

**Joint International Council on Systems Engineering (INCOSE) /
Concordia Institute for Information Systems Engineering (CIISE)
Distinguished Seminar**

Dr. Claude Laporte, ETS
École de technologie supérieure

**The Development of International Standards for Very Small Entities: Historical
Perspectives, Achievements and Way Forward**

Very Small Entities (VSEs) are enterprises, departments or projects having up to 25 people. VSEs, involved in software development, are very important to the world economy as their software components are often integrated into the products of larger entities. Failure to deliver a quality product on time and within budget threatens the competitiveness of organizations of all sizes. One way to mitigate these risks is by having VSEs to put in place recognized software engineering practices. Many international standards and models, like the ISO/IEC12207 or the Capability Maturity Model Integration (CMMI) from the Software Engineering Institute, have been developed to capture proven engineering practices. However, they were not designed having in mind the needs and expertise of VSEs. They are consequently difficult to apply in such settings. An ISO/IEC JTC1/SC71 Working Group, Working Group 24, was established in 2005 to address these difficulties by developing the ISO/IEC 29110 software engineering standard, which is specifically tailored to the needs of VSEs. In this presentation, a perspective on the development of ISO/IEC 29110 and an outline of a series of deployment packages, developed to facilitate the implementation of the ISO/IEC 29110, are discussed. This presentation also details the establishment of a Network of Support Centers for VSEs to facilitate and accelerate the implementation of the ISO standard. Finally, a series of pilot projects, conducted to validate the work of the working group, are discussed and future work are presented.

Biography: Claude Y Laporte teaches graduate and undergraduate software engineering courses. He received his Master in Applied Sciences from the Electrical and Computer Engineering department of École Polytechnique de Montréal in 1986. In 1980, he received his Master in Physics (computerized instrumentation) from the Université de Montréal. He completed a Ph.D., under the supervision of Dr. J. Tisseau, Director of the National Engineering School of Brest (ENIB) of the Université de Bretagne Occidentale (UBO). He is the Editor of Working Group 24 of JTC1/ISO/SC7. The working group has been mandated to develop Software Life Cycles for Very Small Enterprises (less than 25 employees). He also represents the Standards Council of Canada (SCC) at Working Group 20 of JTC1/ISO/SC7. This working group has developed a standard for the international certification of software engineering professionals.

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