

# Bell System "Superswitcher" More Efficient And Versatile

Superstars may come and go, but the Bell System's biggest Electronic Switching System (ESS) -- dubbed the "superswitcher" -- continues to get better.

Since its debut in Chicago in early 1976, the superswitcher has gone to work in 55 locations across the country -- handling 30 percent of all long distance phone calls.

The superswitcher, actually a stored-program controlled electronic switch, was the first to switch telephone calls through the Bell System network in digital form. It was designed to handle 550,000 calls per hour -- four times more than the electromechanical system it replaced. It also needed only one-fourth the space of the earlier system and cut maintenance costs by more than half.

Subsequent improvements by Bell Laboratories engineers have reduced its space requirements, energy needs and operating costs for many equipment frames by an additional one-half to three-quarters. Also, its maintenance and call-handling capabilities have been improved through software innovations. For instance, a sophisticated new "language" -- called EPLX (ESS Program Lan-



**BETTER THAN EVER AFTER FIVE YEARS--**

Jim Foster, an engineering supervisor in the Bell Laboratories "superswitcher" development labs at Naperville, Illinois, makes a series of tests on

a unit of the No. 4 Electronic Switching System (ESS), which recently celebrated its fifth anniversary in January.

quage Extended) -- enables programmers to program the system

more efficiently and accurately. The system is designed to operate

reliably -- with only a few hours downtime during its service

life of about 40 years. And hardware and software packages called "generics" are issued yearly to give the system new features as well as make it more economical.

The first "generic" added the feature of Common Channel Inter-office Signaling (CCIS) which passes call-handling information over separate high-speed lines instead of using the network's voice-circuit paths. The rapid nationwide introduction of this feature is speeding up the connection time for long distance calls and paving the way for new customer services.

With the second "generic," compact integrated circuit memory devices -- operating four times faster than earlier memory equipment -- were put to work in the system. A digital "echo suppressor" was added to improve the quality of transmission over long distances -- especially on satellite circuits.

The superswitcher became an overseas traffic switcher in 1978, when it was equipped to handle two international signaling standards.

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...Public Relations



**Larry Randolph**  
...Account Executive



**Charles Farrar**  
...Corporate Planning



**Fred Harris**  
...Switched Services

### Bell People Make The System Work



**Rhonda Kendrick**  
...Engineering

In Charlotte these people make life a little easier for you; thanks to Southern Bell.

The Bell System is on the move and these Southern Bell employees have and are moving right along with it.

They come from a wide range of backgrounds...high school graduates to masters' degree recipients. They didn't start at the top...many, in fact, started as operators and telephone installers...but their knowledge and hard work have helped them move up in their profession.

With America's largest corporate employer, these Charlotteans have found there's a place to be an integral part of the giant telecommunications industry.

They sought the opportunity to advance by qualifying themselves to move into jobs that more fully utilize their talents and reap better financial rewards...jobs that include highly technical skills and administrative management.

Opportunities in Charlotte's Southern Bell operation are enhanced by the System's paid employee benefits. Health, dental, and educational benefits only mention a few of the many extras that come with employment with Southern Bell.

These Bell employees are a part of the 4,000 person work force in Charlotte-Mecklenburg.

Everyday they and their co-workers endeavor to give you the highest quality telephone service possible.



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**John Johnson**  
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