

Q: How can I disconnect an assigned pin from the DUT?

HILEVEL Solution to Synchronization and Multiplexing

We primarily see just two reasons for **Timing On-the-Fly** disconnecting a signal from the DUT.

- You wish to use tester pin(s) for synchronization with an external instrument.
- You are using Timing-On-the-Fly (TOF) to achieve higher data rates.

In both cases it is important to “disconnect” pins to avoid misleading failure messages when running DUT Continuity test. In the latter case, the disconnect state is the default when specifying TOF parameters, while the former represents a case where the software has no knowledge of the user’s intentions. So in either case we have to explicitly tell the system that the pin in question is not really connected to the DUT.

Synchronization Pins

The synchronization case is straightforward. You simply define your pin groups, including group(s) used for synchronization. To disconnect the pin you press the “Pins...” button on the **Pin Setup** screen, which takes you to the Pin Assignment window. Simply double click on this pin in the left box (Available Pins); under the column marked **Special**, the flag **DC** will then appear, signifying that the pin has been disconnected.

For the TOF case you decide on connection while defining TOF pins. The TOF screen is invoked from the Extended sidebar. You there select the number of pins to be multiplexed (two, three or four), and the system automatically disconnects the adjacent pins that are part of the multiplexing. If you indeed wish to connect one of these pins to the DUT anyway, you then select the signal and double click in the TOF List box. A signal used for Timing-On-the-Fly is flagged as **Tof** or **TofDc**, depending on whether the pin is connected to the DUT or not.

Listing Disconnected Pins

When using the **SetFile Viewer**, the number of disconnected pins is listed. It provides an easy and convenient integrity check. The **SetFile Viewer** is found in the View drawer above the toolbar. Disconnected pins are also indicated in the PinList file by the word \$DISCONNECT.

Also See: **Q'nApp #E1: PinList**