**MARS Acknowledgements**

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Pete and Ken would like to acknowledge the many helpful contributors to MARS. It has succeeded beyond our wildest expectations and for this we are most grateful. Its success would not be possible without your feedback, suggestions and assistance!

We are pleased to recognize these contributions to release 4.5:

* **Torsten Mahne**, **Umberto Villano** and others who took care of the bug with certain European keyboards that require an Alt key combo to form essential MIPS assembly characters like $ and #. I had no means of testing it.
* **Eric Wang** at Washington State University, who suggested adding cursor positioning to the Keyboard and Display MMIO Simulator tool.
* **Marcio Roberto** and everyone else involved in the development of MIPS X-Ray tool, which has been around for several years but only now added to the release. Sorry for the delay.

We also appreciate the contributions others have made to previous releases:

* **Carl Burch** of Hendrix College, who developed the mechanism for simulating the execution of straight binary code. Previously, execution was based on ProgramStatement objects generated by the assembler. This, combined with the added capabilities to write to the text segment and branch/jump into the data segment at runtime, permits one to produce self-modifying programs, simulate buffer overflow attacks, and the like.
* **Tom Bradford**, **Slava Pestov** and others, who developed the jEdit Syntax Package (syntax.jedit.org) at the heart of the syntax-aware color highlighting editor. It was old but the licensing was right and it was written for embedding into Java applications.
* **Mohammad Sekhavat** from Sharif University in Tehran, who developed the macro capability.
* **Greg Gibeling** of UC Berkeley, who introduced capabilities into his customized version of MARS that have subsequently been expanded and integrated into our release. These include the ability to dump MIPS memory contents to file and parser improvements to distinguish signed from unsigned hexadecimal constants.
* **Eric Shade** of Missouri State University, who suggested several improvements to pseudo-instruction expansions such as elimination of internal branches and improvements to the sign-extended loading of 16-bit immediate operands.
* **Saul Spatz** of the University of Missouri Kansas City, who noticed and provided a solution for a flaw in the calculation of byte-oriented addresses in the simulated MIPS memory stack segment. He has also suggested several improvements that we have implemented.
* **Zachary Kurmas** of Grand Valley State University, who suggested several bug fixes and who encorporated MARS into his own successful JLSCircuitTester digital logic simulator software.
* **Felipe Lessa**, who contributed the Instruction Counter tool and suggested a solution for the problem of MARS inability to launch when stored in a directory whose name contained non-ASCII characters.
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* The unknown audience member at our SIGCSE 2006 conference presentation, who suggested that MARS would also be useful running in the background in support of an external application. This led directly to our development of the Tools framework and API that truly distinguishes MARS from all other MIPS simulators.

We would also like to recognize many others who have contacted us to point out bugs, suggest improvements, or engaged us in interesting correspondence. The bugs have been addressed and the improvements either implemented or added to our wish list. Correspondents include: William Bai, Miguel Barao, James Baltimore, Jared Barneck, Bruce Barton, Rudolf Biczok, Battista Biggio, Carl Burch, Ram Busani, Gene Chase, Lucien Chaubert, David Chilson, Sangyeun Cho, Donald Cooley, Bernardo Cunha, John Donaldson, Abhik Ghosh, Michael Grant, Thomas Hain, John Ham, Kurtis Hardy, Justin Harlow, David Harris, Bill Hsu, Pierre von Kaenel, Amos Kittelson, klondike, Geoffrey Knauth, Sudheer Kumar, Yi-Yu Liu, Jeremie Lumbroso, Paul Lynch, Richard McKenna, William McQuain, Adam Megacz, Alessandro Montano, Judy Mullins, William Obermeyer, Ivor Page, Gustavo Patino, Christoph von Praun, Klaus Ramelow, David Reimann, Patricia Renault, AndrÃ© Rodrigues, Robert Roos, Joseph Roth, Marco Salinas, Peter Schulthess, Ofer Shaham, Scott Sigman, Sasha Solganik, Timothy Stanley, Gene Stark, Josh Steinhurst, Michelle Strout, Didier Teifreto, Mitchell Theys, Massimo Tivoli, Dwayne Towell, Duy Truong, Judah Veichselfish, Vineeth, Daniel Walker, Janyce Weibe, Ben West, and Armin Zundel.

The Mars.jar file contains all source code and, starting with Release 3.6, the files necessary to generate a new jar file should you wish to make changes to the source and repackage it for your own use. Let us know if you do this, so we can consider your changes for the general release.

Thanks to everyone who uses MARS. Keep those cards and letters coming!