

Welcome!

Greetings from Team ENCO!

We've been working hard on new features for the recently released 5.1d version of DAD. One focus of our efforts is AirPlay which I believe is the coolest on-air machine around. After many requests, Airplay now supports branch events, providing the automation power you asked for in this typically Live-Assist machine. We have also enhanced AirPlay timers to support: play time count down and count up, talk time count down, scheduled air time and actual calculated airtime. The new "Time Remaining" option will display Over/Under time for the currently playing hour as well as total time for other hours within a playlist. AirPlay is also more forgiving in that we've removed the default "focus" from AirPlay buttons once they are pushed. This will eliminate unwanted actions due to an accidental re-press being interpreted from something

like the space bar. All in all, this is a great machine and I encourage everyone to try it.

Other new features include support of new GPI/GPO tools that make equipment integration with DAD a breeze as described in another article below. We have also added a "Column Controller" that makes it much easier to set up desired columns on all screens with lists.

You can now drag-n-drop from the Record Machine cut number field to any Array button, playlist position, P_Play etc., making getting a live link or phone call on the air easier than ever.

Our support of Multiple DAD Libraries introduced in DAD 5.0 is proving quite powerful. We added messaging to this to enable other ENCO applications to share the use of this



great feature. These include CutServer, Gateway, DropBox and AudioCVT.

SetupDAD now creates a "SERVER" folder with proper folders and files needed to easily set up a DAD Server. Improvements for searching, logging, StreamLine integration and report generation round out the 5.1d release.

Thank you for your continued support and ideas.

See you online at novacek@enco.com or on our new ENCO Users Forum at <http://forum.enco.com>
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Introducing the ENCO Forum

As many of you are already aware, we have migrated the ENCO Users List Server to a Forum. We encourage everyone to subscribe. The ENCO Forum provides a knowledge base of ENCO information, combined with very powerful search capabilities and will be our primary communication vehicle for timely ENCO information. Learn more at <http://www.enco.com/new/Forum.htm>. You may either register and join the forum with full access, or simply browse as a "read-only" guest. Those joining the Forum will have options for receiving email updates of postings in topic areas of interest. The entire contents of the old ENCO List Server, nearly 12000 entries, have been transferred into a searchable area of the Forum. We are sure the Forum will be an excellent means to keep you informed about the latest ENCO developments as well as a place for lively discussion. Hope to see you there!



ENCO's new forum has discussion threads ranging from DAD, ENCO News and Utilities information, to a "swap meet" for equipment buyers and sellers.

DAD's Critical Design Advantage - Protecting Your Future

Applying computer technology to automate broadcast processes for handling audio, from storage and management through playout and on-air assist have become the standard worldwide. It would be difficult to find a broadcaster today that relies on manual methods to get their audio program to air. "Station Automation" generally refers to the use of devices, processes and system interconnections designed to make a broadcast 'station' (radio or TV) run a series of scheduled events automatically - without operator intervention. The norm has become utilization of PC technology to provide needed functionality and control for the process in general, as well as a breadth of "features" necessary to support specific needs of the individual broadcaster.

The demands are as great as the variety of broadcasters that range from the webcaster operating out of his room, to global networks. For some, this means having the feature set to support a one man operation to easily set up and play without interruption 24/7. For others it's the capabilities to manage multiple programs on multiple stations. And yet others look for on-air assist features to ensure everything that occurs live runs smoothly without error. To address these needs, the broadcast automation industry has continued to add increasing numbers of features supporting specific tasks to their systems. The list is long and continues to grow.

However the real underlying requirement to address dynamically changing needs in modern broadcasting is *flexibility*. Flexibility can reduce a broadcaster's reliance on vendor

development cycles in meeting rapidly changing needs. DAD is uniquely meeting this requirement through an architecture that has its origin in the process control industry. Process control runs factories producing everything from potato chips to nuclear power. So what does that have to do with broadcasting? Well you may be surprised! Managing a broadcast stream is in many ways similar; it has a sequence of events controlled in real time, requires interface of a large variety of devices and often needs to make automatic adjustments based on numerous criteria. Systems used to implement process control must be extremely flexible. After all, making potato chips and producing nuclear power both employ process control, but the processes are quite different. Yet the tools created to implement these dissimilar processes might in fact be very similar. Process focused systems, like DAD, are built around a philosophy that permits the user to implement their own features at a high level of abstraction. This means the user can implement powerful and far reaching changes to their system in easy to understand steps and common language. Systems must be designed to allow the engineer that understands the production process to create or modify control of the process in easy to understand terminology and commands, that do not necessitate hard coding of new features in low level computer programming languages.



No, its not DAD, but the architecture is similar and has important implications for broadcast.

Do you need it? The Importance of flexibility

Flexibility and customization has never been more important in the broadcast industry. When introduced in the early 90's, automation systems were designed to simply automate a well defined, decades old process, and they do an outstanding job. But now, and for the foreseeable future, the process is changing in dramatic and rapid fashion. It is no longer just a radio broadcast stream. There are many streams, both audio and data, both analog and digital, to many locations, using many devices. And this is just the beginning. The future promises more innovation at an ever faster pace. It is clear that a broadcaster that must wait for "new features" or enabling technology to be hard coded into their system, risks falling seriously behind. They must now be able to react to their changing environment quickly, and on their own. Their systems must be designed with this in mind.

Key advantage of DAD

Architecture, Uniqueness

ENCO built the first DAD on a user programmable framework originally developed from our background with process control applications. Since the applications we had worked on differed widely, but the kind of functions we were coding (user interfaces, device communication, monitoring and evaluation etc.) were the same, it made sense to build tools that enabled us to assemble applications quickly without resorting to re coding these components in a programming language like "C". Our framework allowed us to incorporate features in DAD quickly making it a powerful, feature rich broadcast automation system. Today, DAD still remains on a flexible, programmable foundation. This provides DAD users a critical advantage as they face the changing demands in broadcasting

sure to come in the years ahead. Much of DAD's key functionality is implemented through our flexible programming environment (called "DCL" which is DAD's Command Language and "DPL", DAD's Programming Language). Users can create automated sequences and events all programmed in easily understood broadcast terminology or English-like commands. Often users can program their own features if they are not already present in DAD's base functionality, and rapidly adjust to their individual requirements as they change. For example, this has made it easy for users with remote broadcast requirements to create live sounding unmanned stations or those with fast paced live programming to simplify the most complex studio actions and equipment integration tasks to a simple button push. Users can also interact with DAD's open database structure. This makes conditional

actions based on time, library entries, playlist sequences or meta data a straightforward, simple process. With a future to be defined by emerging new HD technology, multicasting requirements and a plethora of new media and devices, flexibility and customization capabilities will become critical in automation, and essential in maintaining a broadcasters' competitiveness.

Today and for the foreseeable future, broadcasters face increasing demand to compete in new places, and the need to readily embrace new technologies and media. We can only guess what will be required of the broadcaster in coming decades, but we can be certain that a flexible and easily adaptable audio delivery backbone like DAD is essential.

Monday Night Football Field Production with DADtv



DADtv is being installed in NEP's Supershooter 25 Broadcast Production Truck in support of ESPN's Monday Night Football broadcasts.

DADtv is a packaged configuration of DAD targeted for HDTV production and is used to address new demands for

multi-channel audio, multiple audio program streams and improved audio workflow.

DADtv is a tremendous advantage to TV broadcasters wanting to improve their audio workflow for HDTV broadcasts. Not only does DADtv provide native support of HDTV's 5.1 surround sound audio standard, it also provides critical rights reporting logs (as done in radio for years!) and effectively manages multiple audio streams for a single program. These have all become important issues for major TV network customers.

NEP's installation of DADtv in

a Supershooter brings these expanded audio capabilities to field production for the first time. According to George Hoover, NEP's Senior VP of Engineering: "We needed to include flexibility to create different program audio for domestic and international broadcasts of Monday Night Football. DADtv ideally met these requirements in a small equipment footprint, well suited for our Supershooter application. As demand for live HD production grows, we continue to add the latest state-of-the-art capabilities to our high def equipment packages".

Making General Purpose Interface (GPI/GPO) Setup a Snap

A new generation of general purpose interfaces is making the integration of other equipment much simpler. One of the topics that ENCO Support deals with on a daily basis is the set-up of GPI and GPO (GPI/O) interfaces. These are a critical part of automation, however it is an area that a user might deal with initially and then not revisit for a long time. Although well documented, the large variety of devices and user needs can make configuration and set up quite a challenge.

However, this has become a much simpler task with the release of DAD 5.1d. This latest DAD incorporates new Universal Language support for GPI/O devices. This allows you to simply set the DAD CFI directive REMOTE = UNIVERSAL and all other GPI/O related configuration settings, address and port count registry settings and even the DADPIO driver itself are no longer needed. In this new architecture, DAD makes use of GPI/O device information compiled

by the InstaCal® software supplied with all Measurement Computing GPI/O hardware offered by ENCO. This means InstaCal® does the discovery and configuration of supported devices, then at startup, DAD uses this information to initialize the required number of inputs and outputs.

An additional benefit of DAD's universal language support is the ability to combine multiple GPI/O devices. All that is necessary is to run InstaCal® and configure a group of supported devices with sequential "board numbers" starting with 0. DAD is then able to address the group of GPI/O devices as a single, larger virtual GPI/O device with the combined total inputs and outputs of the group. And they do not have to be similar devices either. Currently, ISA, PCI, USB and Ethernet based GPI/O devices are supported opening the door to tremendous flexibility with simpler setup.



A wide variety of new GPI/O hardware options allow for easy implementation and or expansion. The small, clean form factors of the Measurement Computing devices makes wiring and installation a snap. USB interfaces with built in connectors to daisy chain control and power; Input only and output only versions to fit specific needs; Ethernet Devices that can be placed anywhere within the LAN and assigned to any DAD workstation. All of which can be intermixed with legacy devices and are truly plug and play with no jumpers to position, DIP switches to set, or interrupts to configure. The world of DAD GPI/O has gotten Smarter, Faster and Better! Contact ENCO Sales for more information.

Do You Have DCL/DPL Routines to Share?

As detailed earlier, one of DAD's strongest advantages is how our users can take advantage of DCL and DPL to address unique problems. We would like to describe some real world examples either with reference or anonymously via our web site and literature as well as possible case history publication. Many in the user community have asked if there is an area where they can look for examples that might help them solve problems. We also think this is a good idea! All we need are the examples! If you have some cool and interesting examples, and are willing to share them, please let us know! Send to price@enco.com.

Upcoming Events!

SBES - Birmingham, UK **Nov. 15-16 2006** **Stand 75**
Ohio Association of Broadcasters - Columbus OH **Dec. 7th 2006**

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