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The current ANSI/ASC X12.839 Standard (X12) has proven to be an effective means of meeting the government requirements for reporting contract performance. Although X12 has been well-received by government contractors, it fails to address a number of key issues critical to promoting the collaboration required by both industry and government. The current standard, as it relates to performance measurement, simply provides electronic versions of the Cost Performance Report (CPR) and Cost/Schedule Status Report (C/SSR).

Although the X12 standard also provides for the transfer of schedule data via a separate transaction set, this element of X12 has not been adopted by either government or industry. This is probably because, unlike CPR and C/SSR data, COTS scheduling tools have provided de facto standards for exchanging schedule information. Further, the current standard has no provision for reporting technical performance and does not address the need to integrate cost, schedule and technical performance data. Consequently, program analysts and program offices are left with only a limited suite of cost performance metrics to assess the health of a contract, analyze trends and verify the fidelity of the data.

Although these metrics are effective cost indicators, they typically are released four to six weeks after the period they represent. These delays result from financial system cycle times, subcontractor billing lags, and the organizations ability to sense and collect data. Because of the lack of timeliness EVM metrics cannot provide insights into the real drivers of program risk, which are always identified much sooner through technical measures and network schedule impacts. For industry, the X12 information is insufficient to manage the effort, consolidate data from subcontractors, and leverage the leading technical indicators of project performance to provide early warning concerning potential issues that will affect the program.

In recent years, both government and industry have come to recognize the need to eliminate after-the-fact reporting in favor of timely access to management information. Information that integrates the technical, schedule and financial elements of a program is readily available, providing access to relevant levels of detail based on all users' individual needs and their respective roles in the effort. To facilitate this need, the X12 standard must evolve from an architecture based on report output to a database architecture that promotes integration of data by facilitating the queries necessary to support the needs of all stakeholders. The new architecture must provide access to information while ensuring the integrity, fidelity and security of the underlying data.

Internet access and rapidly maturing technology provide the infrastructure necessary to promote an evolution from Electronic Data Interchange (EDI) to an effective architecture for Electronic Rapid Information Distribution and Exchange (Dekker eRIDE™). Extensible Markup Language (XML) Web services are the fundamental building blocks in the move to distributed computing on the Internet. Open standards and the focus on communication and collaboration among people and applications have created an environment where XML Web services are becoming the platform for application integration. Through this technology, applications are constructed using multiple XML Web services from various sources that work together regardless of where they reside or how they were implemented.

XML Web services are successful because the standards they are based on make them interoperable, and the technology used to implement them is ubiquitous. As a result, XML provides the tools that will enable the performance measurement industry to define a standard to replace the obsolete reporting mechanisms with timely access to integrated cost, schedule and technical performance information. The challenge for implementing XML and achieving the goal of providing access to integrated performance information is to avoid the temptation to simply utilize XML to create files that contain the data from the CPR or C/SSR reports.

As the pioneer of eRIDE and leveraging the Dekker DigiSense™ technology Dekker, Ltd designed a contemporary implementation of this architecture for EVM that incorporates cost, schedule and technical data through an Object Oriented Relational Database accessible over the internet through XML. This next generation architecture takes into account the structures necessary to integrate data effectively, ensuring that all stakeholders derive value from the information while ensuring security of the information and allowing for timely access to data based on each user's role.

The adoption of the XML technology must be based on an architecture that supports the goal of integrating management information. Utilizing XML to mimic the existing X12 structure would represent a significant investment cost to both government and industry without a corresponding increase in value. Now is the time to move beyond the technology and architecture adopted in the 80's and develop a standard that will be used by both commercial businesses and government contractors.

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