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Rationale for Modification to the SC7 Terms of Reference (JTC 1 N3787)

During the period of 1987 to 1990 the results of SC7 dealt primarily with guidelines and standards for the preparation of documentation about computer-based application systems and notations used in the describing processing steps. In 1989 SC7 started project 7.21 which dealt with the definition of the requirements for the overall processes used to define, develop, operate and maintain computer software.

Project 7.21 resulted in the standard, ISO/IEC 12207, Information technology - Software life cycle processes (1995). It established a common framework for software life cycle processes, with well-defined terminology, that can be referenced by industry. It contains processes, activities, and task that are to be applied during the acquisition of a system that contains software, a stand-alone software product, and software service and during the supply, development, operation, and maintenance of software products. It became necessary during the development of ISO 12207 to understand the context within which the software operates to define the necessary activities and tasks needed to define those aspects of the system which provide the context for the definition of the software.

In 1992 SC7 reached an initial agreement with IEC TC56, Dependability to clarify the programs of work on areas involving software. This interaction progressed to the point where in 1994 TC56 and SC7 entered into a two year joint trial period of cooperation between TC56/WG10, Software Aspects of Dependability and JTC 1/SC7/WG9, System and Software Dependability. The two projects of joint interest are System and Software Integrity Levels and Software Maintenance. Also recently a joint plan has been developed to provide a strategic view of potential projects of common interest.

In 1994 SC7 authorized the establishment of a ad hoc group on software-system relationships. The charter of the ad hoc group was to address the following issues: the development of ISO/IEC 12207 raised questions on the system-level aspects of software engineering and the relationships between software and system, software-intensive aspects of contemporary systems are not fully identified, information systems always provide support to the parent system, and a system view is needed for liaison. The ad hoc group confirmed the need for a standard defining system life cycle processes. In 1995 SC7 submitted a new work item proposal on system life cycle processes which was approved by JTC 1 as project 7.38 (Reference: JTC 1 N4086).

As the use of software in many applications/products has grown and the field of software engineering has matured it has become necessary to discuss the relationships between software and the system(s) within it is used to successfully develop and maintain software. This is particularly true for complex systems.

Practitioners of software engineering use technologies from many areas to perform their job effectively. The focus of SC7 is on the effective use of those technologies.