FOR IMMEDIATE RELEASE

Ada 2012 Language Standard Approved by ISO
*Language revision adds contract-based programming, multicore support,
and other advanced features*

GENEVA, Switzerland, December 18, 2012 – The Ada Resource Association (ARA) and Ada-Europe today announced the approval and publication of the latest version of the Ada programming language by the Geneva-based International Organization for Standardization (ISO). The language revision, known as Ada 2012, was under the auspices of ISO/IEC JTC1/SC22/WG9 and was conducted by the Ada Rapporteur Group (ARG) subunit of WG9, with sponsorship in part from the ARA and Ada-Europe. The formal approval of the standard was issued on November 20 by ISO/IEC JTC 1, and the standard was published on December 15.

Ada 2012 brings significant enhancements to Ada, most notably in the area of "contract-based programming." New features here include the ability to specify preconditions and postconditions for subprograms, and invariants for private (encapsulated) types. These take the form of Boolean expressions that can be interpreted (under programmer control) as run-time conditions to be checked. The contract-based programming features fit in smoothly with Ada's Object-Oriented Programming model, and support the type substitutability guidance supplied in the Object-Oriented Technologies and Related Techniques Supplement (DO-332) to the new avionics software safety standard DO-178C / ED-12C.

Other new features in Ada 2012 include enhancements to the containers library, additional expressiveness through features such as conditional expressions and more powerful iterators, and support for multicore platforms (task affinities, and the extension of the Ravenscar profile – standardized in Ada 2005 as an efficient and predictable tasking subset for high-integrity real-time systems – to multiprocessor and multicore environments).

A technical summary of Ada 2012, together with an explanation of the language's benefits and a set of links to further information, is available at www.ada2012.org, a website maintained by the Ada Resource Association.

"Ada 2012 is a major advance in the state of the art in programming languages," said Dr. Edmond Schonberg, Rapporteur of the ARG. "The new features answer real user needs, and help cement Ada's reputation as a language of choice for systems where reliability, safety, and security are paramount."

"I would like to give special thanks to Randy Brukardt for his editorial work on the Language Reference Manual, to Ed Schonberg and the Ada Rapporteur Group (ARG) for their excellent work in developing the language revision, and to all members of WG 9 in producing a quality document that achieved unanimous approval from our parent organization," said Dr. Joyce Tokar, Convenor of WG9. "Ada 2012 is a significant technical accomplishment."

With the growing complexity of software systems in most aspects of our daily professional and personal life, program correctness is a paramount concern. Ada 2012 provides outstanding solutions to that end, which can be applied both in industry for production software development, and in academia for teaching and research.

About the Ada Resource Association
The Ada Resource Association (ARA) is a non-profit organization chartered to support the continued evolution of the Ada language and its infrastructure, to serve as a source of information about Ada and its usage, and to promote Ada as a language for effective software engineering. To these ends the ARA maintains the Ada Information Clearinghouse website www.adaic.org and has provided funding for the development and maintenance of the Ada language standard and the Ada Conformance Assessment Test Suite. For information about the ARA, including sponsorship opportunities, please visit www.adaresource.com. The ARA is headquartered in Oakton, VA (US).

About Ada-Europe
Ada-Europe is the international non-profit organization that promotes the knowledge and use of the Ada programming language in academia, research and industry in Europe. Its flagship event is the annual international conference on reliable software technologies, a high-quality technical and scientific event that has been successfully running in the current format for the last 17 years. Ada-Europe has member organizations all over the continent, in Belgium, Denmark, France, Germany, Spain, Sweden, and Switzerland, as well as individual members in many other countries. For information about Ada-Europe, its charter, activities and sponsors, please visit: www.ada-europe.org. Ada-Europe is headquartered in Brussels, Belgium.

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