SS7 Network Architecture
The Signalling Transfer Point (STP)

What would you say is the key element in the PSTN (**Public Switched Telephone Network**)? While there are a number of key elements, it really is the switching location that makes it a network. Switches are the "glue" that holds the PSTN together.

The SS7 is held together by a digital sister of the switch known as a Signalling Transfer Point (STP). The requirements of voice switching and digital transfer are different, but they resemble each other in some ways. The PSTN requires circuit connections of voice lines. The SS7 requires the use of continuously available transmission lines. The infrastructure of the network provides that capability in whatever "flavor" happens to be standard in the network. Thus the permanent connections called **links** may be individual channels in a T1 or E1 or any other transmission type that is readily available.

The job of the STP is to examine the destination of messages it receives, consult a routing table, and send the messages on their way using the links that are selected from the routing tables. The routing becomes necessary because, like the switch, the STP may have numerous links to end users of the network. And, like the switch, it may have links to other STPs to perform the routing to locations with no direct connections to the STP which performs the first routing.

Telecommunications reliability requires redundancy. For this reason STPs are always paired. Links connect the pair and allow messages to "cross over" from one to the other. Because of this, the links are referred to as **Cross Links**, or simply **C** links.

As you will see, link names are defined by what they connect and, sometimes, by the function they perform. They are named using the letters of the alphabet (A-F). Knowing the types of links that make up the linkset brings an immediate knowledge of the type of network nodes (without the specifics of the applications working there) that are linked.