

Why SS7?

Problems in the PSTN

For the first fifty years of telephone communications things moved at a fairly even pace. Demand for phones increased steadily, peaking at the time of the Stock Market collapse. The Great Depression applied the brakes to the demand for phone services while the technology continued to increase, albeit more slowly. With the advent of World War II, the demand for phone services began, once again, to rise sharply. Initially sparked by military requirements, this demand was further fueled by the needs of a multitude of industries gearing up for the war effort.

The problems of meeting this demand were harrowing. For one thing, not all nations were party to any standards agreements which would facilitate the handling of international telephone calls. In many nations, trying to make a telephone call was a lesson in handling frustration. That lesson was only compounded when a call originating in one nation had to be connected to a phone in another nation.

Telephone companies found it difficult to meet the demand in wartime. After the war meeting the demand would become impossible. During the two decades following World War II demand for telephone service reached astonishing proportions. New businesses popped up overnight like mushrooms. Existing businesses experienced growth spurts that would double or triple their demand for phones in a single year. Comfortably employed workers gained the confidence to have second and even third phones installed in their homes. Areas where there had been few phones before the war now pressed to be able to become a part of the emerging world of modern communications.

To answer this demand, telephone companies could do little more than add more wires. A thousand new telephones might result in ten thousand new conversations every day. Those ten thousand conversations would require new wires to carry them. To make matters worse, telephone traffic doesn't occur at an evenly paced rate. There are peaks and valleys in telephone usage. Those thousand new telephones might well result in four or five hundred new conversations occurring at the same time.