

## Manufacturers Promote Fiberoptics in the Local Telecommunications Network

by Holly Bigelow, Managing Editor

"Subscriber loop," "subscriber-feeder network," and "local loop" are some of the many catchwords used to describe the next big market in the fiberoptic industry: the local telecommunications network. Kessler Marketing Intelligence, Newport RI, predicts that the subscriber loop will account for 42 percent of all telephony optical fiber installations this year. Suppliers are coming out with a spate of products to anticipate the demand.

In 1987 fiberoptic long-haul and inter-exchange trunks will be completed between existing digital central offices (COs), according to Scott Esty, senior market analyst at Corning Glass Works, Corning NY. By 1988, existing copper feeder cables will be replaced with fiber, and by 1995, fiber will routinely replace copper in the last mile to the home.

The long-term outlook for optical fiber use in local loops is assured, but what's still unknown is what equipment vendors will need to supply and when the completely fibered network will become a reality, according to a recent report from International Resource Development, Norwalk CT. The unpredictability stems primarily from the AT&T divestiture and the attendant lack of central authority over the bulk of the U.S. telephone network, the report says. In spite of the unsettled market, however, manufacturers are pushing ahead to supply fiberoptic products for local-loop service providers.

### Defining the Loop

Defining the subscriber loop, and therefore the products designed for the market, is a problem (see Figure 1). Most telephony fiberoptic installations have occurred in long-haul trunk applications. Fiber is rapidly moving into the shorter-distance *inter-exchange routes* (CO to CO) operated by the local exchange carriers. The *feeder* portion of the network connects the CO directly to large business customers or to remote serving-area interfaces. From there, *distribution* lines travel along neighborhood streets, where they are connected by *drops* to the individual homes. "Technically the *subscriber loop* is everything on the subscriber side of the central office," said Esty. The term *local-loop* is often used to encompass both the short interexchange routes and the feeder network.

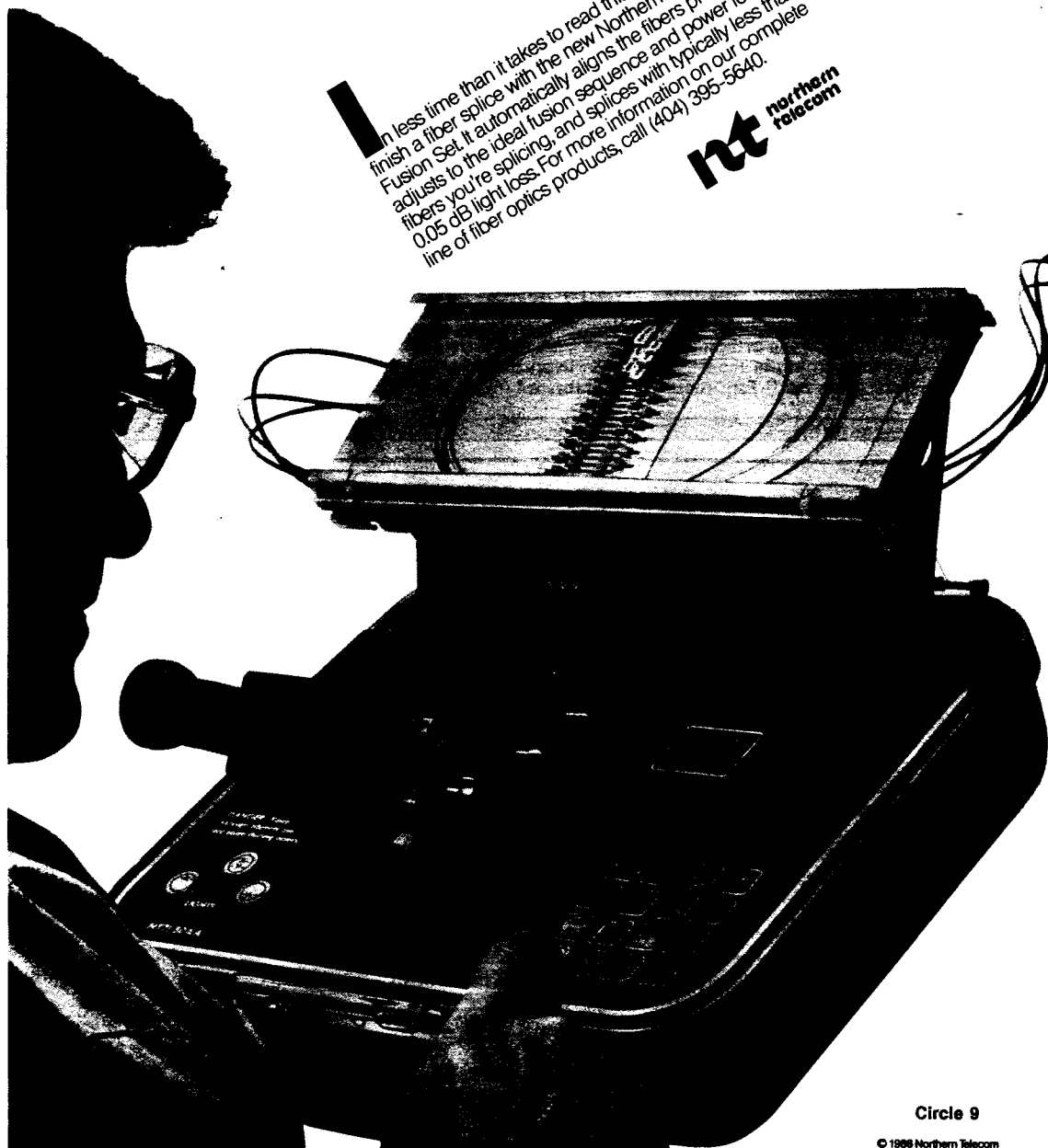
The evolution toward fiber is occurring separately in the local loop and the distribution network, according to Esty. Fiber is already being used extensively in the feeder portion of the loop, as the per-channel cost of fiber continues to decrease. Currently, Esty said that any new installation more

than 8,000 feet from the CO requiring transmission capacity of 150 or more voice-frequency circuits will routinely be done with fiber. Below that point, in the distribution cables

and individual drops to the homes, fiber is not yet practical, though it is being laid for some distribution networks on a trial basis only.

Fiber offers many advantages to the

metropolitan planner who can't predict the next growth surge, and who wants to remain flexible in order to meet future traffic demands. Once fiber is installed in the loop, the physi-



Less time than it takes to read this ad, you can finish a fiber splice with the new Northern Telecom Auto Fusion Set. It automatically aligns the fibers precisely, adjusts to the ideal fusion sequence and power for the fibers you're splicing, and splices with typically less than 0.05 dB light loss. For more information on our complete line of fiber optics products, call (404) 395-5640.

**nt** northern telecom

Circle 9

© 1988 Northern Telecom

25