

APPLICATION NOTE

ADSL Subscriber Management Station

Carrier Division



With the rollout of ADSL services across the UK now starting to happen, many businesses are looking at ADSL as a method of interconnecting their remote offices and home workers. For a large ISP with hundreds, if not thousands, of subscribers cost is not an issue, and subscriber management solutions offered by Redback or Cisco may be used. However, for smaller businesses with less than thirty remote sites these huge costs cannot be entertained.

What options exist for these customers? The answer is AP3000, and the multi-bridge application software release V5.8 supporting up to 32 simultaneous remote sessions.

In this application, all remote sites are within the same local exchange area allowing a small DSLAM to be co-located within the exchange. Alternatively, the Telco could use it's own DSLAM equipment and simply provide a 'bitstream' service to the customer. Each remote user has an ADSL modem providing a simple 10BaseT LAN port. Since ADSL uses ATM as the transport mechanism, adaptation from LAN frames to ATM cells is required. Here AAL5 and transparent mode RFC-1483 MPOA encapsulation is used with a single PVC connection per user for connection to the central office and network server equipment. Each ADSL line is terminated at the DSLAM from where the ATM PVC is switched back to the central site. With up to 32 users, this means there could be 32 incoming PVC's at the central site, each of which carrying a single RFC-1483 traffic stream. What is needed now is an ability to terminate these PVC's and reconstruct the multi-protocol LAN traffic at the central site for connection to the Servers, and also to drive the return path.



How does the AP3000 fit into this application?

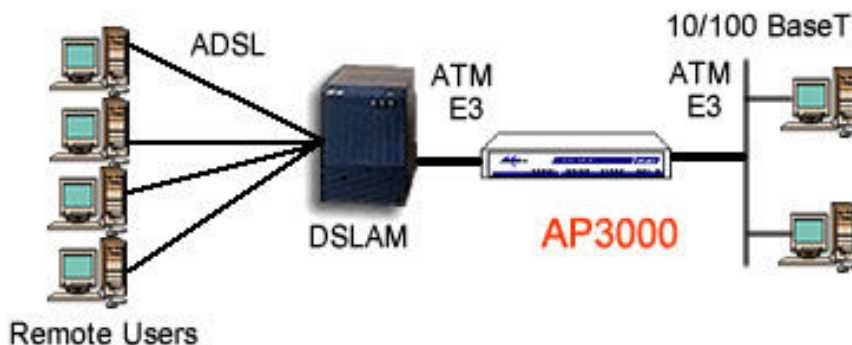


Figure 1. AP3000 as ADSL termination unit



The ATM connection from the exchange situated DSLAM to the central office will typically be E3 or, costs permitting, STM-1. This is ideal for AP3000 which being modular, may be fitted with the correct ATM UNI Module from the wide range available. That is all that is required as far as APX equipment, since the basic AP3000 chassis provides the integral 10/100BaseT LAN port and application code.

It is a very simple configuration task to configure the individual PVC's for connection to the remote ADSL users. As users are added, more PVC's may be configured allowing the system to grow with demand.

The equipment required for the application detailed here is:

Qty 1	AP3000 Chassis	Part Number: 80-07-003
Qty 1	E3 ATM UNI Module	Part Number:80-07-203

