

## Telephone Switch Considered Harmful

By Dirk Hart

Recently I was called on to help setup a point to point T1 solution. The T1 and telephone equipment were supplied by a third party as was the CSU/DSU. This arrangement made sense at the time since they were providing the circuit, it was fractional T1 - 17 voice channels and the remainders were to be data channels.

I arrived on site with a pair of routers to set up a bridge, but I wasn't getting anything from the CSU/DSU. The telephone provider started asking me all sorts of questions about the circuit such as framing, line code and clock source. After quite some discussion back and forth I impressed upon these folks that these question are properly asked of the circuit provider.

In a remarkably short time they came back with all the right answers and, as I was onsite, I pressed the buttons on the telephone management station as directed, and they setup the remote CSU/DSU to match. Soon I had a connection and was able to finish up with the routers.

A couple of lessons come to mind. First, if the telephone gear goes down, the CSU/DSU goes down as well and the customer will be without voice and email both. Second, despite the fact the circuit was up, I could not work on the CSU/DSU, as the telephone folks were unwilling to focus on the CSU/DSU until the voice side was running. This introduced a lengthy and costly delay for my client.

In summary I will not hesitate in the future to recommend an external CSU/DSU in favour of a telephone-switch-integrated unit.