T E C H N O T E

DATE: 5/13/99

SUBJECT: WinCal raw calibration files and Virtual VNA

Some facts about WinCal raw calibration files in general and TRL in particular

Virtual VNA

The section below is from the file DRVNA.INI in the WinCal install directory. This file defines what files is used by the Virtual VNA driver to simulate reading calibration data

[Configuration]

VirtualRead2PortFile=0

VirtualCalFileSOLT=virtual.sol

VirtualCalFileLRRM=virtual.lrm

VirtualCalFileTRL=virtual.trl

VirtualCalFilePTEST=virtual.pts

Virtual2PortFile=virtual.s2p

When you press the "Autocal" button the virtual VNA driver reads the file specified above. **In TRL it is important that you have loaded the "virtual.trl" file first, so the correct line setup is loaded, i.e. which lines are used and their delays, open-or-short reflect etc.** This is not an issue for the other calibrations.

For other saved TRL calibrations, you can only load the file and then re-compute (if all required data was saved), or read more data from a real VNA.

For all calibrations it is a requirement that all data from all standards have the same frequency range. If you load a calibration file and then read another standard, the VNA has to be set to the same range exactly (true for virtual VNA as well).

A limitation for manual mode TRL

If you select SHORT as your reflect standard and only use "manual" buttons to measure data, you cannot read the requested OPEN data. The solution is to use the Autocal sequence at least once, even with a manual station. If you don’t do this you cannot compute. If you use OPEN as the reflect this is not an issue. The OPEN reading is needed for calibration the verification graph and is also used for calibration stability testing later.