

## VOCALITY INTERNATIONAL – APPLICATION NOTE

REF: AN060

REVISION: V02

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TITLE: Using a SIM2 to simulate a WAN link

### Overview

The Vocality SIM2 can be used to establish a WAN link between any two Vocality multiplexers from the V25, V50, V100 and V200 family. This not describes the equipment a method required, using two V25 units as an example.

### Equipment

- One SIM2 Satellite Simulator
- One IEC A.C. power cord
- Two VI68220A cables
- Two V25 units with A.C. PSU adaptors
- One V25/V200 supervisor cable VI68224A
- PC or Laptop

### Procedure

1. First, restore the SIM2 to its factory default settings. This may be done from the front panel by holding both the DELAY and ERROR RATE buttons depressed during the boot-up sequence, which is complete when the alternating displays of flashing LEDs occurs. Release the buttons and check that the unit has selected 64Kbps, Zero delay, zero errors.
2. Next, restore both V25 units to factory defaults. This is done by the following method: Connect the V25 supervisor cable VI68224A to one of the units and to the COM1 port of the PC (if the PC has no COM port then use the USB-serial adaptor supplied). Launch Hyperterminal on the PC and configure it for 9600bps operation, no flow control and boot up the V25. Wait for the logon banner to display, then enter <CTRL>&<R> three times. This yields the prompt "Restore Factory Defaults", to which you should respond "y". The unit will reset its configuration and reboot.
3. Repeat this on the other unit.
4. On one unit, wait for the logon screen to reappear, then type the <up arrow> key to logon. On the "STARTUP CONFIGURATION" screen, go to the mode option and select "Normal". Type <ESC> then "y" to accept the changes. Back at the top level menu, move the cursor to the "SYSTEM" menu and

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press <ENTER> to select it. On the “SYSTEM” menu, enter “NODE0” as a name for this unit at the “NODE NAME” field, press <ESC> then “y” to accept the changes. Once again back at the top level menu, select “VOICE” then on the next menu down, select “ANALOGUE VOICE”, then “ANALOGUE PORTS”. On this menu and on the channel 1:1 line, move the cursor to the Interface field and select “FXS”. Now move to the Algorithm field and select “NetCode 9.6”. Then move right to the “Destination” field and enter “1:1:1”. Type <ESC> followed by “y” as before. Now go all the way back to the top level menu and select “CLOCKING”. On the reference clock source select “DATA”, then <ESC> and “y”.

5. Go to the other unit, connect the supervisor cable and boot the unit. Wait for the logon screen to reappear, then type the <up arrow> key to log on. Once again, on the “STARTUP CONFIGURATION” screen, go to the mode option and select “Normal”. Type <ESC> then “y” to accept the changes. Move the cursor to the “SYSTEM” menu and press <ENTER> to select it. On the “SYSTEM” menu, enter “NODE1” as a name for this unit at the “NODE NAME” field, move right to the “NODE NUMBER” field and enter the value “1”. Press <ESC> then “y” to accept the changes. Back at the top level menu, select “VOICE” then on the next menu down, select “ANALOGUE VOICE”, then “ANALOGUE PORTS”. On this menu and on the channel 1:1 line, move the cursor to the Interface field and select “FXS”. Now move to the Algorithm field and select “NetCode 9.6”. Then move right to the “Destination” field and enter “0:1:1”. Type <ESC> followed by “y” as before. Now go all the way back to the top level menu and select “CLOCKING”. On the reference clock source select “DATA”, then <ESC> and “y”.
6. Connect the “Data1” port of the Node0 unit to the “A” port DB15 of the SIM2 using one of the VI68220A cables (DB15 to DB15HD(9-way size)) and the same port of the Node1 unit to port “B”.

The two V25 units should establish carrier as indicated by a solid green “Data1” LED on both units. A telephone call may be made between the Channel 1 voice port of each unit.

To a selection of useful simulation parameters can be made using the push buttons on the SIM2 front panel, such as rate, delay and errors. More precise selections can be made by

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connecting the supervisor port and entering specific values in the SIM2 menu (see the relevant User Guide).