TECHNICAL SUPPORT NOTE
Configuring the Total Access 604/608 for FRF5 or FRF8

Introduction

This Technical Support Note describes how to configure the TA604/608 for either terminating Frame Relay into an ATM network (FRF8) or encapsulating Frame Relay over an ATM network (FRF5). This is relevant only if the application has an external router using Frame Relay off the V.35 port of the TA604/608.

Establishing a Console Session

To configure the TA 600 series IAD, it is necessary to establish a console session to it using a VT-100 terminal. Terminal parameters are as follows:

Data Bits: 8
Parity: None
Stop Bit: 1
Flow Control: None

After a connection is established, you will see a LOGIN prompt. There is no password or login set by default, so you can get to the main menu by simply pressing ENTER. CTRL-R will refresh the display.

Setting Up Physical And ATM Layers

Configure WAN

Go to TA608 IAD /WAN and make the following settings:

- **DSLAM Type** = Lucent Stinger or Nokia D50
- **Layer One Interface** = Stinger SDSL or Nokia SDSL
- **Layer Two Protocol** = ATM will appear
- **DSL Training** = Fixed Rate
- **DSL Rate Config** = the rate specified by the carrier.

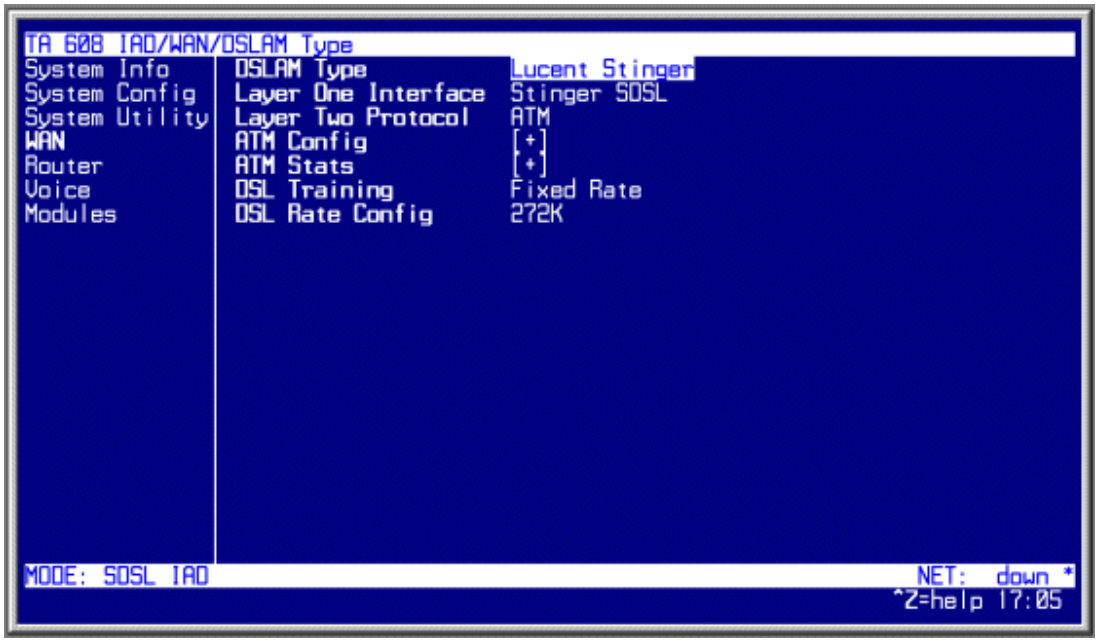

Figure 1

Configure ATM Parameters

Select the ATM Config menu. Change the following:

- **Idle Cells** = ITU or ATM Forum
- **Data Scrambling** = ENABLED or Disabled

These parameters are available from your ATM service provider and must match the provisioning of the ATM switch or errors will occur.

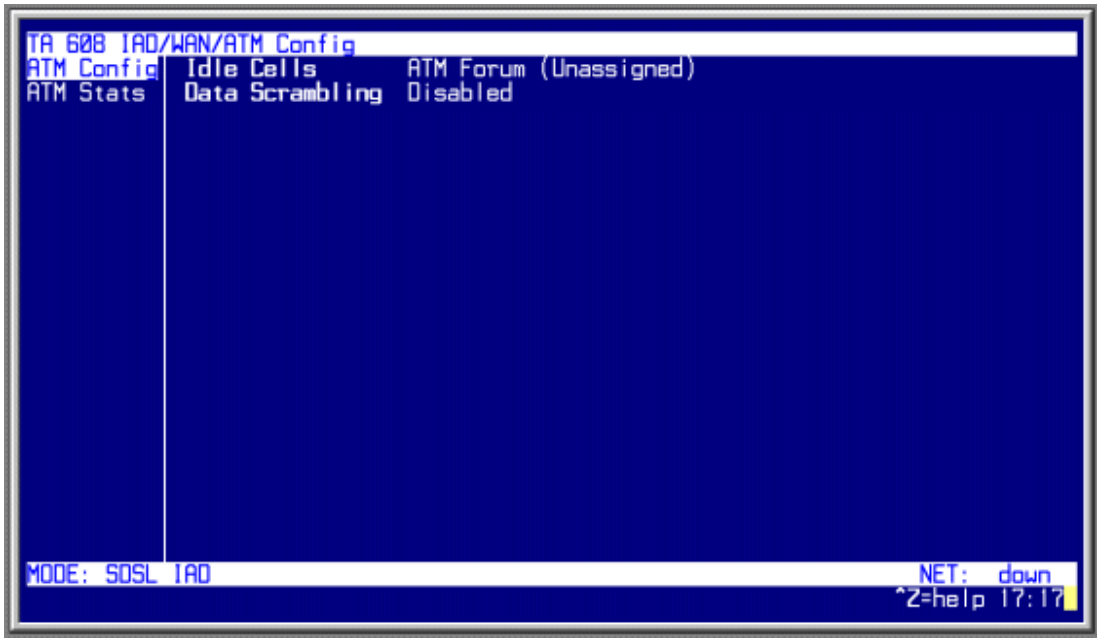

Figure 2

Select ATM/Frame Relay Interworking (IWF) function mode

The entire configuration for ATM/Frame Relay interworking function is found under TA608 IAD/ Module / V.35 Setup / ATM/FR IWF.

- **Mode** = FRF5 or FRF8
- **FRF5** = Network Interworking Mode (Frame Relay Encapsulated OVER ATM)
- **FRF8** = Service Interworking Mode (Frame Relay CONVERTED to ATM)

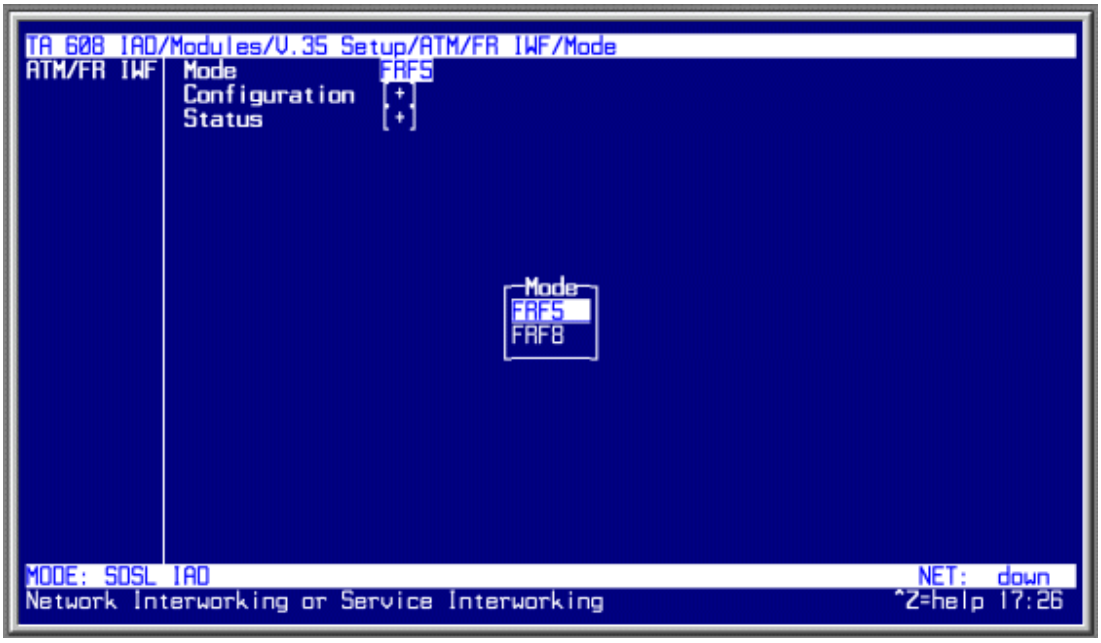

Figure 3

Setting Up FRF5

1. Select the Configuration menu under FRF5. The menu items are:

    - **LAN FR Maint Protocol** = Frame Relay maintenance or signaling protocol between local V35 port and the attached DTE port.

      Support Annex D (ANSI, default), Annex A, CISCO LMI, or Static (no signaling).
    - **LAN FR Poll Timeout T392 (5-30)** = T392 for signaling protocol, typical value 15. No meaning if Maint Protocol is Static.
    - **FRN Port Config** = These are logical Frame Relay ports over ATM. Up to four ports are supported with each port supporting up to 4 DLCIs. (This will be discussed in more detail below.)

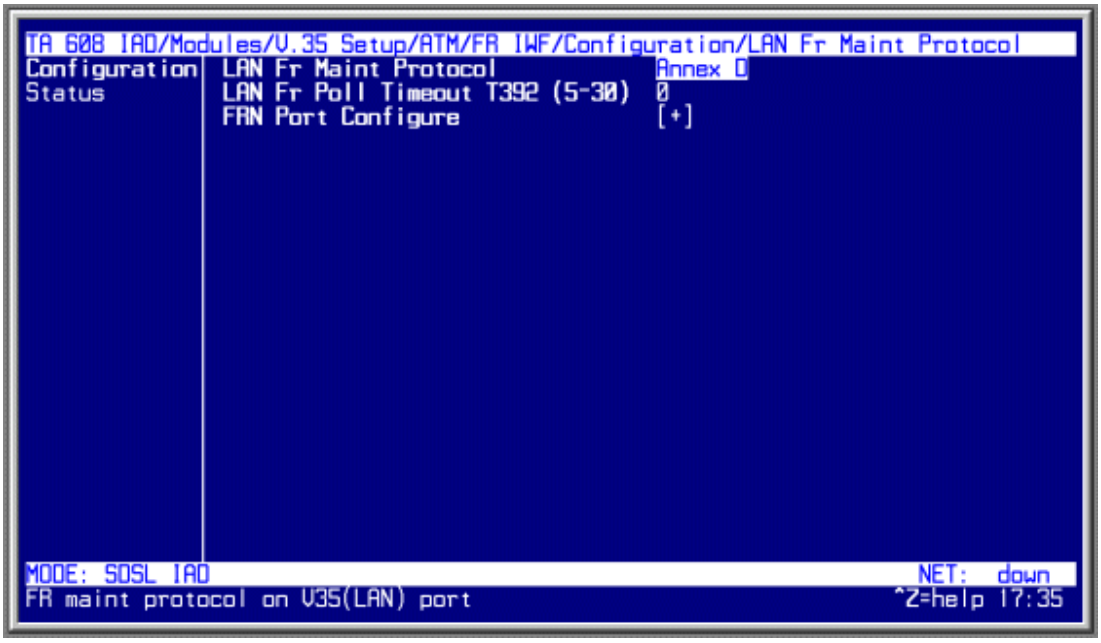

Figure 4

2. Set up individual DLCIs under Frame Relay Network Port Config. Enter the **FRN Port Configure** menu. Now right arrow over to create an entry. With your cursor over the number 1, you can press "I" for insert to create multiple PVCs. Also, by entering on the number 1, you will transpose your screen from horizontal to a vertical view as shown below.

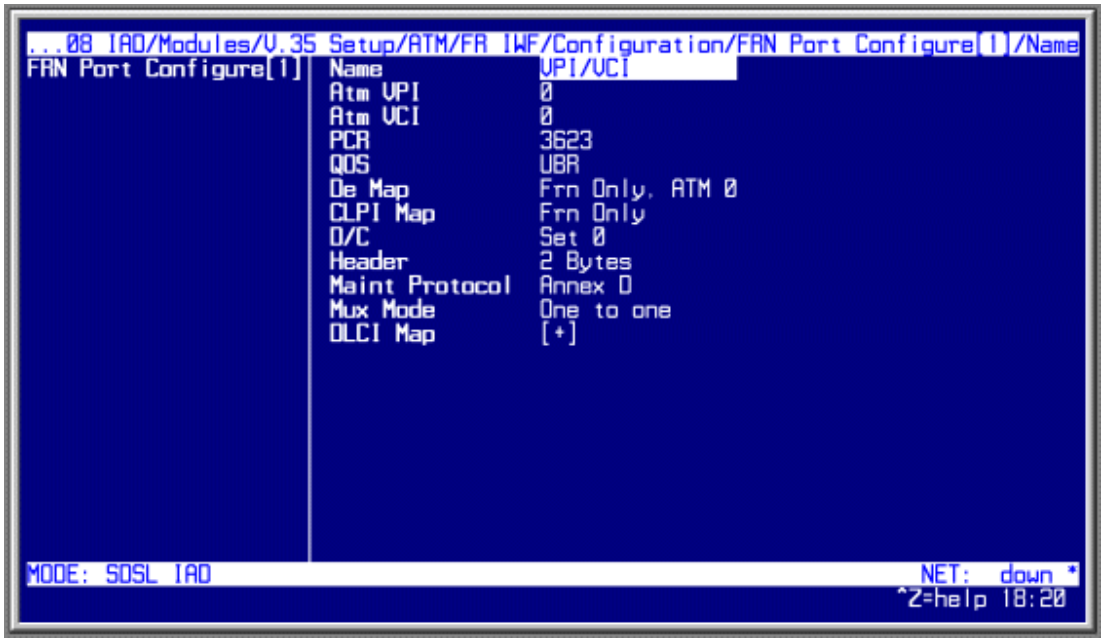

Figure 5

- **Name** = User editable to identify your port
- **ATM VPI** = Specifies the virtual path over which this logical port is running.
- **ATM VCI** = ATM VPI/VCI specifies the virtual circuit over which this logical port is running. Usually the VPI is left to 0 and the VCI is given an identifier value.
- **PCR** = Peak Cell Rate for this VPI/VCI.
- **QOS** = Quality of Service for this VPI/VCI.
- **De Map** = Frame Relay to ATM DE mapping. Mark as Discard Eligible. Default value (Frn Only, ATM 0) suggested.
- **CLPI Map** = ATM to Frame Relay CLPI map. Default value (Frn Only) suggested.
- **D/C** = Sets data or command field in the header to 0 or 1. Default 0.
- **Header** = Header format. Supports 2, 3, or 4 bytes.
- **Maint Protocol** = Maintenance or signaling protocol over this logical Frame Relay port. Support Annex D, Annex A, CISCO LMI or Static.
- **Mux Mode** = Supports one or many DLCIs over this one VCC port.
- **DLCI Map** = Actual DLCI mappings for each DLCI.
  - **ACTIVE** = Always active, not configurable
  - **LAN DLCI** = The DLCI configured over local V.35 Frame Relay port
  - **Net DLCI** = The DLCI configured over the WAN side logical Frame Relay port

Setting Up FRF8

1. Go to the ATM/FR IWF menu under TA 608 IAD / Modules / V.35 Setup. Change the Mode to FRF8. Now select the Configuration menu.

   - **LAN FR Maint Protocol** = Frame Relay maintenance or signaling protocol between local V35 port and the attached DTE port.

     Support Annex D (ANSI, default), Annex A, CISCO LMI, or Static (no signaling).
   - **LAN FR Poll Timeout T392 (5-30)** = T392 for signaling protocol, typical value 15. No meaning if Maint Protocol is Static.
   - **FR/ATM PVC Mapping** = These are logical Frame Relay ports converted to ATM. Up to four ports are supported with each port supporting up to 4 DLCIs. (This will be discussed in more detail below.)

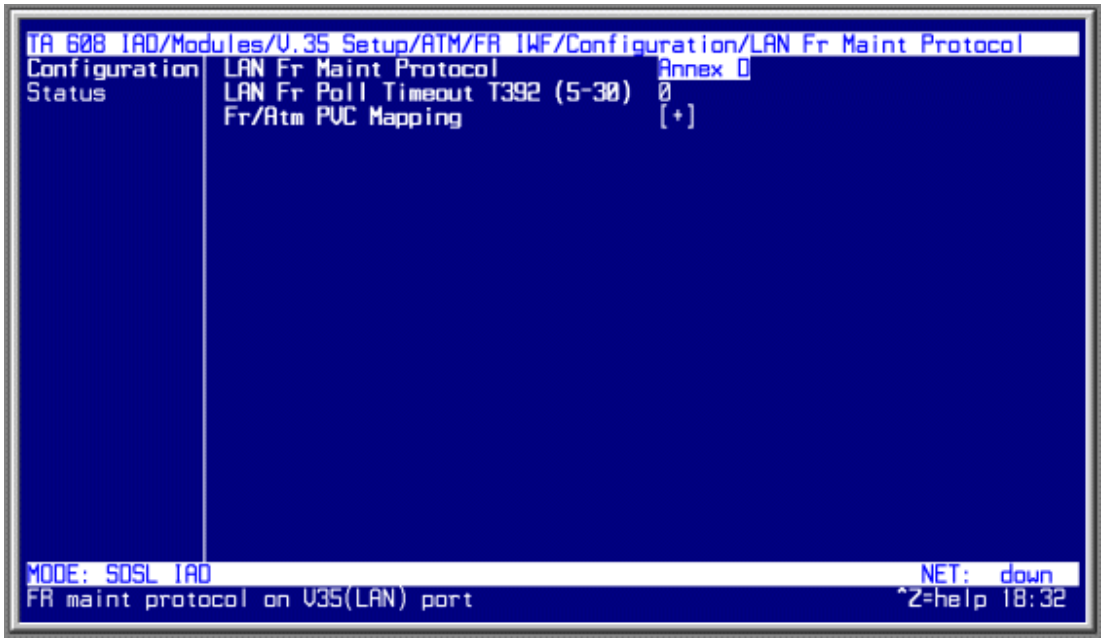

Figure 6

2. Set up individual PVCs on the V.35 port. Enter the **FR/ATM PVC Mapping** menu. Now right arrow over to create an entry. With your cursor over the number 1, you can hit "I" for insert to create multiple PVCs. Also, by entering on the number 1, you will transpose your screen from horizontal to a vertical view.

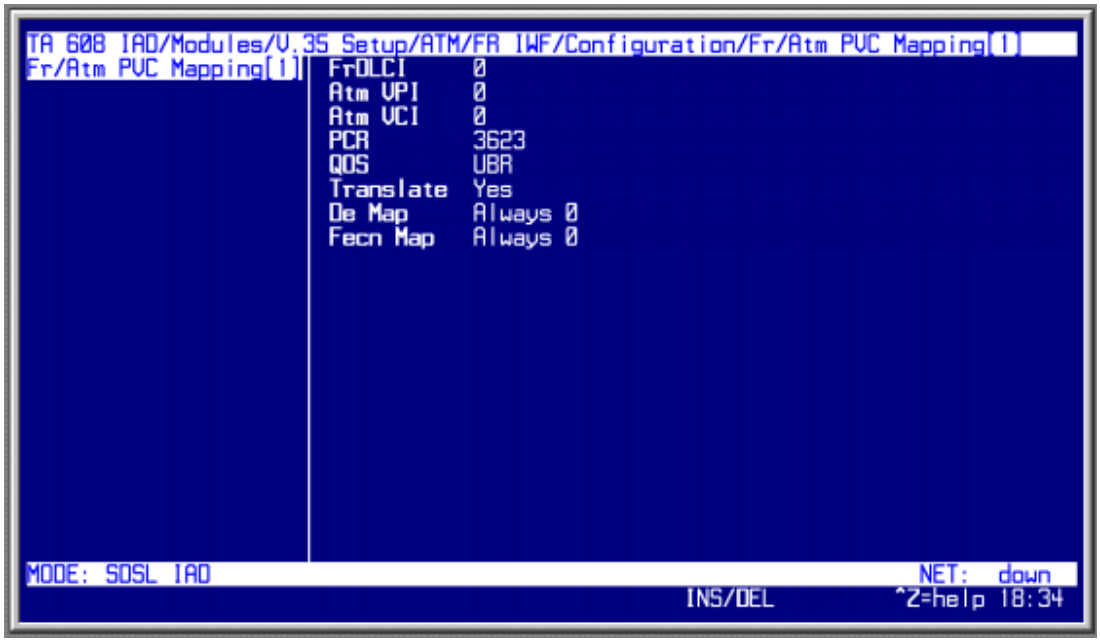

Figure 7

- **Fr DLCI** = Frame Relay DLCI on V.35 port (what DLCI the DTE is expecting)
- **ATM VPI** = Virtual path this virtual circuit is using.
- **ATM VCI** = ATM VPI/VCI is the virtual circuit that is mapping to this DLCI
- **PCR** = Peak Cell Rate for this VPI/VCI.
- **QOS** = Quality of Service for this VPI/VCI.
- **Translate** = YES translates the mode between Frame Relay and ATM. No makes the transition between FR and ATM transparent.
- **De map** = Maps Frame Relay DE bit to ATM CLPI bit. Choices are Always 0, Always 1, or Convert each other. If set to always 0/1, it will force this to mark the DE bit as always a 0/1. Convert will copy the corresponding bit from FR to ATM and visa versa.
- **Fecn Map** = Map Frame Relay FECN bit to ATM EFCI bit. Choices are Always 0, Always 1, or Convert each other. If set to always 0/1, it will force this to mark the FECN bit as always a 0/1. Convert will copy the corresponding bit from FR to ATM and visa versa.

If you experience any problems using your ADTRAN product, please contact ADTRAN Technical Support.