Foreword

Welcome to the Fourth IEEE International Symposium and Forum on Software Engineering Standards (ISESS’99) held in conjunction with the International Conference on Software Technology: Software Quality sponsored by the International Center for Software Technology (CITS). ISESS’99 precedes the 1999 ISO/IEC JTC1/SC7 annual meeting on Software Engineering Standards hosted by the Brazilian national JTC1/SC7 body. This year’s location in Curitiba, a major South American software center, is a reminder of the worldwide cooperation taking place to make a universally valuable set of software engineering standards.

The goal of ISESS’99 is to capture users’ experience to improve standards for the benefit of all users, whether in industry, government or academic institution. Its aim is to promote active international cooperation among practitioners, educators, standards developers, regulatory organizations, industrial users and software engineering researchers. ISESS’99 is taking place at a time when the challenges in software development and maintenance have never been greater, and at a time when public awareness, is at a new high. ISESS’99 will address some of these challenges.

The period since the first ISESS Symposium in 1993 has seen both a growth in, and a consolidation of, software engineering standards from IEEE and ISO/IEC JTC1/SC7, the two leading publishers of these standards. Today there are approximately 75 standards published by both organizations, over double the 35 standards available in 1993. More significant than growth alone is the work done to consolidate the standards into a more consistent set. A key driver for this initiative was the 1995 publication of ISO/IEC 12207, Information Technology — Software Life Cycle Processes. It was adopted in 1998 as IEEE/EIA Standard 12207.0, the first of a 3-part standard that also includes additional information related to 12207. 12207 has proved to be the cornerstone for bringing greater uniformity among all process-related standards. The new 1998 collection of IEEE software engineering standards reflects this consolidation.

ISESS’99 is especially exciting, with a rich program offering insights into new standards, standards experiences and on selected technology topics. ISESS’99 has invited three industry leaders to help define some of the challenges facing us:

- Lloyd Mosemann II will talk about these issues in his talk “The Software Challenge Continues!”
- David Farber will address the future of the industry.
- Harold ‘Bud’ Lawson will address some of today’s issues in his talk “From Busyware to Stableware, The Essential Transformation.”

Starting with three tutorials on Monday (May 17, 1999), the ISESS’99 program contains a full technical symposium of panels, paper sessions and mini-tutorials. In addition, five workshops provide a forum where delegates can participate:

- Two of these workshops represent the Brazilian view on software quality.
- A third workshop will review the status of the Software Engineering Body of Knowledge activities being coordinated by SESC (Software Engineering Standards Committee) of the IEEE Computer Society.
- A workshop on Users of Software Standards is a continuation of the popular ISESS’97 workshop covering the results of the Software Engineering Standards users survey.
- Another workshop covers safety-related issues in software engineering and in current standards.
Panel sessions will cover three technical topics: object technology, Commercial-off-the-Shelf (COTS) software and formal methods. Delegates will have the opportunity to hear the status of standards under development, notably the work on System Engineering and the evolving ISO/IEC standard 15288. A mini-tutorial on the software measurement process will review the progress of another new ISO/IEC standard under development.

Through the documentation of best practices in wide use today, software engineering standards form the basis for a maturing discipline. These standards also form the basis of ongoing work on a new Body of Knowledge. These events hold the promise for the establishment and recognition of a software engineering discipline early in the next Millennium and benefits from discussions about best practices in symposiums such as ISESS’99.

Planning and bringing the ISESS’99 program and activities together required the effort of many individuals and organizations. A special thank you to the authors, presenters and speakers; as well as the panel and workshop chairs; and members of the Steering Committee, Program Management Committee and Program Committee. George Jackelen’s handling of the logistics and circulation of the many contributed papers is very much appreciated. Twenty-eight papers were selected to be part of ISESS’99. A special thanks also goes to Anne Marie Kelly and her staff at the IEEE Computer Society Volunteer Services organization, and to Roberto Almeida and Marcia Barbosa of CITS, our host, for their tireless work to bring the ISESS’99 arrangements together.

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