When AT&T bid on the US federal government's new private network called FTS2000, it was clear that competition between service providers bidding on this contract would be intense. To win this contract, it was realized that this network would have to be robust, reliable, provide a wide array of services, and be very efficient. It was therefore decided to adopt a Dynamic Nonhierarchically Routing (DNHR) traffic architecture, which had proved economical and successful in the AT&T public switched network during the mid-1980s. In this case DNHR had to be adapted to the eighteen 5ESS™ switches which would form the backbone of the ITS2000 network. The adapted routing strategy was called DFR, Dynamic Flexible Routing, which like DNHR took advantage of diverse customer calling patterns over a wide geography area in this nationwide network serving four time zones. AT&T was awarded 60 percent of the ITS2000 contract for service beginning in October 1989, and the proportion of traffic grew to 76 percent by December 1996. In its initial stages, FTS2000 was a highly volatile network with call attempts offered to the network increasing in monotonic steps. Customers were added as large federal agencies transitioned to the new network, and it was not uncommon for network load to substantially increase over a single weekend, even by as much as fifty percent.

Therefore planners realized the need for an agile, short-term planning tool adapted to the volatile FTS-2000 environment, and thus the system called PATTERNS was developed. PATTERNS incorporates the same network design algorithm used for DNHR, in which the efficiency of routing pattern changes often makes it possible to accommodate moderate new traffic loads and avoid adding new circuits altogether. PATTERNS generates new routing patterns for changes in network loads, and recommends trunk augments where necessary. The algorithm runs in a few seconds on a Silicon Graphics workstation, and has a mouse-driven, simple, and user-friendly interface. With the PATTERNS capability, it is easy and fast for network planners to experiment with multiple what-if scenarios, to determine the most cost-effective method for serving new network demands. Routine planning for the backbone portion of the network is performed by a single planner. All servicing for the backbone and access circuits which connect the government customer locations is handled by a team of 11 people. PATTERNS provides data management and a multitude of reports, displays, and engineering support for the team, with many of the reports and displays provided to the government customer.