



FOR IMMEDIATE RELEASE

Ada 2012 Language Standard Submitted to ISO

Language revision adds contract-based programming, multicore support, and other advanced features

STOCKHOLM, SWEDEN, June 12, 2012 – At the Ada-Europe 2012 conference in Stockholm, the Ada Resource Association (ARA) and Ada-Europe today announced the completion of the design of the latest version of the Ada programming language and the submission of the reference manual to the International Organization for Standardization (ISO) for approval. The language revision, known as Ada 2012, is 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.

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).

“Ada 2012 is a major advance in the state of the art,” 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 needed.”

“The Ada Rapporteur Group did an excellent job of carrying out the language revision,” said Dr. Joyce Tokar, Convenor of WG9. “Special thanks to Randy Brukardt for his editorial work on the Language Reference Manual, and to

Ed Schonberg and all the other ARG members. Ada 2012 is a significant technical accomplishment.”

Formal ISO approval of the Ada 2012 revision is expected in late 2012.

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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