



**Accredited Standards Committee X12**  
**Context Inspired Component Architecture**  
*Using CICA Architecture for Building XML Messages*

Executive Summary

Foreword

The American National Standards Institute (ANSI) Accredited Standards Committee X12 (ASC X12) celebrates its 25<sup>th</sup> year of building electronic business messages. Over the past few years, it became evident that there was great interest and promise in building business messages in a new syntax, called eXtensible Markup Language (XML). The proliferation of today's redundant XML-defined messages, supporting so many vertical domains, could lead to millions of dollars of lost effort and cause different parts of the same company to process conflicting XML messages that compromise business critical transactions and operations.

Without a common framework for developing XML messages, there is no hope to realize the economic advantages of enhanced enterprise integration.

ASC X12 members have developed a syntax-neutral architecture that not only facilitates the creation of XML business messages and enhances the reusability and interoperability of message structures, but also makes it possible to use the same architecture as future markup languages are developed.

What has emerged is an exciting concept that revolutionizes business message development and increases efficiency for all businesses and industries that adopt this new architecture. CICA, which stands for Context Inspired Component Architecture, is approved for use in the development of ASC X12 business messages. Adoption of this concept by other industries and standards will go a long way toward convergence and interoperability, a goal of everyone involved in electronic commerce.

What is CICA?

CICA is a business message architecture that provides a single approach to business message development that facilitates a common reusable vocabulary across multiple industries. It also creates an environment for convergence with other standards organizations, industry associations or data content committees. The CICA architectural framework serves as the foundation that protects your investment in business content development by creating a reusable common structure that can be expressed in a variety of syntaxes, for example, XML schema, industry specific implementation guides, ASC X12 EDI transaction sets or future markup languages. The CICA architecture and the ASC X12 organization provide a mature environment to protect and enhance your company's investment in electronic business-to-business data exchange.



### How does CICA work?

The keys to CICA's functionality and flexibility are modularity and reusability. CICA implementations formulate data into reusable context-independent components that are stored in a repository. At their simplest level, CICA components are the generic objects of the business process, such as a name or date. As these components are inserted into their appropriate place within the process, they acquire specific meaning, e.g. the "purchaser's name" or the "date of birth." Since CICA data is built only one time, components can be reused to fulfill a myriad of business data exchange needs. The same CICA data structures can be used for insurance, finance, health care, transportation or in any other industry that exchanges business data. The components are easily used by different development organizations, reducing development time and promoting convergence of business vocabularies into a broadly accepted set of common components.

### How will CICA help my company?

CICA facilitates the development of versatile business messages and increases efficiency by allowing for a one-time message development process. Whether you are purchasing a product, requesting a status, sending payment information, CICA establishes a common vocabulary and framework that will enable message developers to operate in an environment of flexibility and agility previously unknown.

Once your business information is built to the CICA model, you have a complete and reusable repository of modular business data that can be inserted into any kind of business document. This will enable businesses to reduce development costs and achieve a more rapid return on business messaging investments. Since data is stored separately from output formats, when business needs change, the data components stay the same. Only the output or final format will change, protecting your investment in the future. CICA will insulate you from the fickle winds of ever-changing technology.

### My company has a significant investment in EDI. What can CICA do for me?

The message structure of an EDI transaction is typically complex. CICA produces discrete modular messages. Thus, they are inherently more flexible and more adaptable to a wide variety of messaging needs. Instead of sending multiple business messages in one transaction, CICA documents contain more specific business content enabling your trading partners to realize lower implementation costs by sending and receiving only the data necessary for your business process.

While EDI has been the engine of significant e-business growth, its proprietary software, cryptic format and implementation complexities are all impediments to a rapid return on investment. Implementation costs are rising and business-to-business messaging is becoming more complex. CICA's syntax-neutral and context-inspired approach provides a new and innovative answer in today's business messaging arena. CICA will make your business more agile, while reducing costs and protecting your investment.