Higher Layer Protocol Analysis from ATM Networks using AuroraForte

Higher Layer protocols carried above the ATM transmission layer can be monitored and decoded by Aurora Forte in combination with an Ethernet based protocol analyzer such as Trend Observer. This capability can be applied to networks used for IP, 3G/UMTS, Frame Relay, SS7 etc.

Application Note ANFORTE 12

Testing the World's Digital Networks

TrendCommunications

PROTOCOL ANALYSIS

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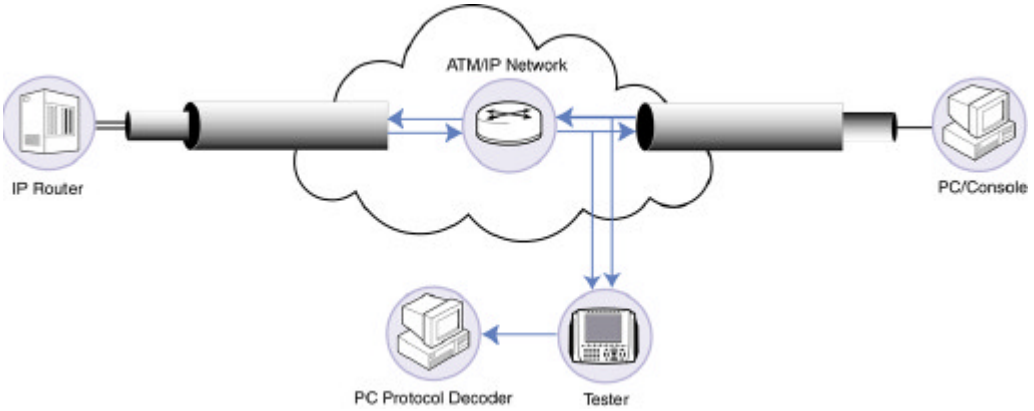

This ability allows the network engineer to monitor and analyse the performance of data transmission above the ATM layer. Any protocol type being carried within an Adaptation Layer type 5 (AAL5) can be converted to Ethernet format for analysis. Aurora Forte can easily be connected to ATM network links such as E1, E3, DS1, DS3 and OC3/STM1 for unobtrusive monitoring using either protected monitor points or fibre optic splitters. With dual interfaces fitted to Aurora Forte it is possible to monitor both the Forward and Backward network directions, thus enabling a full protocol trace to be observed.

Aurora Forte autolearns the ATM layer activity and allows the user to select upto two virtual circuits carrying AAL5 type traffic

for protocol monitoring. The protocol data is re-assembled from the ATM layer circuits and converted into standard Ethernet frames for output on the 10baseT port of Aurora Forte continuously and in realtime.

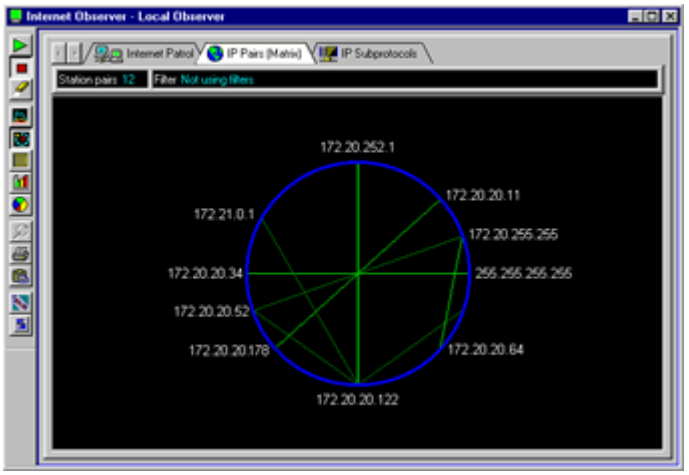

Figure 1 Address Pairs Matrix

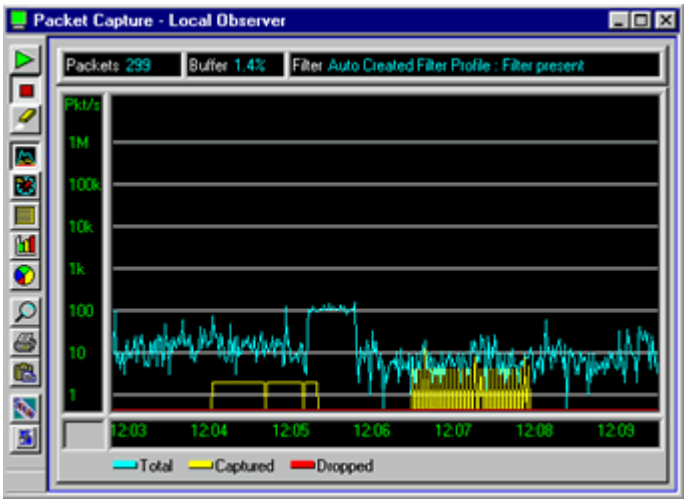

Figure 2 Packet Rate Analysis

Aurora Forte in combination with Trend Observer protocol analyser can capture and decode the message trace from the ATM network. Example screen shots are shown above and on the following page.

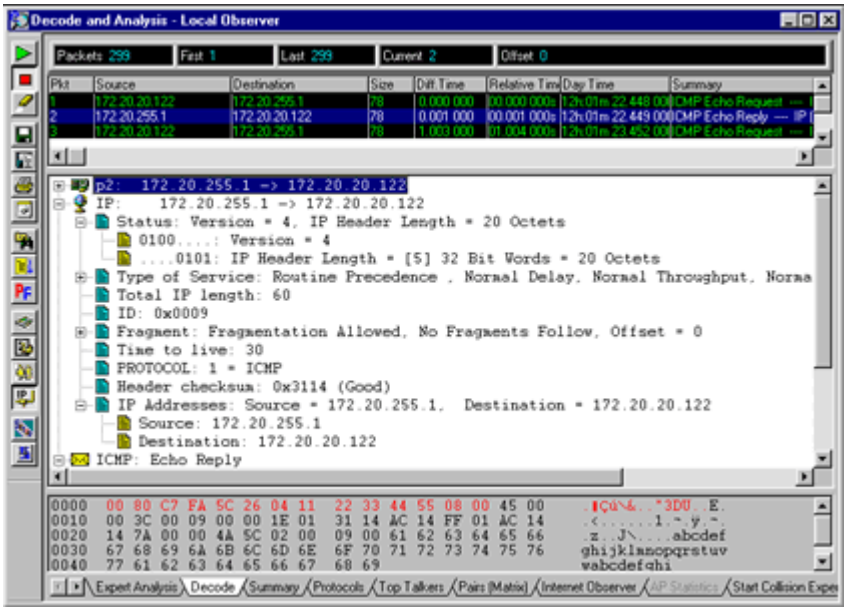

Figure 3 Protocol Decode and Analysis

The functionality detailed above is available in the latest release of Aurora Forte software. Please contact your Local Vendor or the Trend Communications Ltd Customer Support. Call the Hotline (tel: +44 1628 851085) for further information.

AuroraForte

AuroraForte is a multi-port field portable tester for AMT and UMTS network testing. It provides transmission testing, ATM layer testing and IP testing on interfaces including:

E1, E3, DS0, DS1, ATMF25.6, G703 Electrical, STM1/OC3 single and multi-mode and a number of other interfaces.

The AuroraForte provides a large number of test functions including:

** Physical layer Transmission testing*
** ATM BERT*
** ATM quality assessment*
** Multiple cell-stream handling*
** Multi-interface support*
** Traffic generation across 256 VCC, monitoring on 1024 VCC*
** O.191 of Service testing*
** Traffic Policing (to monitor a committed service level agreement)*
** F4 and F5 Operations, Administration and I.610 Maintenance testing (for path and circuit route testing)*
** Support for IP ping and various encapsulation types, and with variable length payload*
** Semi-permanent Virtual Circuit SVC support,*
** Management of results and configuration files via PC on Ethernet interface for simple operation*
** Large high resolution colour display and graphical ICON based menus for easy configuration of tests*

Aurora Forte is popular with a number of national and global 3G operators who recognise its simple yet powerful operation, its flexible future proof architecture and its comprehensive capability from physical to Protocol layer testing.