



Module 6

SPIM - MIPS Assembler
Workshop



Module Six

- SPIM - MIPS Assembler Workshop - Part Two
- In this presentation, we are going to talk about :
- SPIM Download and installation instructions

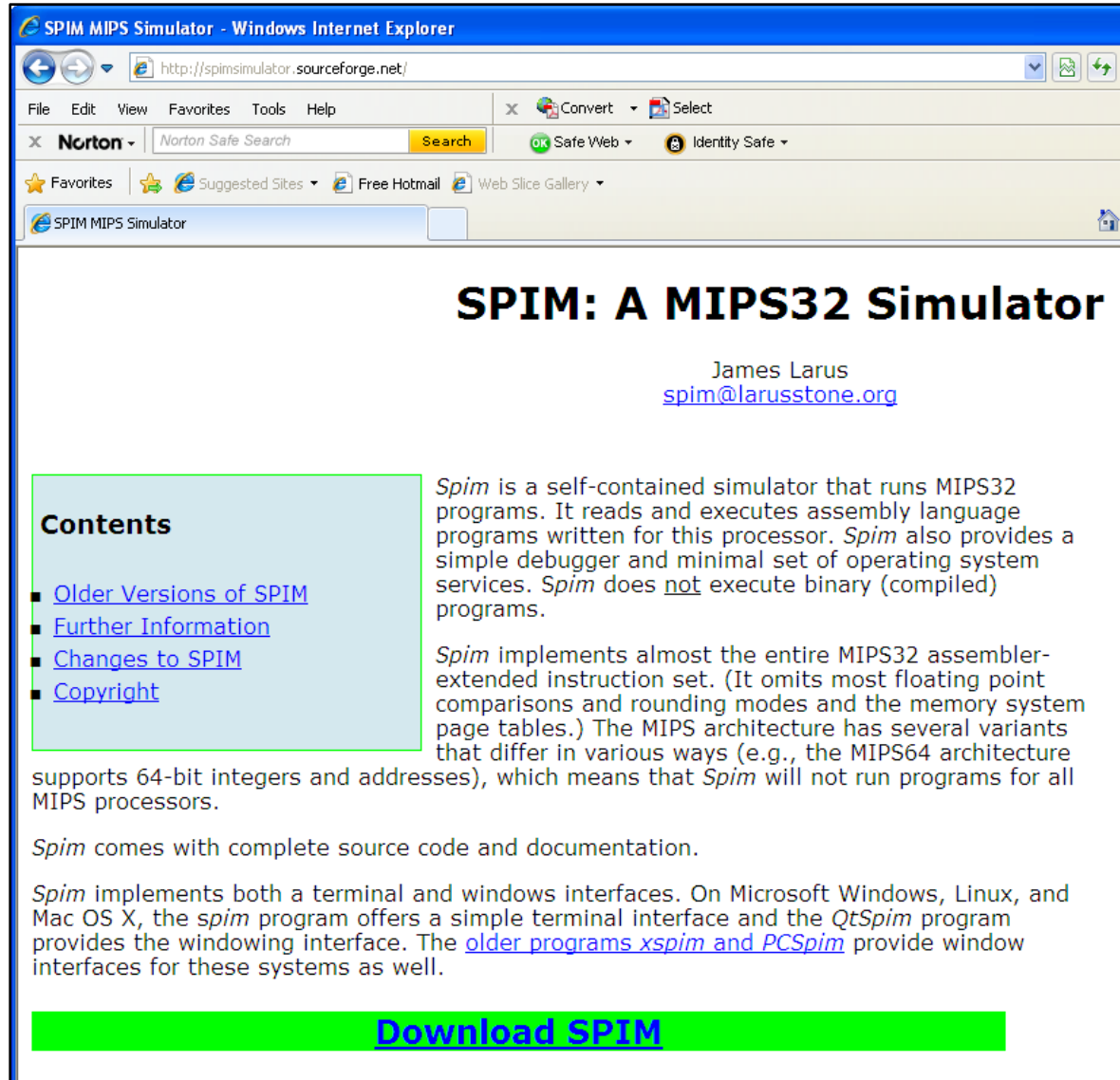


Overview

- Previously we talked about:
- SPIM Tutorial
- Now: SPIM Download

Download

- The URL link for the SPIM Assembler is:
 - <http://spimsimulator.sourceforge.net/>



The screenshot shows a Windows Internet Explorer browser window with the title "SPIM MIPS Simulator - Windows Internet Explorer". The address bar displays the URL "http://spimsimulator.sourceforge.net/". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The toolbar shows "Norton Safe Search", "Convert", "Select", "Safe Web", and "Identity Safe". The "Favorites" bar is visible with "SPIM MIPS Simulator" as a bookmark. The main content area features the heading "SPIM: A MIPS32 Simulator" by James Larus, with the email "spim@larusstone.org". A "Contents" sidebar lists links to "Older Versions of SPIM", "Further Information", "Changes to SPIM", and "Copyright". The main text describes the simulator's capabilities, including its self-contained nature, assembly language support, and MIPS32 architecture details. A prominent green button at the bottom reads "Download SPIM".

SPIM: A MIPS32 Simulator

James Larus
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Contents

- [Older Versions of SPIM](#)
- [Further Information](#)
- [Changes to SPIM](#)
- [Copyright](#)

Spim is a self-contained simulator that runs MIPS32 programs. It reads and executes assembly language programs written for this processor. *Spim* also provides a simple debugger and minimal set of operating system services. *Spim* does not execute binary (compiled) programs.

Spim implements almost the entire MIPS32 assembler-extended instruction set. (It omits most floating point comparisons and rounding modes and the memory system page tables.) The MIPS architecture has several variants that differ in various ways (e.g., the MIPS64 architecture supports 64-bit integers and addresses), which means that *Spim* will not run programs for all MIPS processors.

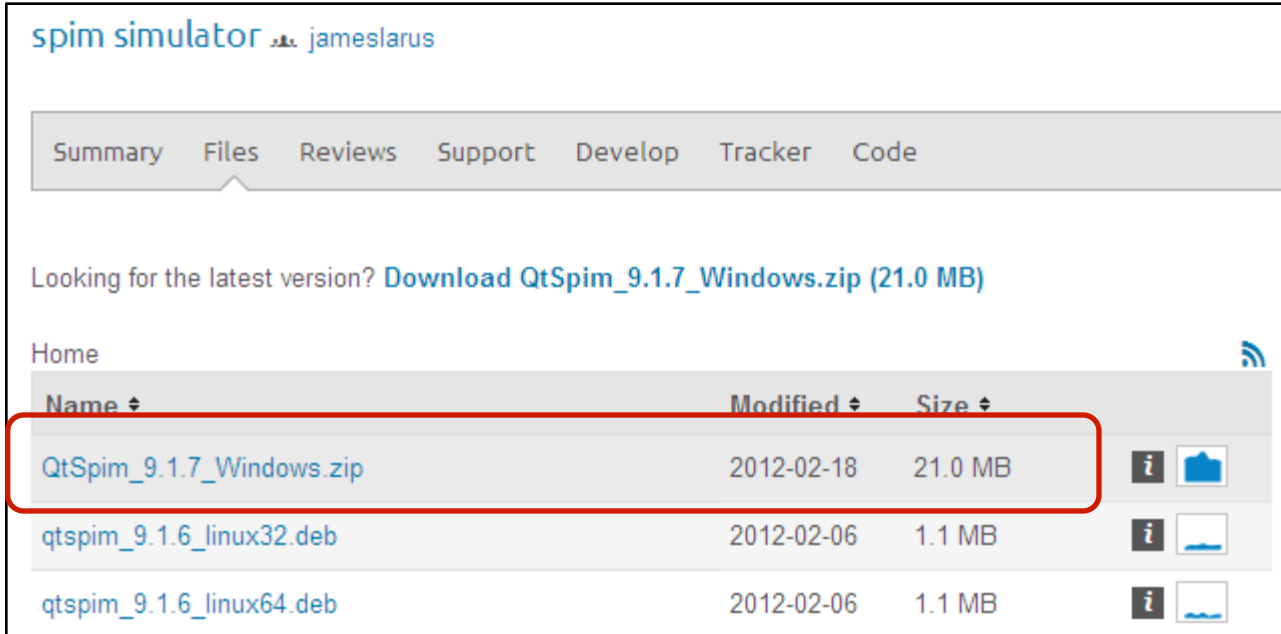
Spim comes with complete source code and documentation.

Spim implements both a terminal and windows interfaces. On Microsoft Windows, Linux, and Mac OS X, the *spim* program offers a simple terminal interface and the *QtSpim* program provides the windowing interface. The [older programs xspim and PCSpim](#) provide window interfaces for these systems as well.


[Download SPIM](#)

Download

- The URL link for the SPIM Assembler is:
 - <http://spimsimulator.sourceforge.net/>
- The download then contains instructions and the software links:










The screenshot shows the SourceForge project page for 'spim simulator' by 'jameslarus'. The 'Files' tab is selected, displaying a list of download links. A red rectangle highlights the first file, 'QtSpim_9.1.7_Windows.zip', which is 21.0 MB and was modified on 2012-02-18. Below it are two other files: 'qtspim_9.1.6_linux32.deb' and 'qtspim_9.1.6_linux64.deb', both 1.1 MB and modified on 2012-02-06.

spim simulator  jameslarus

Summary Files Reviews Support Develop Tracker Code

Looking for the latest version? [Download QtSpim_9.1.7_Windows.zip \(21.0 MB\)](#)

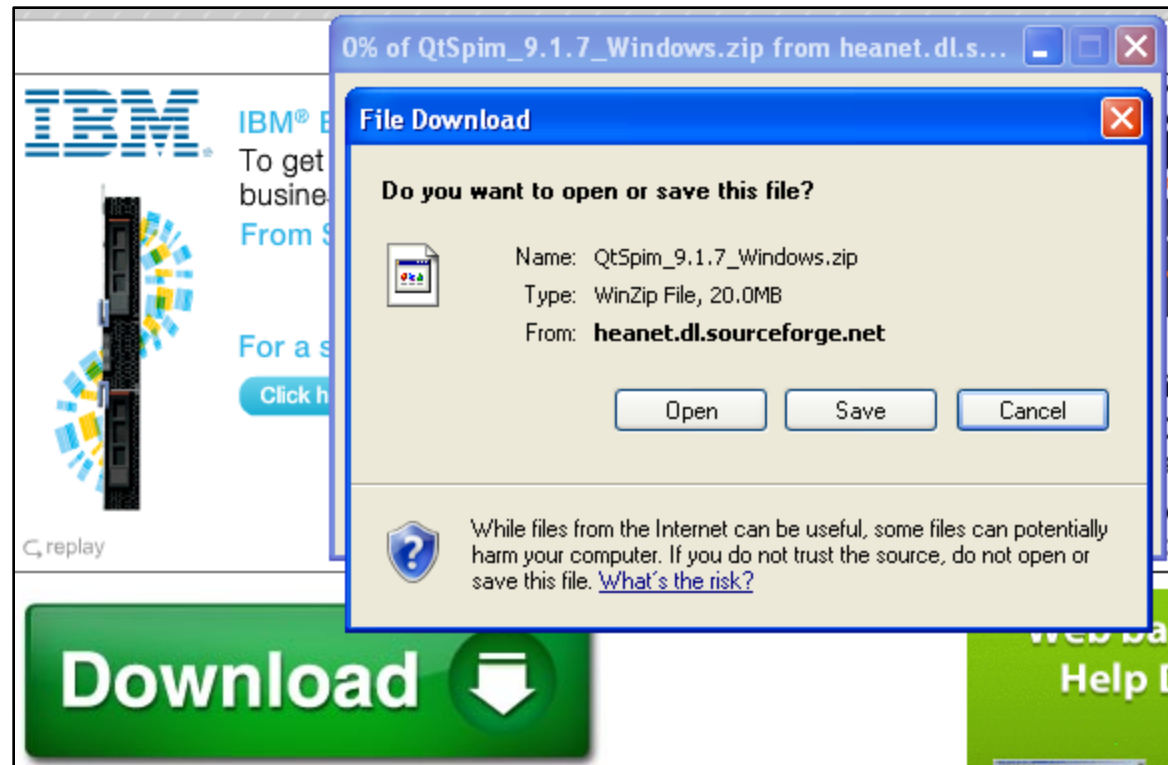
Home 

Name ↕	Modified ↕	Size ↕		
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qtspim_9.1.6_linux64.deb	2012-02-06	1.1 MB		

Installation

- **Microsoft Windows**
- Download the file :

and save it on your machine.
- Unzip the file.
- Click on the *setup.exe* program.
- Follow the prompts.





Installation

- **Unix, Linux, or Mac OS X**
- Installation is a bit more complex for a Unix or Linux system, as you need to compile the program for your particular computer and operating system.
- Download the file and follow the instructions on the web site.



SPIM Command Line Options

- All versions of SPIM (spim, xspim, and QtSpim) have command line options that control how SPIM starts running.
- The general format is:
spim arguments file.asm program_arguments
- where
 - **spim** is the name of a particular version of SPIM,
 - **arguments** are the command line options described below,
 - **file.asm** is the name of a file containing a MIPS program, and
 - **program_arguments** are the initial arguments passed to the MIPS program

SPIM Command Line Options

- For example, to just start xspim without any arguments or an initial program,

type **xspim**

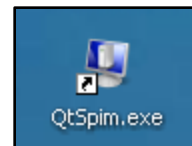
- Or, to start QtSpim with delayed branches on filetest.asm,

type **qtspim** -delayed_branches test.asm

- The programs accept the command line options found and described in the CD in the

SPIM Command-Line Options tutorial

- Windows version can also be run from the icon:





Summary

- SPIM - MIPS Assembler Workshop
- The QtSPIM tutorial
- Installation instructions