Microsemi Corporation

April 20, 2014

Customer Notification No: CN1404

Customer Advisory Notice (CAN)

Subject: Synopsys Synplify Pro Software bug where Asynchronous Reset/Clock and Data Input are driven by the same signal

Dear Customer,

This notification provides information on a synthesis software bug affecting the previous release of Synopsys Synplify Pro Software in June 2013. This bug is independent of PCN 1309 and its addendum PCN1309 A.

Affected Versions:

- Microsemi Edition versions:

  o **H-2013.03M-1 –** released in June 2013 for Libero SoC V11.1

  o **G-2012.09A-SP3 –** released in June 2013

- All-Vendor version:

  H-2013.03-SP1 – released in June 2013

Description of the Problem:

If either of the following exists in the state-machine code, incorrect logic can be generated in the netlist. This incorrect logic will cause a failure to register the right value at the right time.

1. The same signal is driving Asynchronous Reset and Data Input, either directly or through an inverter.

     or

2. The same signal is driving Clock and Data Input, either directly or through an inverter.

Note that this situation may not always be obvious from inspecting RTL, as the two signals pointed out in 1 and 2 above may not be common in the RTL code. The signals could become common after a synthesis optimization technique, such as constant propagation. Hence, Microsemi strongly recommends following method 1 and 2, as shown in the section below to identify if your design is affected.

Method of Identifying an Affected Design:

To verify if this bug has affected your design, search for either of the following notes in the log file of the synthesis results:

1. "In FSM <name>, reset input is driving data input."

or

2. "In FSM <name>, clock input is driving data input."

Solution:

Microsemi recommends using the latest software mentioned below for all designs.

Revised Versions:

- Microsemi Edition versions:

  o **H-2013.03M-SP1 –** released in October 2013 for Libero SoC Version 11.1 SP3

  o **G-2012.09A-SP4 –** released in October 2013

Click here for Microsemi Revised Edition Version.

- All-Vendor version:

  H-2013.09-1 – released in September 2013

Contact Information: Microsemi SoC Products Group

For any clarifications or questions, contact Microsemi SoC Tech Support

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Regards,

Microsemi

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