type fits into the space allowed.

Completed advertisements and stories are printed out on film by a computerized photographic typesetter. The exposed film is then automatically developed and dried by another machine.

PHOTOGRAPHS are developed by another machine called an ECRM. Unlike film you use in your camera, the ECRM prints directly on paper without

a negative. This special machine uses a laser scanner to transform pictures into a series of dot patterns.

Take a magnifying glass and look at the pictures on this page. You will see that the more dots there are, the darker the picture is.

Stories and pictures are cut to correct size and coated with wax. People called keyliners take the waxed material and place it on a page called a flat. For directions, they follow a layout of all pictures, stories and ads drawn on standard-sized paper by editors and advertising placement personnel.

The completed flat, which is slightly larger than one page of your paper, goes to the camera room. This camera is about eight feet tall. It produces a right-reading instead of a reverse negative. (Hold this paper up to a mirror. The image you see in the mirror is called reverse.)

The right-reading image allows the use of a relatively new kind of production called offset. Formerly, hot lead was molded into type set into lines in reverse order. Ink rolled directly onto it in a process called letterpress.

An image from the negatives used in offset are transferred to light-sensitive metal plates with ultra-violet light. The metal plates, like photographic film, is developed. The plates have a water repellent lacquer coating that ink sticks to and a gum preservative to protect it.

FINALLY, THE plates are placed on a machine called the press. Inked plates roll up against cylindrical "blankets." The reverse image on the blankets is then pressed against rolls of newspaper. Each roll weighs 1,000 pounds and is 58 inches wide. Unlike letterpress, which can print only one side of a page at a time, each side of the paper is printed simultaneously in the offset process.

At Observer & Eccentric Newspapers, the press is a three-story high machine that can print up to 60,000 papers an hour with a maximum of 64 pages at a time.

Besides black ink, combinations of yellow, red and blue ink are used to produce the color pictures you see in the paper. Dot screens determine how much of each color of ink is used.

The press is also used to fold newspaper into a maximum of eight sections at a time. Once its folded, the newspaper is carried by conveyor to the mailing room where papers are counted, stacked and tied into bundles by machine.

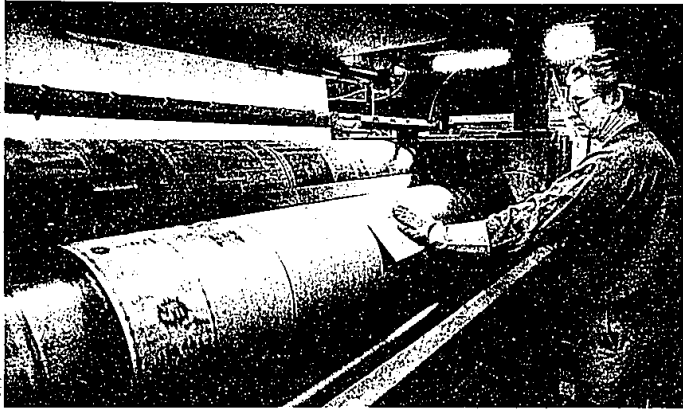
The same conveyor then carries the bundles out to trucks for delivery. It sounds like a long, complicated process, but modern newspapers find it a more efficient way of providing a better quality product for our readers.



Reporter Bill Casper, a Canton Township resident, writes a story for the Redford Observer on a video display terminal. This computer used for word processing allows type to be changed and moved around the screen.



Phil Peabody of Roseville uses a machine called an ECRM. This machine uses a laser beam to print a halftone on paper without first using a negative. A halftone is really a photograph that has been changed into a series of dot patterns.



Changing plates on the three-story high press used at Observer & Eccentric Newspapers is Dan Shay. The metal plates, which are light sensitive, have first been burned with ultra-violet light and coated with a lacquer to which ink will stick. Both sides of the paper are printed simultaneously in this process of printing, called offset.



Photographer Gary Caskey of Plymouth prepares a negative for printing on an instrument called an enlarger in the darkroom.



A conveyor carries newspapers to the machine located in the background where they are counted and stacked. After the papers are "stuffed" with advertising inserts as they are carried along the conveyor, they will later be tied by another machine and carried out to trucks waiting to deliver the bundles to carriers and newstands.

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