STWorkbench

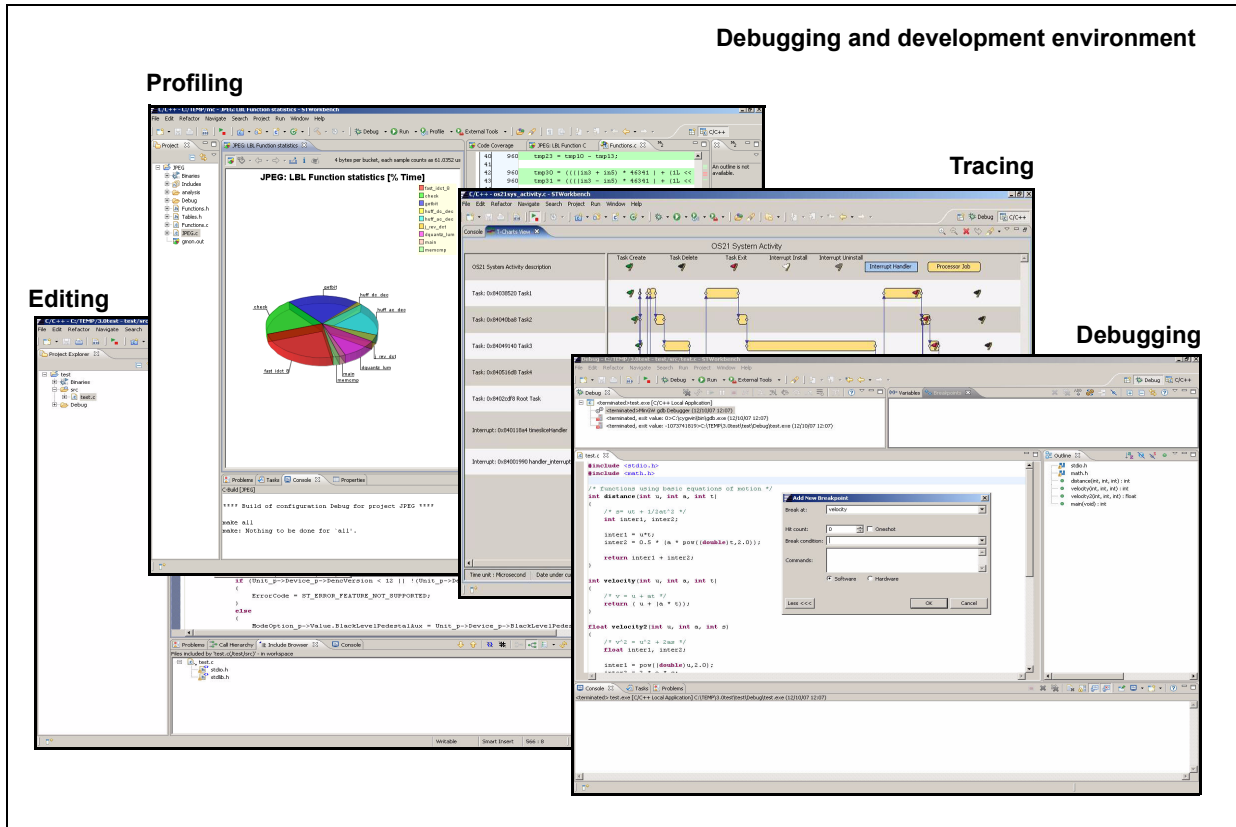## Debugging and development environment

Features

- Based on Eclipse
- Provides C/C++ support with integrated C/C++ Development Tooling (CDT)
- Customized and extended for a range of STMicroelectronics toolsets
- Supports multi-core, multi-OS development and debugging
- Enhanced debugging, tracing and profiling
  - integrated trace, profiling and performance monitoring
  - Execute from Command Line feature
  - fully functional console view

- STLinux-specific features
  - managed make and debug of STLinux applications and libraries
  - integrated kernel configuration about build
- Source editor and project configuration features
  - can import existing make systems or use built-in make control
  - supports source control plug-ins
- Configurable and extendable
  - appearance and layout fully configurable
  - plug-in philosophy makes extension easy
  - includes a number of useful third-party plugins

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Description

STWorkbench is a state-of-the-art integrated development tool for use with a range of ST toolsets (including ARMv7, ST40, ST200) on OS21 and on the STLinux distribution.

STWorkbench is based on Eclipse™, the industry standard development platform.

STWorkbench can either be used as an integrated development environment, or users can just use the powerful debugging, tracing and profiling features on their pre-built applications (toolset dependent).

The STWorkbench environment is enhanced to provide the features required by those working in the embedded environment, such as disassembly and register views, hardware breakpoints and integrated profiling and tracing.

STWorkbench integrates seamlessly with existing "Make" systems so that you can start working immediately.

STWorkbench includes a built-in, feature-rich editor to create code, with tools to simplify source management and maintenance.

Additional features

In addition to the features listed *on page 1* of this document, STWorkbench also provides the following:

- enhanced debugging, tracing and profiling
    - memory-mapped register view
    - enhanced memory and disassembly view
    - support for hardware breakpoints
    - Function viewer feature permits breakpoints to be managed at the function level
    - Execute from Command Line feature enables debugging to be configured and launched directly from the command line
    - automatic detection of ST TargetPacks and options in the Launch Configuration dialog
    - breakpoint candidates
    - integrated terminal view for serial, SSH and terminal console connections
    - support for Branch Trace buffer (ST40 Micro Toolset only)
    - system activity features including outline views, chart comparison tools and database searching
    - Terminal View, providing a serial terminal with several connection methods including STMC2 Serial relay
- the OS21 and STLinux operating systems are supported with the following cores and toolchains:
    - OS21: ST40 and ST200
    - STLinux: SH4 (ST40 Linux GCC, ST40 Linux uClibc GCC), ARM Cortex-A9 (ARMv7 Linux GCC)

- source editor and project configuration features
  - support for source control plug-ins (for example, IBM Rational ClearCase®, Subversion or Git)
  - project templates and wizards
  - enhanced editor and navigation features
  - other source browsing capabilities include the include, call and type hierarchy views
- STLinux-specific features
  - managed make and debug of STLinux application and libraries
  - integrated kernel configuration and build
  - kernel debugging using the JTAG kernel debugger
  - core file debugging
  - host-target file transfer
  - system profiling with OProfile
  - graphical system trace with KPTrace using NFS or Ethernet
  - support for STAPI-SDK and SDK2

Requirements

Minimum host requirements

- 1 GHz CPU with 1 Gbyte RAM
- 1024 x 768 high-color display

Supported host operating systems

- Red Hat Enterprise Linux versions 4 and 5
- Microsoft Windows XP and 7
- STLinux hosted on Fedora 12 to 17 inclusive (32-bit)
- STLinux hosted on Fedora 14 to 17 inclusive (64-bit)

STWorkbench is compatible with 64-bit hosts

Additional information

For further information on STWorkbench, including the training and support available, please contact your local ST FAE.

Revision history

Table 1. Document revision history

Date	Revision	Changes
June-2007	A	Initial release
7-Feb-2008	B	New features added to the Features list.
28-Aug-2008	C	New features added to the Features list.
10-Feb-2009	D	Changes to formatting to be consistant with other data briefs New features added to the Features list.
28-July-2009	E	STWorkbench is now based on Eclipse Ganymede. New features added to the Features list.
13-Aug-2009	F	Correction of typo on page one and capitalization in bullet list. No technical changes have been made.
26-Sep-2012	7	Updated for release 6.2.0 of STWorkbench
18-Mar-2013	8	Updated for release 6.3.0 of STWorkbench

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