

Looking back and looking forward



It was November of 1983 when I met with Ron Causley over lunch to discuss forming a new company that would focus on industrial applications of computer based technology.

Fifteen years ago, little was done using general purpose computers for industrial applications and no one had a roadmap to chart the course of where this technology would find acceptance and grow. Hind-sight being a perfect 20/20, it is easy to spot those key developments in computer technology that caused it to extend itself into every aspect of our lives including its general acceptance in industry. If only the view looking forward were as clear.

One aspect of the future that is crystal clear to SISCO is our dedication to providing excellent service to our customers. SISCO will continue to strive to provide our customers with the very best real-time communications and industrial systems technology available anywhere in the world. All of us at SISCO wish you the very best for the new year.

Jon Martin
President and CEO

Inside...

- OPC for AX-S4 MMS
- AX-S4 MMS adds UCA support
- MMS-EASE *Lite* working for embedded systems
- SISCO's Employee Edge

SISCO's ActiveMMS offers enhanced productivity for Windows programmers

ActiveMMS is a COM based Automation Server that provides an object-oriented, easy to use API to allow custom client applications to communicate directly with MMS devices over either OSI or TCP/IP-based networks. The API is based on the Microsoft Distributed Component Object Model (DCOM) technology which specifies how objects can be integrated in the Windows™ environment. Client applications that wish to use ActiveMMS can be written in either Visual C++® or a scripting language such as Visual Basic®.

ActiveMMS API

The ActiveMMS API is a set of COM interfaces (objects). Some interfaces allow you to manage ActiveMMS and create other objects. Other interfaces allow you to model and access MMS

objects such as variables, named variable lists, associations, etc.

The interfaces provide methods and properties that can be used to manipulate remote device objects such as VMDs,

domains, and variables. Two types of methods exist: synchronous and asynchronous. Using either method will result in an event being sent to the application.

Component-based applications can be

Advantages of using ActiveMMS

- Tight integration with Visual Basic improves productivity and ease-of-use
- COM Automation Server fully compatible with COM/DCOM
- Powerful object-oriented interface provides flexible access to UCA/MMS
- Works with both Visual Basic 5/6 and Visual C++

"ActiveMMS tightly integrates with Visual Basic for maximum productivity."

easily created with this API and it will minimize the effort required to integrate MMS and UCA into a system's architecture.

See ActiveMMS, page 2

SISCO celebrates 15 years!

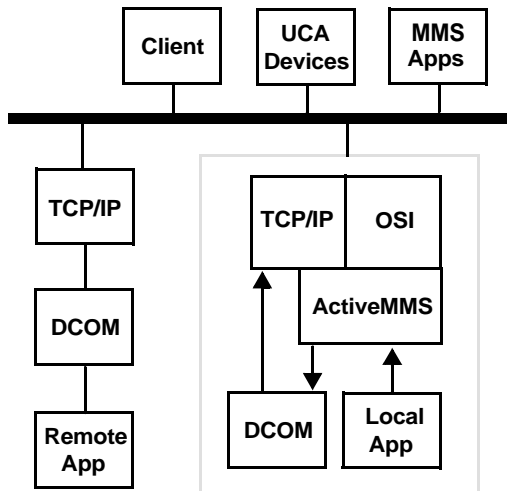
In 1983, Systems Integration Specialists Company, Inc. (SISCO) was founded to focus on the practical application of advanced computing technology to the demanding plant floor environment.

Today, SISCO leads the industry in providing mission-critical industrial computer-based integrated information systems and real-time standards based communications solutions to end-users and OEM customers world-wide. Thank you for helping us achieve the success we enjoy today!

ActiveMMS

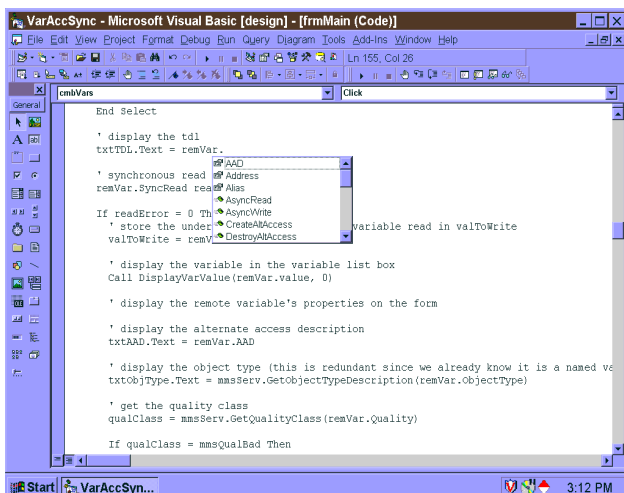
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The ActiveMMS architecture allows local applications to make direct calls to the COM automation server to communicate with UCA/MMS devices and applications over both OSI and TCP/IP simultaneously. Remote applications can make use of standard DCOM capabilities to make remote calls to ActiveMMS from over the network.



ActiveMMS Architecture

As shown below, ActiveMMS integrates tightly with the Visual Basic programming environment. Productivity is enhanced because UCA/MMS functions and objects are easily selected from drop-down lists for insertion directly into the program. There is no need to remember all the syntax or to search through the extensive printed or on-line documentation. Most of the information needed to write a program is right where you need it when you need it.



OPC for AX-S4 MMS

SISCO has recently been working to add support for OLE for Process Control (OPC) to its AX-S4 MMS ("access for MMS") product. Well, the time has come. And with this new development, AX-S4 MMS and its new OPC interface can now provide applications with easy access to real-time data using a standard interface.

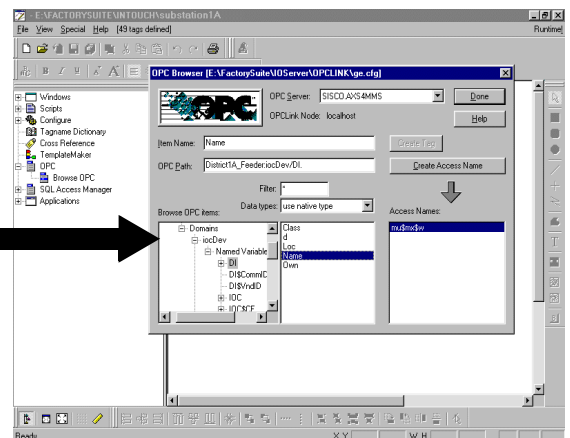
OPC is a standard developed by the OPC Foundation for interfacing Windows-based applications to device networks. OPC is based upon Microsoft's® COM/OLE Automation technology for Windows. This standard solves many of the performance problems associated with Dynamic Data Exchange (DDE). Additionally, many of the PC based HMI and SCADA manufacturers are members of the OPC Foundation and have products that can interface to OPC (e.g., Wonderware, USData Factorylink, GE Cimplicity, Siemens WinCC, National Instruments, etc.).

With AX-S4 MMS now supporting OPC, SISCO is able to provide MMS and UCA connectivity to any OPC enabled application without custom programming. With OPC, AX-S4 MMS is the only interface needed to retrieve data from any number of devices. Rather than having to develop custom software drivers or buy proprietary application programming interfaces for each

The AX-S4 MMS OPC Server works directly with commercially available off-the-shelf applications such as InTouch®, Cimplicity®, Fix® or any other OPC enabled client applications.

The OPC Browser allows you to select devices and objects to easily configure your application to read and write the selected data.

And, for developers, AX-S4 MMS with OPC brings real-time MMS/ UCA data to programs needing interfaces based upon Microsoft's Distributed Component Object Model (DCOM) technology.



vendor's devices, AX-S4 MMS packages all the tools needed for real-time communication between Windows applications and devices, as well as other applications over MMS-based Ethernet networks.

Earlier this year, SISCO provided a demonstration of this new version of AX-S4 MMS using the Wonderware HMI package. Wonderware, OPC, and UCA connectivity was provided by AX-S4 MMS allowing data interchange with COOPER, GE, and Dranetz/BMI UCA enabled devices.

The new version of AX-S4 MMS provides both a DDE and OPC interface simultaneously. Any current AX-S4 MMS customer with a support contract can look forward to receiving this new capability with their next product release.

New features for AX-S4 MMS include UCA Support

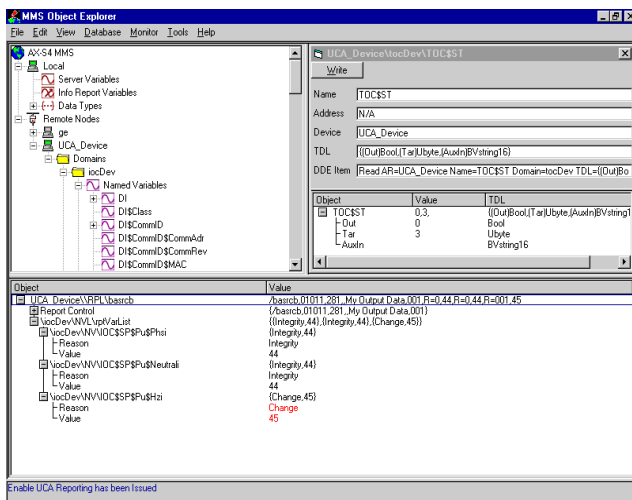
Journals and UCA Reporting have been the latest enhancements added to the AX-S4 MMS product. Using the following Journal services, AX-S4 MMS will allow you to access and alter Journals to maintain a history of events in the device:

- ReadJournal Reads Journal entries.
- SyncJournal Retrieves new Journal entries.
- WriteJournal Adds a new entry to a Journal.
- InitJournal Deletes old entries to a Journal.
- ReportJournal Obtains the attributes of a Journal.
- CreateJournal Creates a Journal on a remote server.
- DeleteJournal Deletes a Journal.

With the AcceptUCA service, DDE Clients will be able to receive UCA Reports, which are specialized information reports of a Named Variable List. The AcceptUCA service will interpret the data received and present the data to the DDE Client in a matter more suited to the UCA Report Object.

UCA Reporting has also had a direct impact on the MMS Object Explorer. The UCA Reporting services' integration with the MMS Object Explorer now enables the user to view real-time changes to an item's data.

By viewing a UCA Report Control Block in the Monitor Pane (the pane on the bottom half of the screen), you can view changes to the UCA Report Control Block's data as they occur. The key to this feature is that any change in data will be shown in red, making it easy to spot.



Success! MMS-EASE Lite working for embedded systems

Since MMS-EASE *Lite* was first developed, many OEMs have taken advantage of its unique capability to adapt to the requirements of embedded systems. Because MMS-EASE *Lite* has been specifically designed to allow MMS (Manufacturing Message Specification) and UCA (Utility Communications Architecture) to be embedded directly within small devices, it helps solve some of the biggest concerns that OEMs have such as operating system independence, memory management, and CPU/memory resource limitations.

The following is a brief summary of what some of the world's leading equipment OEMs have been doing with MMS-EASE *Lite*:

G&W Dacscan

G&W Dacscan used MMS-EASE *Lite* to build a UCA serial interface to their RTU product for the CPS project. They had anticipated a lengthy development process, but by using MMS-EASE *Lite* they were able to complete their development ahead of schedule.

David Splawn and Associates

David Splawn and Associates used MMS-EASE *Lite* to build a UCA/Ethernet link for their RTU interface product. The initial successful installation with their customer has led to other products including a time master for substations, with more to come.

Dranetz/BMI and Electrotek Concepts

Dranetz/BMI and Electrotek Concepts, featured in the last issue of the *HOST*, used MMS-EASE *Lite* and the MMS Object Foundry to enhance the connectivity to their line of power quality meters and disturbance analyzers.

GE Multilin

GE Multilin has the first substation feeder protection relay available with a UCA interface. Using MMS-EASE *Lite* and the MMS Object Foundry helped them get a robust UCA/Ethernet interface to the market fast.

Employee Edge

Diane Eick, Senior Design Engineer



Since its birth in 1983, SISCO has been very shrewd in building its team of professionals and is proud of the tradition it holds of employing quality individuals. Just a few years after SISCO was founded, Diane began

her career here as part of a team that designed and programmed MMS-EASE, the SISCO flagship MMS API product. Now, 11 years later, Diane has firmly established herself as an integral part of product development. "Thinking back to those days and reflecting on the importance of the MMS-EASE product... I get a lot out of knowing that I was part of something special, something that has stood the test of time and has been a durable, reliable solution for many customers over the years."

After receiving her Undergraduate and Graduate degrees in Computer Science, Diane spent a few years in the field programming real-time process control systems, diagnostic monitoring systems, and user interfaces.

As a Senior Design Engineer here at SISCO, Diane currently spends most of her time in the development of user interfaces. "I love starting from scratch and having the opportunity to build something from an idea. Creating applications that are easy to use and help our cus-

tomers accomplish their objectives gives me satisfaction with my job and the work that I do."

Diane's commitment to the design and programming of the MMS Object Explorer, an AX-S4 MMS client application that allows users to examine objects defined in MMS devices without any programming, helped to make it the successful application it is today. "The MMS Object Explorer uses state-of-the-art user interface technology that puts MMS Objects at the user's fingertips."

She's also been involved in the development of a Windows and database-based application for SISCO's Automatic Paging System (APS), which has replaced the DOS and text file-based user interface. APS is a paging system that alerts the appropriate personnel of production malfunctions. "The APS product is such a great concept. By changing the user interface, we've made APS even easier to use."

Diane candidly spoke when asked about her thoughts on the future of SISCO. "In the time that I've been here, SISCO has gone from having potential to maintaining a high degree of success. It's fabulous to see the rewards of hard work paying off. Our commitment is to put forth that little bit of extra effort and continue to develop reliable, robust products. The future is looking good for SISCO and I'm glad to have been a part of it for so long."

SISCO, Inc.

Systems Integration Specialists Company is a recognized leader of computer applications and real-time communications with end-users and OEM customers worldwide. SISCO is dedicated to 1) providing solutions that are based upon an understanding of our customer's needs and 2) providing solutions that are cost effective, open, interoperable, and maintainable.

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