

Mass InterConnect aims for higher standards with ATML

Automatic Test Markup Language is reaching the tipping point of being adopted by major manufacturers within the ATE industry. Elizabeth Ballester, Jay Guruswamy and Gabriel Roffman report.

For nearly a decade, a group of dedicated individuals has been working to develop a language that allows one to describe much of the information surrounding ATE including testing requirements, test equipment, the unit under test, test adapters, test stations and even the results from the tests.

One of the main goals of this effort has been to streamline the process of collecting and sharing this information to ultimately make ATE less expensive for everyone involved.

Now under the IEEE Standards Coordinating Committee 20 (SCC20), ATML (Automatic Test Markup Language) is reaching the tipping point of being adopted by major manufacturers within the ATE industry.

Common language

The ATML working group has developed this language through a set of XML schema documents. XML (eXtensible Markup Language) provides a mechanism to create a common language that can be used for communication between programs. XML employs schema to define the language through tag sets created by the programmer to organize the data.

As one example, the Instrument Description schema allows one to define all kinds of characteristics of an instrument including physical characteristics like its size, type of data bus (VXI, PXI), types of connectors (SCSI, 9-pin

DIN, etc), positions of the connectors (Front or Back), internal switching paths, hardware capabilities, location of support documents, etc.

This standardisation of ATE will reduce product development overhead and maintenance and repair costs. This reduction would occur through the improvement of test system design by implementing dynamic test sequences that adapt to historical data, supporting instruments and their interface setups, and capturing test information at various test stages. Benefits to the test industry include decreased test times, reduced fault incidents, reduced repair/down time, and formalized capture of historic data.

The Mass InterConnect solutions provided by VPC to the Test and Measurement industry can be described using this standard language which allows further collaboration with the test industry. We at VPC are adopting the ATML schema as the standard language to describe our products. The flexibility of XML, and by extension ATML, enables VPC to extend the ATML vocabulary as needed to accurately define our interconnect solutions, including cable assemblies, connectors, etc.

Today the application engineer has to download and study the connectors on the instrument to design a cable assembly. With the adoption of this standard by the instrument manufacturers, VPC will be able to develop a cable solution more efficiently since the specification will be described in a standard format.

The total time spent by the application engineer in configuring a solution will be greatly reduced which leads to lower costs for our customers. Then, the ATML description of the solution can be provided to the customer enabling easier set-up and integration into a test station plan.

The ATML description of the solution can also be used going forward for help with maintenance. This includes identifying components used in the solution and their associated online support documents. This also includes specifics of the wiring of the solution which can offer many support benefits. These benefits can only increase as adoption of the ATML standard becomes more widespread. ●

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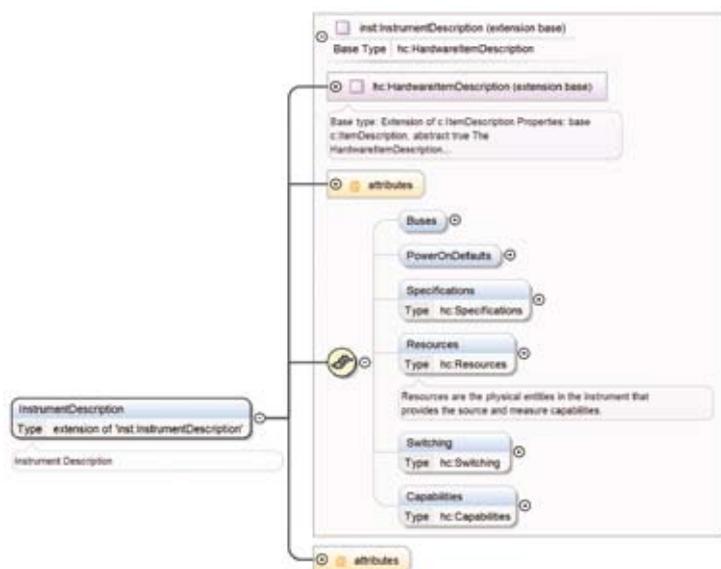


Fig. 1. Model of the Instrument Description Element in ATML.