October 08th 2015

HOW TO: Assign a MIF file to Memory

This document is an addendum to the book : "A Route to Chaos Using FPGAs. Volume I : Experimental Observations". We will assume that you either have a copy of the book or are familiar with the reference designs associated with the book:

http://www.harpgroup.org/muthuswamy/ARouteToChaosUsingFPGAs/ARouteToChaosUsingFPGAs.html

The idea is very simple: you have to explicitly tell the MegaWizard ROM megafunction where the .MIF (memory initialization file) is on your system. Obviously, the path information would change from system to system, depending on where each user unzips the reference design.

Step 1: Start Quartus.
Step 2: Open project. For illustration purposes, we will use the De2ChaoticDDEs
reference design from the book's website above.
Step 3: Goto Tools→MegaWizard Plug-In Manager (figure 1).



Figure 1. Starting the MegaWizard Plug-In Manager

Step 4: Choose "Edit an existing custom megafunction variation" (figure 2).

🖞 MegaWizard Plug-In Manager [page 1] 🛛 💽	x
MegaWizard Plug-In Manager [page 1] The MegaWizard Plug-In Manager helps you create or modify design files that contain custom variations of megafunctions. Which action do you want to perform? Create a new custom megafunction variation Copy an existing custom megafunction variation Copy an existing custom megafunction variation Copyright (C) 1991-2012 Altera Corporation	
Cancel < Back Next > Finish	



Step 5: Choose codecROM.vhd (figure 3).

🖏 MegaWizard	I Plug-In Manager [page 2b]				
Which custom megafunction variation file do you wish to edit?					
Look in: 🕕	C: \Users \bharathwaj \Desktop \DE2ChaoticDDEs 🔹 🔹 🕄 🕄 🗐 📰 🗐				
db dspBuild greybox incremer isimulatic dockBuf	codecROM.vhd er floatingPointAbs.vhd _tmp floatingPointAdSubtract.vhd ntal_db floatingPointCos.vhd n floatingPointMultiplyDedicated.vhd .Clock.vhd floatingPointToFixed.vhd				
File name:	codecROM.vhd				
Files of type:	Files of type: All Megafunction Files (*.tdf *.vhd *.vhd *.v)				
Show only wizard-generated files					
Return to this page for another edit operation					
The current megafunction variation is based on the megafunction shown below. If you want to use a different megafunction as the basis for your changes to this custom variation, select a different megafunction name from the following list:.					
Megafunction	name: ROM: 1-PORT				
	Cancel < Back Next > Finish				



Step 6: Keep clicking next till you get to the Mem Init screen (figure 4).



Figure 4. Go to the "Mem init" screen

Notice how the "File name:" text box points to the .MIF file on Dr. Muthuswamy's system. Simply click "Browse" and go to the DE2ChaotiCDDes directory on your system to find the .MIF file (figure 5). Make sure the dropdown "Files of type" shows "MIF Files (*.mif)".

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ROM: 1-PORT	About Documentation			
1 Paramater F3 EDA F3 Summary				
🔨 Select File	? 💌			
Look in: Users\bharathwaj\Desktop\DE2ChaoticDDEs	0 0 📑 🖽 🗐 🦷			
My Corr bharath My Corr bharath My Corr greybox_tmp incremental_db isimulation i2cROM.mif				
File name:	Open			
Files of type: MIF Files (*.mif)				
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Resource liesee				
1 M4K Cancel < Back Next > Finish				

Figure 5. Choose i2cROM.mif