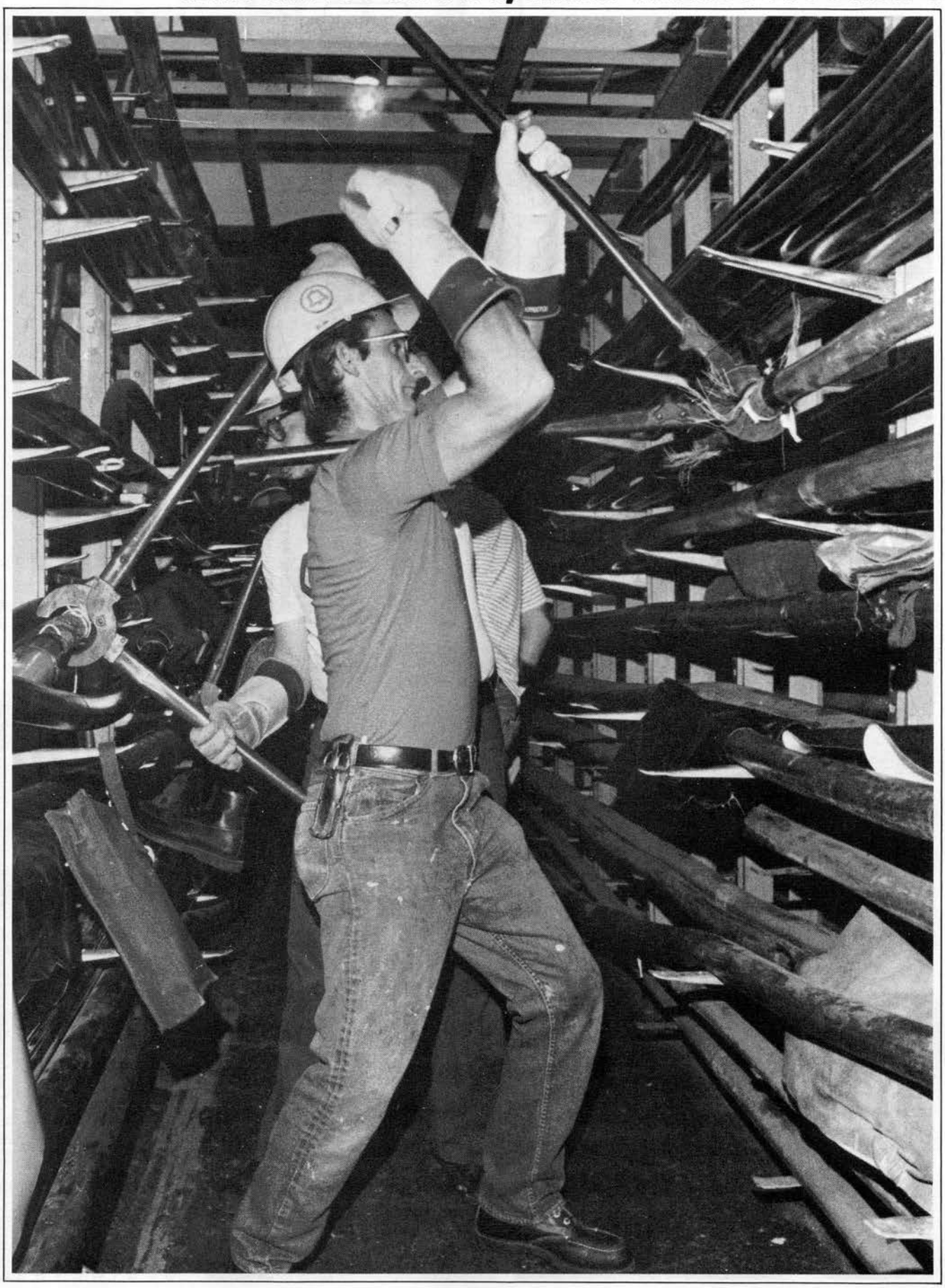
THIS ONE'S FOR YOU, MARY KEENEY . . . PAGE 4

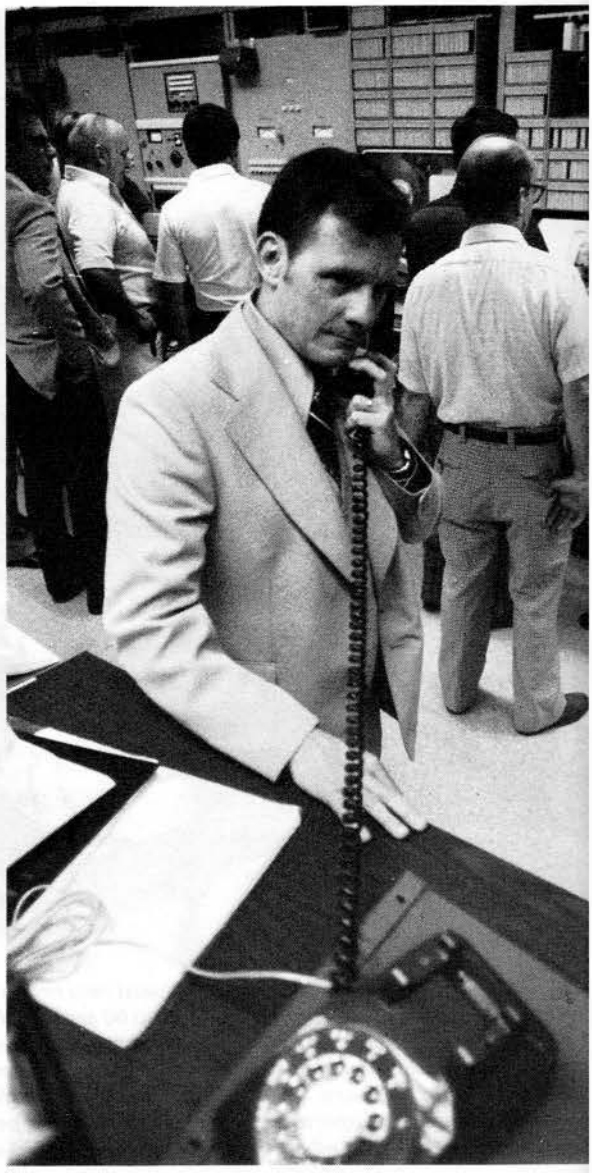


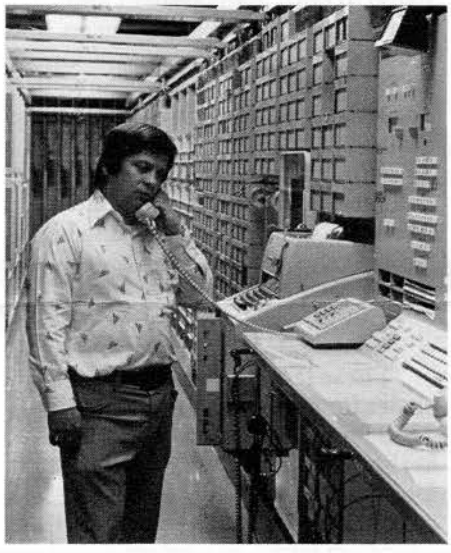
Worcester MA ESS Cutover on October 9, 1976.

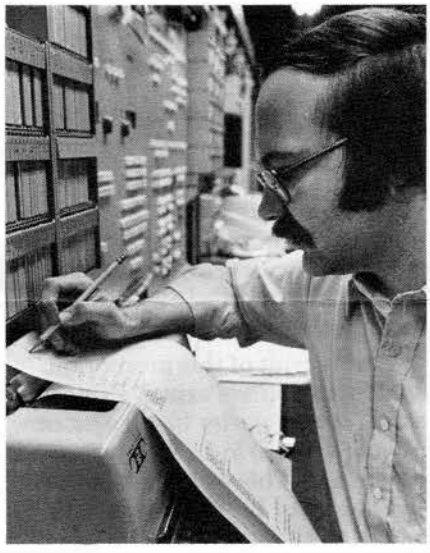
ON THE COVER — *At exactly 2 a.m., Saturday, Oct. 9, 50 cable splicers like Herb Prouty, front, and Jim Walsh began the Worcester, Mass., cutover by severing cable pairs.*

(Right) When the Worcester cut — the fastest in N.E.T. history — was complete, everyone's attention turned to the control unit. Network Manager-ESS Bill O'Brien made one of the first calls switched by the new system.

(Below) As cable was being cut in the cable vault, 35 craftpeople, among them CO Switchman Bill O'Connell, front, and Equipment Installers Kevin Buckley and Timothy Brewer pulled coils in the frames.







New England Topics, Nov. 8, 1976

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Moments after Worcester's ESS cutover, cable splicers in the Chestnut Street vault like, from left, Gene Toto, Norman Brenner, Dave Beech and Paul DeJoie began clearing the severed cable.

Mary Keeney can't remember the last call she made before going to bed Oct. 8.

"I probably called a neighbor or friend," the Worcester, Mass., customer said, "about some little thing."

The next morning, however, Mary noticed that her dial tone sounded slightly higher in pitch and there was a single rather than double ring on incoming calls.

What had happened while Mary and most of the rest of Worcester were sleeping was a 180-second operation which moved the telephone service of Worcester's 65,000 customers from 1935 to 1976.

What was phased out was a step-by-step switching office which had served Worcester since 1935. What came in — during the largest single cutover of its type in the Bell System — was an Electronic Switching System, the latest word in switching offices.

The ESS has all those gee whiz things like transistorized central control and memory. And it can handle 110,000 calls an hour, which is just about a thousand times faster than the equipment it replaced.

Mrs. Keeney had heard about ESS — "not about the equipment itself, but about the services you can get with it."

It was her neighbor, Terry DiTaranto, an operator in the Worcester building on Chestnut Street which houses the two new ESS machines, who told her about it.

"The company's gone all out to make the most of the sales potential of this ESS," Terry said.

Worcester customers were notified — via newspaper and radio ads and letter — about the various custom calling services and about the introductory offer of getting Touch-Tone® at a reduced price.

An ESS sales task force was set up, and 18 specially trained service reps and their backup force of service order writers and clerks began the special promotion back in September.

The reps followed up on every newspaper ad coupon sent in by customers and on every sales referral card from Western division employees — who had stepped up their on-going sales referral program.

"I was involved in the sales referral campaign," said Terry, "and when I found Mary Keeney was interested in Touch-Tone, I sent in a referral card for her."

Mary saw what the ESS is all about when she and Terry visited one of the two Worcester ESS offices at 15 Chestnut St.

There was the system's control center, a sleek, blinking console housing an electronic brain which coordinates and commands all system operations.

Then there were the rows of transistors which silently switch calls in a billionth of a second.

But the only sounds were craftpeople "talking" to the machinery on a teletypewriter and the occasional clicking of one of the few electromechanical relays in a switching system that's almost entirely transistorized.

To Mary, for whom the telephone set symbolized all there was to telephone service, the visit was a revelation.

"I never imagined it took all this just to complete a call," she said.

Also a revelation was the fact that ESS, because of its self-testing abilities and backup parts, is out of service for less than two hours every 40 years.

"I wish my home appliances were that efficient," Mary said.

Or, she might have added, as efficient as the conversion itself.

The ESS cutover, on Saturday Oct. 9, was done at 2 a.m. — traditionally the hour of lowest calling volume — to prevent as little disruption of service possible.

About 1:45 a.m., deep within the basement cable vault, 50 craftpeople carrying outsized shears waited for the signal to cut the cable — thereby disconnecting about half of Worcester's customers from the old system.

Above in the old step-by-step equipment frameroom, another 35 craftpeople anticipated pulling heat coils to disconnect the other half.

Both the cable and coil operations were necessary since all the personnel required to do a complete cable cutting job could never fit in the vault.

At 2 a.m., a loud whistle blew. The men in the vault began cutting cable while those at the frames pulled coils. Twenty-three seconds later, both operations were completed and pockets of laughter began to break the tension.

A few moments later, CO Repairmen George Montville and Phil Wrightson, who had been waiting at each of the two ESS control centers upstairs for the signal to rev up the ESS computers, got the word. They immediately typed out the messages on the ESS teletypewriters instructing the computers to start operation. And almost before they took their fingers off the keys, the ESS switches began to move.

Within three minutes of the sound of that two o'clock whistle, 65,000 Worcester customers were on line. And the Worcester cut went down as the fastest ESS cut in N.E.T. history.

Network Manager-ESS Bill O'Brien, who like hundreds of others from throughout New England had spent 13 months preparing for the cut, turned to a colleague shortly after the conversion and said, "That didn't just happen you know."

"You better believe it," said Frank Enos, network staff supervisor and network's staff man at the Worcester cut. "The company has been installing Electronic Switching Systems since 1967. And the Worcester cut, although the largest in the system, is just part of our total ESS conversion program." Worcester had been on the books as the site for the company's 24th No. 1 Electronic Switching System for several years.

The Worcester step-by-step office was built in 1935 and it had grown to become the largest step-by-step CO in the country and could not provide top quality service to much more than 65,000 customers.

By 1973 it became evident that it would be more economically feasible, said Enos, to accommodate additional growth in Worcester with ESS.

The two ESS machines in service now could eventually serve more than 100,000 customers in the area.

"One of the most important reasons for the expansion of ESS," said Enos, "is the improved service it gives. Its speed is well known. But also, maintenance problems and costs are fewer and the trouble report rate in areas served by ESS is about 50 per cent lower than in areas served by the older electromechanical systems."

As of mid-October there were 1,000 electronic systems switching local and toll calls in the Bell System. And five more go on line each week.

Currently, 12.5 per cent of N.E.T.'s main stations are served by ESS. By 1981, this figure will grow to about 31 per cent.

Right now, there are 24 No. 1 ESS offices — the first type ESS developed — switching local calls in large metropolitan areas. There is a No. 2 ESS — which switches local calls in suburban areas — in Ashton, R.I. And a No. 3 local ESS is scheduled to go on line to switch calls for customers in rural South Berwick, Me., in 1977.

Also scheduled for ESS next year are step-by-step offices in Portland, Me., and Maynard, Billerica, Roxbury, Sharon and Foxboro, Mass.

Within the next 10 years, 80 ESS machines of varying capacities are scheduled to go on line in N.E.T.

But all that takes more than even good planning.

In Worcester, for example, it took two years of coordinated efforts of hundreds of people in network, engineering, outside plant, plant, equipment installation and commercial.

There were people like Network Conversion Coordinator Vic Ceccarini and District Network Manager George DeShaw. And Division Manager Barry Sloane, who headed the conversion team.

Then there was Project Engineer Jake Kilrain, who had responsibility for the EI and engineering portions of the job.

They all worked with Records Supervisor John Murphy, Network Manager-Trunk Coordination John

(Continued on page 8)

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Dolan, Network Manager-Line Coordination Milton Connors, Outside Plant Manager Jim Dargan, EI Project Manager Sam Howell and their crews on various aspects of the job.

For example, cable pairs which connected Worcester customers to the CO had to be duplicated and connected to the new office. So records were poured over and cable pairs reassigned. Network CO people verified the existence of cable pairs. Then outside plant forces "half-tapped" or pulled cable pairs into the new office.

Equipment installers alone spent some 110,000 hours between October, 1975 and July, 1976 putting in the ESS equipment. At the peak of the project last winter more than 125 equipment installers from throughout New England were working on the project.

After EI completed the installation last July, the massive job of testing began. Calling pathways were tested and there were checks of the compatibility of old and new systems just before the cutover.

"We had to make sure," said Kilrain, "that the new equipment was not interfering with normal transmission in the weeks before cutover.

"And we had to make sure the customer got good service throughout the project."

After all, Mrs. Keeney, it's all for you.

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