Release Notes: GNUSH v11.01

22nd February 2011

KPIT Cummins Infosystems Limited is releasing the GNUSH v11.01, a cross compiler tool for Renesas SH micro-controllers.

SALIENT FEATURES:

1. The GNUSH v11.01 toolchain is based on gcc-4.5.2 [released], binutils-2.21 [released], newlib-1.18.0 [released] and gdb-7.2.50 [snapshot dated 7th December 2010].

2. The latest patches are applied to gcc, binutils and newlib sources.
   Please visit the following link for the patches applied to the GNUSH toolchain:
   http://www.kpitgnutools.com/phpmyfaq/index.php?aktion=artikel&rubrik=002004&id=78&lang=en

3. The GNUSH v11.01 ELF toolchain installer supports integration with KPIT Eclipse.
   Please visit the following link for information on the latest releases of KPIT Eclipse:
   http://www.kpitgnutools.com/releaseNotes.php

ABOUT GNUSH v11.01:

Release Version:	GNUSH v11.01
Release Date:	22nd February 2011
Platforms Supported:	Red Hat GNU/Linux v8.0 or later (or compatible distribution) Windows NT / 2000 / XP / Vista / Windows 7
Language:	C, C99, C++
Targets:	SH-1 SH-2 SH-2A SH-2E SH2-DSP SH-3 SH-3E SH3-DSP SH-4 SH-4A SH-4AL-DSP
Object File Format:	ELF

CHANGES IN THIS RELEASE:

This section describes the enhancements made and the issues fixed in the v11.01 release.

GCC:

1. The GNUSH toolchain generated "undefined reference to `__fixunssfsi" error with mrenesas option for functions using fixunssfsi. This bug has now been fixed.

HEW (For Windows OS only):

1. Use of the Flash Development Tool (FDT) plug-ins under HEW is deprecated. Hence, users are advised to download the latest version of the FDT application and use it independently for Flash downloads.

KNOWN LIMITATIONS IN SH-ELF:

This section describes the known limitations in this release. We intend to fix these issues in our future releases. We occasionally release maintenance packs for critical bug fixes.

Windows and GNU/Linux:

1. In newlib, the 'fmod' function fails with and without "-mrenesas" option for the following single precision targets:
    a. SH2E
    b. SH2A-Single-Only
    c. SH3E
    d. SH4-Single-Only (little endian and big endian)
    e. SH4A-Single-Only (little endian and big endian)

2. The 'log10', 'ldexp' and 'frexp' functions of optimized libraries fail for SH4-Single-Only (little endian) and SH4A-Single-Only (little endian) targets.

3. Library Generator: Please visit the following link for the known issues and limitations related to this utility:
http://www.kpitgnutools.com/phpmyfaq/index.php?aktion=artikel&rubrik=002003&id=415&lang=en

HEW (For Windows OS only):

1. The following features are currently not supported in HEW:
    a. 'Generate Makefile'
    b. Support for 'convrenesaslib' utility

2. For other limitations pertaining to the single interface for the compiler, assembler, linker and library generator, please visit the following link:
http://www.kpitgnutools.com/phpmyfaq/index.php?aktion=artikel&rubrik=003001&id=445&lang=en

NOTE:
Windows and GNU/Linux:

1. The optimized libraries provided along with the newlib libraries in the toolchain do not require a separate download.

2. The optimized libraries ('liboptm.a' and 'liboptc.a') are not provided under GNU GPL. The source code of these optimized libraries is neither released nor available on request.

3. The "libgen" utility is not provided under GNU GPL. The source code of the "libgen" utility is neither released nor available on request.

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