

RADIO

Prints Radio Newspaper

A new communication system, called Ultrafax, can send a million words a minute, including illustrations, by television and radio relays.

► TELEVISION, radio relays and facsimile are combined in a new communication system called Ultrafax, demonstrated in Washington by the Radio Corporation of America. It reproduces in the receiving station a full page of printed or written matter with illustration, as is done by facsimile, but it does it at television speed, and it can send a million words a minute.

As explained by David Sarnoff, president of RCA, one possible development with Ultrafax is the exchange of international television programs achieved on a transoceanic basis. A service of television and Ultrafax would permit the same receiving set to bring various types of publications into the home without interrupting the program being reviewed. Special attachments to the television receiver would be required.

He pointed out the possibility of the establishment of great newspapers as national institutions and the instantaneous transmission and reception of complete editions in every home equipped with a television set.

The Ultrafax system, it was explained, combines the elements of television with the latest techniques in radio-relaying and high-speed photography. In regular service the transmissions could be radio-relayed any distance by using the commercial radio-relay system towers which are now being erected for television. They could cross the ocean by means of air-borne relay stations in airplanes traveling in lazy circles over properly spaced locations. It would be possible to have the same transmitter that broadcasts the television program simultaneously broadcast the radio newspaper.

Ultrafax's remarkable speed, RCA engineers explained, is possible because full pages of information are transmitted as television pictures at the rate of 15 to 30 a second. The steps in sending include the preparation of data to be transmitted, to assure a continuous flow at high speed, scanning the copy with what is known as a flying-spot television scanner, transmission of the television image as ultra-high radio-frequency signals, and reception on a projection-type television kinescope, or picture tube, from which incoming messages are recorded on motion picture film, or ultimately directly onto photographic paper.

At the end of the transmission, the exposed film can be transferred quickly to a special processing unit developed by Kodak Research Laboratories. The film is passed through a miniature developing tank, rinsed and fixed in less than 15 seconds and dried in 25 seconds more. The Ultrafax

film may be enlarged to full-sized copy by means of a high-speed continuous process machine.

Science News Letter, October 30, 1948

MEDICINE

Cures Reported from Cancer Battlefront

► HERE IS WHAT is happening on the national cancer battlefront, as reported to the American College of Surgeons meeting in Los Angeles.

There were 343 patients cured of cancer and 132 who survived over a five-year period at The Tumor Clinic of King County Hospital, Seattle, Washington, according to Dr. Donald V. Trueblood, director.

Twenty-five out of 49 victims of cancer of the breast were cured over a five-year period, 34 out of 77 with cancer of the neck of the uterus and 22 of 38 with cancer of the body of the uterus, at the Tumor Clinic, Emory University Hospital in Atlanta, Dr. J. Elliott Scarborough, Jr., reported.

Of 244 patients with cancer of the large intestine on which follow-up work was done, 122 survived five years or longer at the Scott and White Clinic, Temple, Texas, Drs. George V. Brindley and R. R. White indicated.

"During a 12-year period, 4,000 patients were cured of cancer at the Veterans Administration Hospital, Hines, Illinois," according to Drs. Charles B. Puestow and Joseph R. Hufschmitt, and Philipp W. Zinkgraf.

The five-year survival rate in six upstate New York counties based on study of all cancer cases reported from 1940-1944 is 26%, data presented by Dr. Frederick S. Wetherell, of Syracuse Memorial Hospital, shows.

"A good deal of statistical evidence is now available which indicates that the curability of cancer is increasing year by year," Dr. Edward J. Ottenheimer of the Windham Community Memorial Hospital, Willimantic, Conn., told the cancer symposium.

In the seven-year period, 1935 to 1941, there were nearly 13,000 cases of proved cancer in Connecticut. "The increase in five-year survivals since 1935 ranged from 9% to 37%," he stated. "This striking change has not been confined to cancer of any particular organ, but applies in different degrees to cancer of every important site as well as to the total group."

Science News Letter, October 30, 1948



NEW NURSING BOTTLE—The mother is shown feeding the baby out of a new collapsible, disposable nursing bottle that requires no washing or sterilizing.

INVENTION

New Plastic Nursery Aid Eases Feeding of Babies

► IT WILL BE "Shellie-fed" instead of bottle-fed for modern babies whose mamas do not breast-feed them, if the hopes of inventor and producers of the newest nursery aid, called Shellies, are fulfilled.

The baby will get his formula from a collapsible bag that can be thrown away after use. Soft and cuddly Shellies, with their specially designed nipple, are said to give the baby much the feeling of security and warmth that breast-fed babies get while nursed by their mothers. Because the bottles are collapsible, there is no back-pressure, no air for the infant to swallow and consequently less need for "burping."

Shellies were invented by a registered nurse, Mrs. Adda May Allen, of The Plains, Va. They are produced by the Shellmar Products Corporation of Mount Vernon, Ohio. They are about to be placed on the market, on a regional basis at first, and will be available at drug, department and infant specialty stores throughout the nation "reasonably" soon, the manufacturers of the plastic bottle announced.

Shellies come in a long roll, each bottle sealed off from the next in line. They are already sterilized and since each is thrown away after its use, bottle washing and sterilizing are eliminated. They will cost about one cent apiece, but to use them mothers will also need a bottle expander, bottle rack, aluminum inner rings, plastic outer locking rings, special "natural-action" nipples and plastic shell caps to protect the