

Configuring OrCAD® for Schematic Capture from MMICAD

This application note describes how to configure the OrCAD schematic capture module to link with the MMICAD simulator.

Before OrCAD is first run, the user must copy \MMICAD\MMICAD.LIB, which contains the MMICAD component library, into the \ORCADESP\SDT \LIBRARY directory and \MMICAD \MMICAD.CCF (which contains the OrCAD schematic to MMICAD circuit converter) to the \ORCADESP\SDT\NETFORMS directory.

OrCAD can then be started from within MMICAD. Using MMICAD's **Links** Menu, choose the **SCHEMATIC CAPTURE** option to start OrCAD. After the session is over, quitting OrCAD will cause automatic re-entry into MMICAD.

The following two stage procedure describes how to configure OrCAD to create a MMICAD design project. At the completion of this procedure, a MMICAD subdirectory under OrCAD is created which will store the schematic circuit files for the MMICAD project. After the installation is complete, the user must remember to switch to this subdirectory within MMICAD. The user must also remember to save settings after each configure stage during installation by clicking **OK** within OrCAD.

I. Configure OrCAD's TEMPLATE Project

This procedure sets up the OrCAD to MMICAD conversion parameters, and is done only once.

Step #1:

In OrCAD's **EDA Tools** Menu, click and execute **Design Management Tools**. Select **Design View** and highlight the **TEMPLATE** name. OrCAD will indicate that it will be using **TEMPLATE** project as the current design.

Step #2:

In OrCAD's **Schematic Design Tools** Menu, click any of the tools to select the **Configure Schematic Tools** Menu. The user will be presented with several options. Select **Library options**. Here, delete all default libraries and insert

MMICAD.LIB presented in the selection window.

Step #3:

Select the **Create Netlist** button and then **Local Configuration**. There are three options to configure: **INET**, **ILINK**, and **IFORM**. Each has to be ON. Select **IFORM**. In the **File Options**, type **TEMPLATE.CKT** as the **Destination**. In the **Processing Options**, select or type **MMICAD.CCF** as the **Selected Format**, and select **Force Iform to always create a Formatted Netlist**.

II. Setting up MMICAD Design Project

Step #1:

In OrCAD's **EDA Tools** Menu, click and execute **Design Management Tools**, then select **Create Design** option. Here, select the **Copy all Files** choice and type **MMICAD** as the new design name. When the MMICAD Template files are generated, select **Design View** and highlight the new MMICAD template file. OrCAD will indicate that it will be using MMICAD project as the current design.

Step #2:

This will configure MMICAD as the initial start-up project. In **Configure ESP**, the user will be presented with several setting options. Select **Design Options**, and type **MMICAD** as the new **Startup Design** project.

Special Considerations

It is important to note that in a given design project, OrCAD sets up the default schematic file name to have the same prefix as the design project name, i.e. **MMICAD.SCH** in the installation above. If the user elects to use a schematic file other than the default, for example, **FIRST.SCH**, then the following steps must be performed:

Step #1:

In OrCAD's **Schematic Design Tools** Menu, choose the **Draft** option and then select **Local Configuration**. The user will be presented with several options. Choose **File Options**. Select or type FIRST.SCH. This file will be the startup schematic file.

Step #2:

In OrCAD's **Schematic Design Tools** Menu, choose the **Annotate Schematic** option and then select **Local Configuration**. The user will be presented with several options. Choose **File Options**. Select or type FIRST.SCH as the **Source File is the Root of the Design**.

Step #3:

In OrCAD's **Schematic Design Tools** Menu, choose the **Create Netlist** option and then select **Local Configuration**. Do the following:

- (a) **Configuring INET:** In the **File Options**, select or type FIRST.SCH.
- (b) **Configuring ILINK:** In the **File Options**, select or type FIRST.INF.
- (c) **Configuring IFORM:** In the **File Options**, select or type FIRST as the **Source**.

Please refer to Application Note No. 17 "Using Orcad® for Schematic Capture from MMICAD" for more information on using OrCAD with MMICAD.