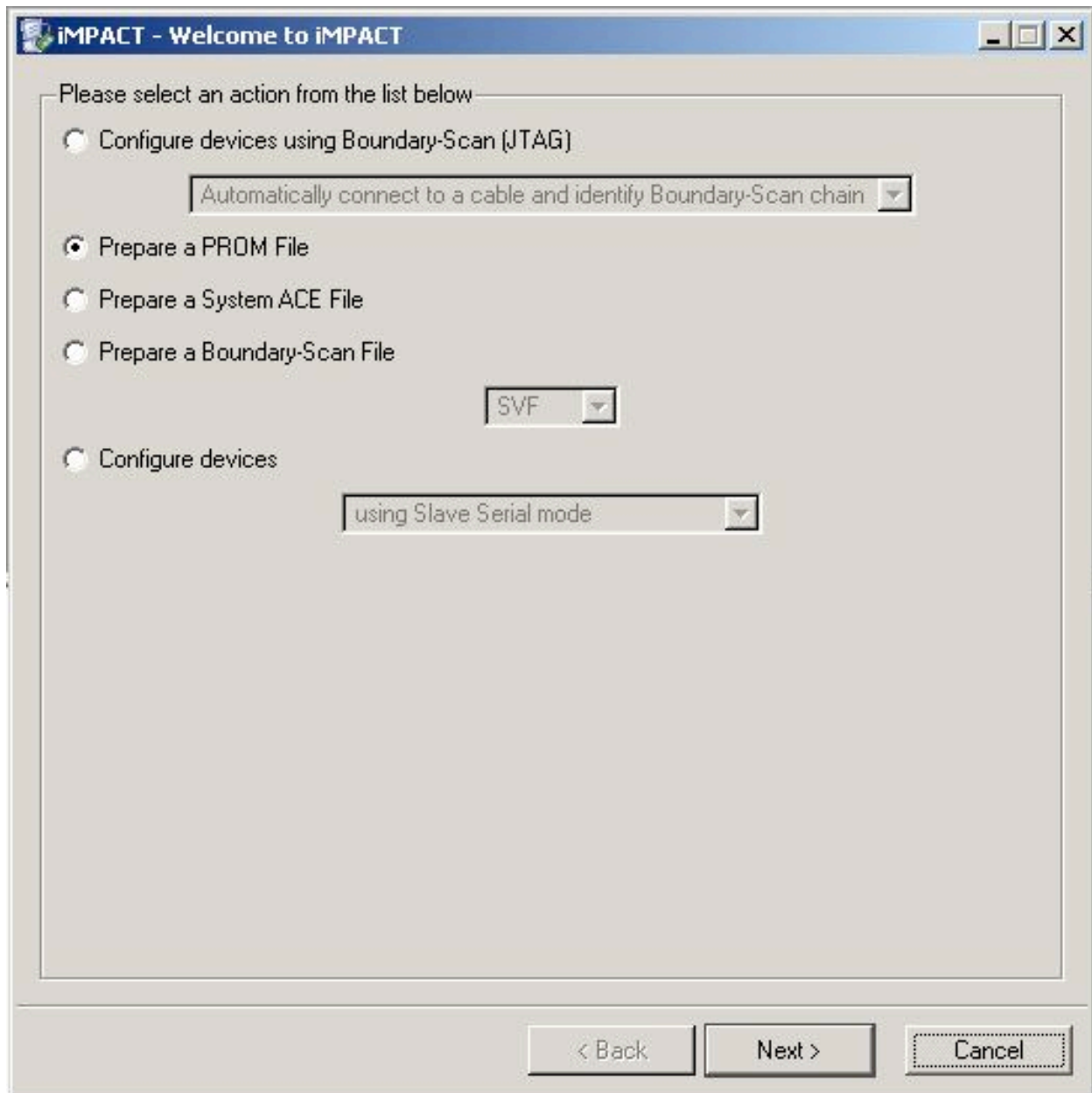


## IBOB PROM Burning in iMPACT 10.1 (last rev. 2009/04/22, TF)

- Set IBOB J15 to jumper across Pins 3 and 4 (middle row) and leave all others unjumpered.
- Start iMPACT. Create a new **.ipf** project and save with any name in any directory (ie., the directory with your bit file).
- In **Welcome to Impact** choose *Prepare a PROM File*



- In **Prepare PROM Files**, use the following options:

**Target:** *Xilinx PROM*

**PROM file Format:** *MCS*

**Checksum Fill Value:** *FF*

**PROM File Name:** *any*

**Location:** *any*

The screenshot shows the 'iMPACT - Prepare PROM Files' dialog box. It has a title bar with the text 'iMPACT - Prepare PROM Files' and standard window controls. The main area contains several sections: 'I want to target a' with four radio button options (Xilinx PROM is selected), 'PROM File Format' with seven radio button options (MCS is selected) and a 'Swap Bits' checkbox, 'Checksum Fill Value (2 Hex Digits):' with a text field containing 'FF', 'PROM File Name:' with a text field containing 'pasp', and 'Location:' with a text field containing 'C:\Documents and Settings\Administrator\Desktop\bit\_files\' and a 'Browse...' button. At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

**iMPACT - Prepare PROM Files**

I want to target a

- ☒ Xilinx PROM
- ☐ Generic Parallel PROM
- ☐ 3rd-Party SPI PROM
- ☐ PROM Supporting Multiple Design Versions: Spartan3E MultiBoot

PROM File Format

- ☒ MCS
- ☐ TEK
- ☐ UFP ("C" format)
- ☐ EXD
- ☐ BIN
- ☐ ISC
- ☐ HEX
- ☐ Swap Bits

Checksum Fill Value (2 Hex Digits): FF

PROM File Name: pasp

Location: C:\Documents and Settings\Administrator\Desktop\bit\_files\ Browse...

< Back Next > Cancel

- In **Specify PROM/Flash Mode:**  
Select *I am using a Xilinx PROM in Serial Mode*

**iMPACT - Select PROM/Flash Mode**

☒ I am using a Xilinx PROM in Serial Mode

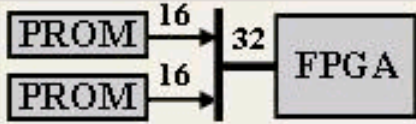
☐ I am using a Xilinx PROM in a Parallel Mode and the data bus width for my FPGA is:

☒ The same as the data width for my Flash/PROM device

☐ Bigger than the data bus width for my Flash/PROM device:

I need to create multiple PROM files split across the data bus as selected below:

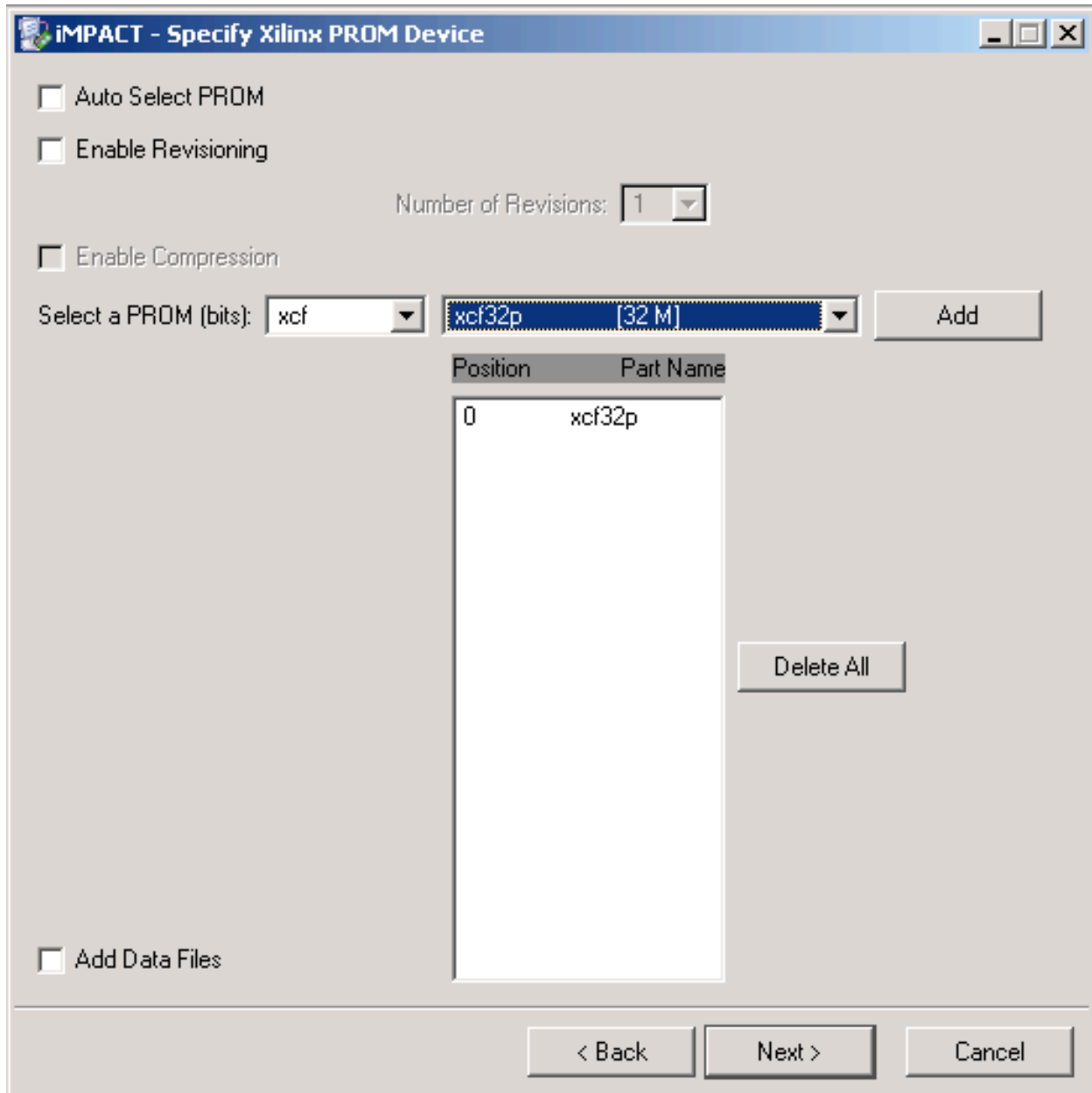
☒ Two x16 PROMs -> x32 FPGA Data Bus



The diagram illustrates the connection between two PROM devices and an FPGA. On the left, two rectangular boxes labeled 'PROM' are stacked vertically. Each box has a horizontal arrow pointing to the right, labeled '16', indicating a 16-bit data path. These two 16-bit paths converge into a single vertical line, which then branches into a horizontal line labeled '32' that connects to a rectangular box on the right labeled 'FPGA'. This represents a 32-bit data bus formed by two 16-bit PROMs.

< Back      Next >      Cancel

- In **Specify Xilinx PROM Device**:
  - Deselect** *Auto Select PROM*
  - Deselect** *Enable Revisioning*
  - Deselect** *Enable Compression*
  - Select** *XCF / XCF32P* and click “Add”

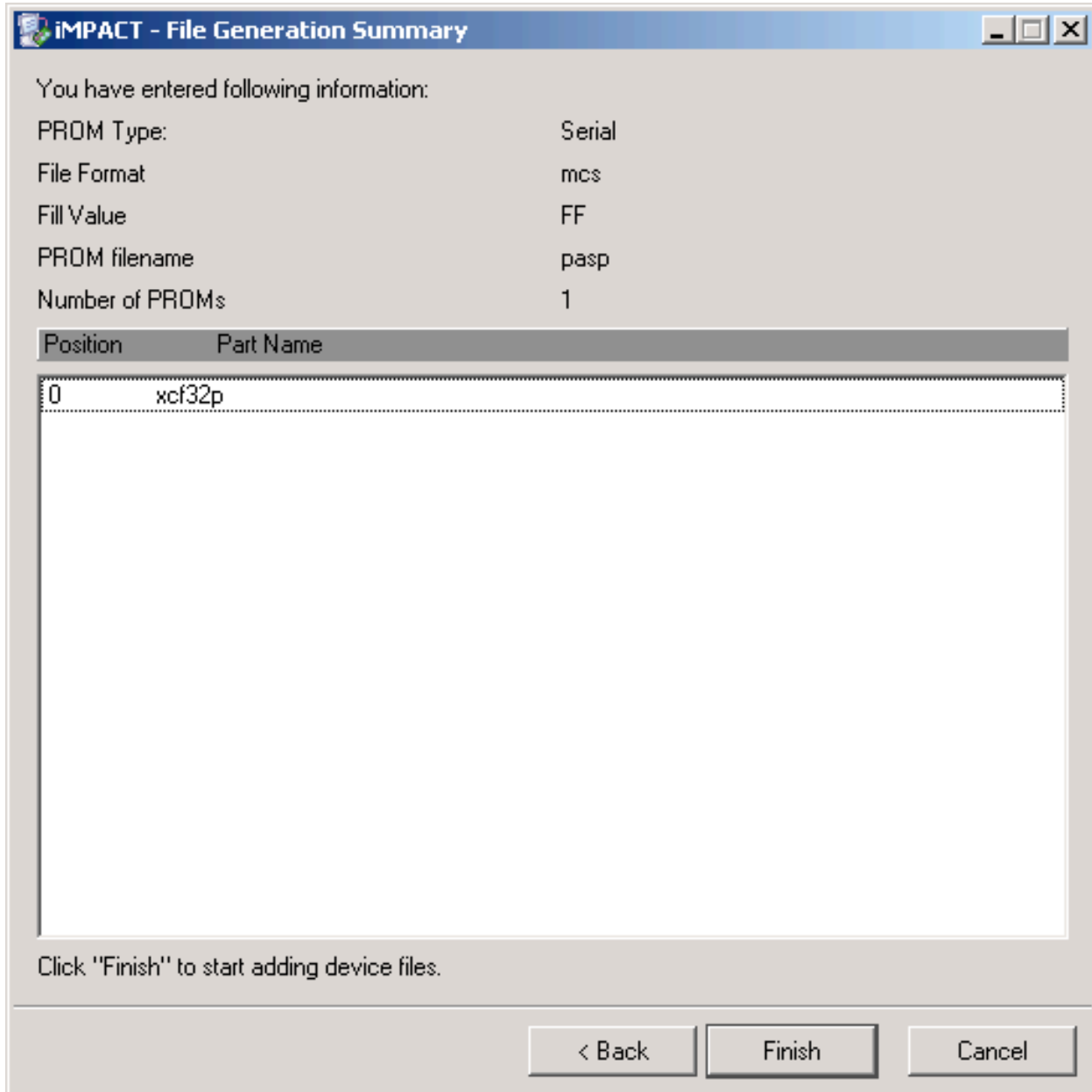


The dialog box titled "iMPACT - Specify Xilinx PROM Device" contains the following elements:

- Three unchecked checkboxes: "Auto Select PROM", "Enable Revisioning", and "Enable Compression".
- A "Number of Revisions" field set to "1".
- A "Select a PROM (bits):" section with a dropdown menu showing "xcf" and a secondary dropdown showing "xcf32p [32 M]".
- An "Add" button to the right of the PROM selection.
- A table with two columns: "Position" and "Part Name". It contains one entry: Position "0" and Part Name "xcf32p".
- A "Delete All" button to the right of the table.
- An unchecked checkbox labeled "Add Data Files" at the bottom left.
- Navigation buttons at the bottom: "< Back", "Next >", and "Cancel".

Position	Part Name
0	xcf32p

- The File Generation Summary should look like:



The image shows a Windows-style dialog box titled "IMPACT - File Generation Summary". It contains a summary of user input and a table for device details.

You have entered following information:

PROM Type:	Serial
File Format	mcs
Fill Value	FF
PROM filename	pasp
Number of PROMs	1

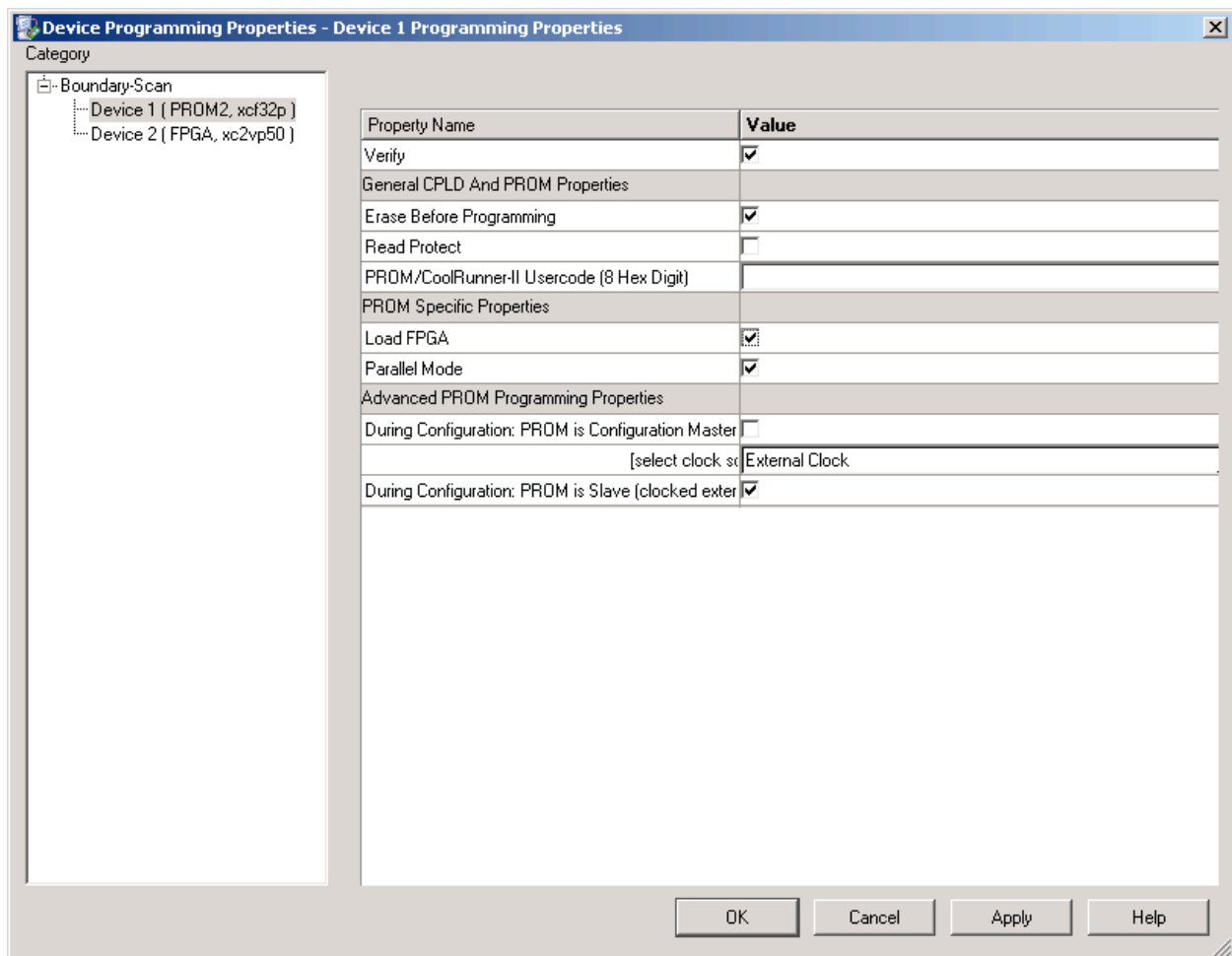
Position	Part Name
0	xcf32p

Click "Finish" to start adding device files.

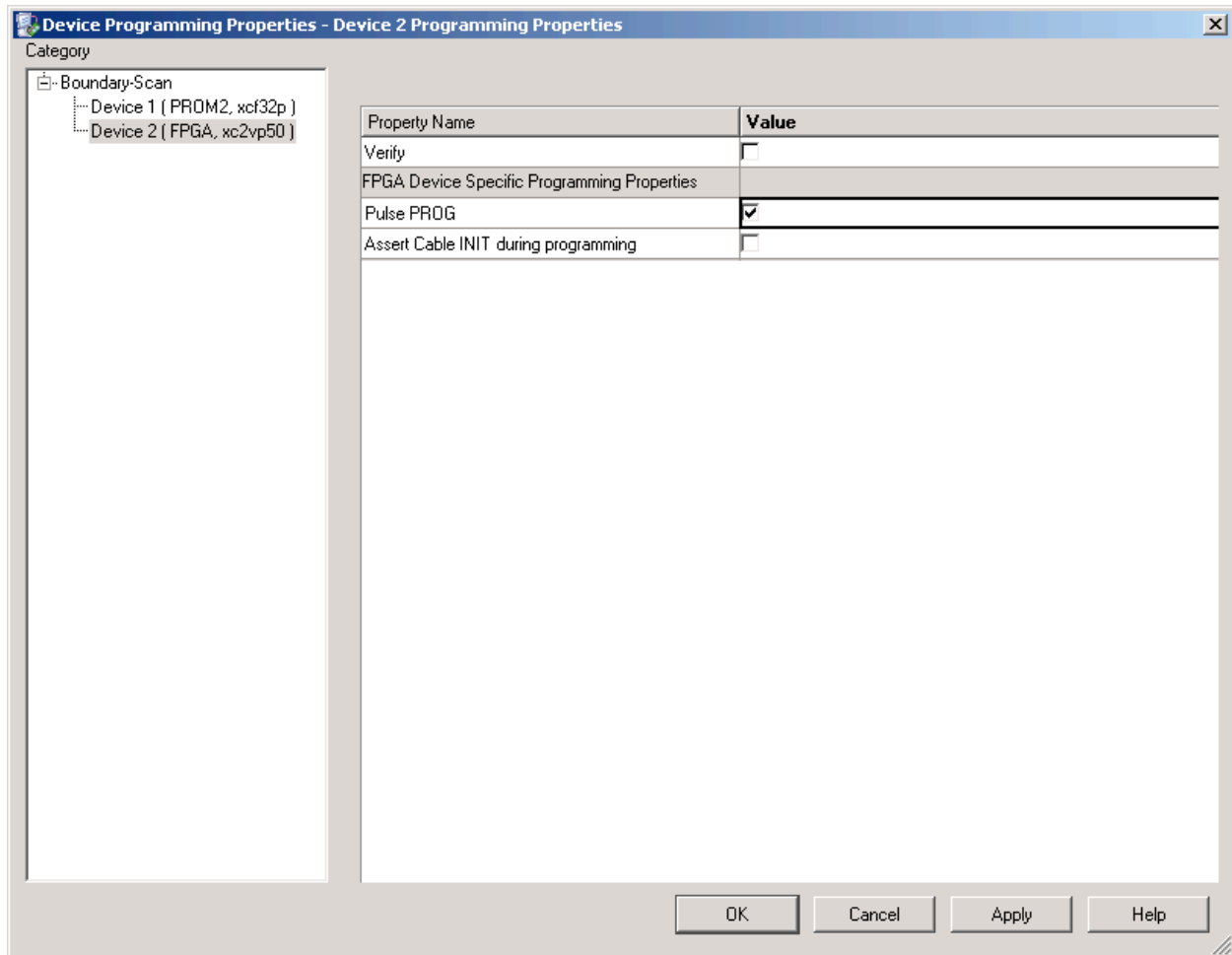
< Back      Finish      Cancel

- In **Add Device File**, click “Add” and select your **.bit** file. iMPACT will give a warning about changing the startup clock; which isn’t a cause for concern. Decline any offers to add other design files to the Data Stream. Click “Finish” and generate the PROM file. The xcf32p device should show about 56% full.
- Once the file generation finishes, close and restart iMPACT. Cancel when it asks about opening or creating a project.

- Initialize the JTAG chain.
- Assign the **.mcs** file you just created to the **xcf32p** device in the JTAG chain. Cancel or bypass when asked about a configuration file for the **xc2vp50**.
- Right-click on the **xcf32p** and select *Program*.
- In the **Device Programming Properties** popup under **PROM2**:
  - Select** *Erase Before Programming*
  - Select** *Verify*
  - Select** *Pulse Prog*
  - Select** *Load FPGA*
  - Select** *Parallel Mode*



- In the **Device Programming Properties** popup under **PROM2**:  
*Select Pulse Prog*



- Click OK to begin burning the PROM.
- When PROM flashing finishes, close iMPACT and turn off IBOB.
- Set IBOB J15 to jumper across pins 5 and 6 (lowest row) and leave all others unjumpered.