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Panel 4 CALS and Virtual Enterprise

Donald McCubbrey
University of Denver

Susan Gilles
CanSTEP Centre

Darren Meister
Queen's University Hiroshi Mizuta, VE Centre

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PANEL 4

CALS AND THE VIRTUAL ENTERPRISE

Chair: Donald J. McCubbrey, University of Denver, U.S.A.

Panelists: Susan Gillies, CanSTEP Centre, Canada
Darren Meister, Queen's University, Canada
Hiroshi Mizuta, VE Centre, Japan

BACKGROUND

CALS began in 1985 as a way to reduce the paperwork and coordination efforts involved in the procurement functions associated with the design, development, and maintenance of large weapons and aerospace systems in the U.S. Under sponsorship of the U.S. Department of Defence (DoD), a process was established whereby standards were developed and implemented to support electronic sharing of information among the DoD and its prime and subcontractors. At that time, the acronym for CALS stood for Computer Aided Logistic Support. In 1987 and 1993, as the scope of CALS expanded, the acronym became known as Computer aided Acquisition and Logistic Support and then Continuous Acquisition and Lifecycle Support.

The CALS initiative soon spread beyond the original domain of U.S. DoD and aerospace contractors and caught the interest of manufacturing firms in other parts of the industrialized world. Important CALS supportive frameworks were established in such countries as Germany and Japan. CALS conferences (CALS EXPO) helped spread the word about the potential for CALS to form the basis for an *enterprise integration* strategy as well as the foundation for companies on the path toward becoming *virtual enterprises*. CALS provides a framework for the development of standards and technologies that foster collaborative efforts and the sharing of engineering and manufacturing information. It can be seen as an enabler for independent companies to inter-operate and exchange information in real-time so that they can work as a single, integrated unit. By 1995, CALS came to stand for Commerce At Light Speed in the commercial world. Proponents of CALS took the position that CALS could serve as the integrating strategy for the exchange of all types of information, both within and between enterprises. In other words, CALS could become an umbrella strategy for encoding all forms of data to support all modes of electronic commerce (EC).

Despite the rising interest in CALS as a strategy for inter- and intra-enterprise integration, it is neither well known nor well understood by the EC community at large.¹

FOCUS OF PANEL

The panel will focus on the conceptual, methodological, and managerial contributions of CALS to the development of virtual enterprises and will introduce two important prominent initiatives which originated in the CALS community.

¹D. J. McCubbrey and R. L. Schuldt, "CALS: Commerce at Light Speed," in P. M. C. Swatman, J. Gričar, and J. Novak (eds.), *Proceedings of the Ninth International EDI and IOS Conference*, Bled, Slovenia, June 10-12, 1996.

1. A description of the TEMPLET project.²

The goal of TEMPLET is to develop a capability maturity model for the virtual enterprise. The project is being undertaken by a global team with representation from industry, academia, and governmental bodies from Canada, Germany, Japan, Switzerland, the U.K., and the U.S.A. When the work is completed, organizations will be able to evaluate their capabilities to function as virtual enterprises in comparison with their industry peers as well as the capabilities of and their compatibility with current and potential trading partners. The results of pilot site testing will be presented.

2. Universal Data Element Framework³ as a platform for semantic integration.

Process and network oriented methods do not address the challenges of integration on a data level. The Universal Data Element Framework (UDEF) addresses the problem of mapping the disparate names attached to data elements in the various standards and internal legacy systems to a common repository of registered names. This mapping is done within a semantic framework that permits universal codes to be generated which are attached to each uniform data element in the repository. In this way, universally accepted meanings for data elements embodied in existing international standards or legacy systems of an enterprise can be generated, and translations effected. UDEF, or similar schemes, will be important enablers of the virtual enterprise.

Since we anticipate that there will be many questions from those in attendance, we plan to allow ample time for discussion and dialogue with attendees.

²<http://www.templet.org>

³<http://www.udef.com>