ADSL Layer Testing

Troubleshooting the customer loop – ADSL central office emulation with Aurora Presto.

Application Note ANPADSL-2

xDSL

TrendCommunications

TESTING AND VERIFYING THE REMOTE MODEM EQUIPMENT

Being able to replace or simulate the telecommunications network is a crucial requirement in ensuring that the customer premises equipment is fault free in any type of telecommunications network. For ADSL where the line quality can be indeterminate, this requirement is even greater. Simulation of the ADSL network provides some key advantages to the technician:

- **Modem Faults** can be quickly determined
- **Confidence in the operation of the customer equipment** can be provided prior to service turn up
- **Interoperability problems between the DSLAM and the ATU-R** can be assessed
- **Independent Maximum through-put tests** can be made

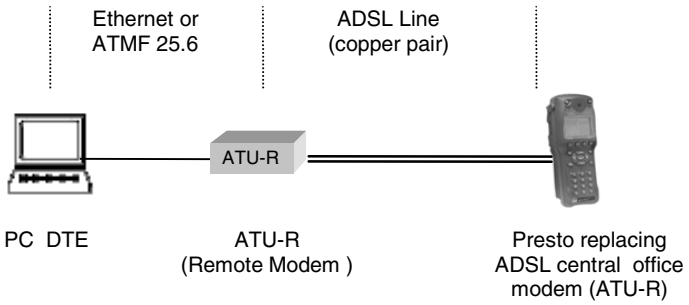

Figure 1 Testing the complete subscriber system using the Trend Aurora Presto

The Trend Aurora Presto ADSL service tester can be set to operate as the central office ATU-C line card. A typical test configuration is shown in figure 1. It is possible to fully verify all three data levels with the Aurora Presto tester checking:

- **ADSL layer** connection between the remote modem and the tester
- **ATM layer** and cell stream effectiveness by generating PING payload traffic or ATM cells containing BERT patterns.
- **IP routing** directly to the customers PC or Video equipment to test the application pathway.

The Aurora Presto is unique amongst handheld testers in fully supporting the ATM layer. This allows a simple set of tests to be run to provide total confidence in the customer modem and terminals by testing locally, or the complete line and customer equipment if testing takes place from the central office end of the line.