

# QScript & CNN

**CNN**

...concept

**Autocue**

...creation

 **Script**

...product

**An Integrated Software Solution Case Study**

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# A breakthrough in CNN production practices

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## *Concept*

In the fall of 2002, CNN International contacted Autocue to discuss their interest in a solution for their news production process that would eliminate paper scripts with a substitute electronic view. Such a solution would significantly reduce the high cost of supporting numerous laser printers (paper, toner, repairs and replacement). In addition, they could put a number of VJs (video journalists) back in the newsroom, rather than chasing paper from printers to production staff.



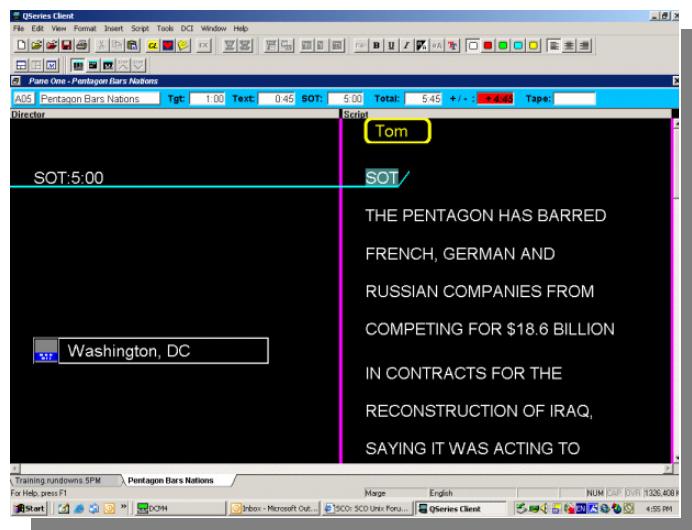
Autocue's unique set of products and newsroom expertise made a perfect fit. With its QSeries product line that included the QNews NRCS, automation capabilities, Unicode compliance, redundant server architecture and full integration with QTV's prompting systems, a large and stable code base offered a running start to the solution.

The early goals set out by CNNi and Autocue included:

- ❑ Mirror the iNews® rundown. Must continuously update with any changes including adds, deletes, updates, reorders and floats (similar to prompter interface or machine control integration with the rundown). Update speed is critical. Any changes made in iNews should be reflected as quickly as they are in the prompter interface.
- ❑ Display scripts on flat-panel touch screen monitors, minimum size 17", mounted on adjustable monitor arms to provide flexibility and preserve space in control room. Monitor arms should be adjustable by each operator, and should allow for viewing from two control room workspaces approximately 3 feet apart.
- ❑ Display at least two complete scripts at a time in two separate panels - an Air panel for displaying the current on-air script and a Preview panel for displaying the next script to go to air, or another script of the user's choosing.
- ❑ Allow user to activate Air or Preview panel by touching the panel on the screen or by pressing Air or Preview key on keypad. Through some visual indicator, it should be very clear to the user which panel is active at any time.
- ❑ Offer 2 modes:
  - Auto mode - This is the default. In Auto mode, when the user advances the Air script, the Preview script automatically advances along with it to the script that follows the new Air script.
  - Manual mode - If at any time the user manually changes the script in the Preview panel, he switches into Manual mode. The two panels are now independent of each other and will not advance together. The user can continue to advance the Air script while viewing scripts from any location in the rundown in Preview.
- ❑ If the user wants to go back to Auto mode, he can touch the Auto button on the screen. The Preview panel will then display the script that follows the current Air panel script, and the two panels will once again advance together.
- ❑ Allow user the following options for navigating through scripts:
  - Advance through scripts using arrow buttons on the touch screen
  - Advance through scripts using arrow keys on keypad

- Go to a specific script by typing its number on the keypad
- Go to a specific script by touching its tab on the touch screen
- Utilize a custom keypad
- Q Allow Director to add notations or highlighting to scripts using a stylus or “stamp” on the touch screen. Stylus would allow user to write anything on the script. Customizable stamps would provide shortcut for most common notations. Example: Director could note on the script the BCWS port assigned to a \*vid number. Notations and highlighting that is saved on a script is then visible to any user of the system.
- Q Provide a prep station where a Director can access any available script, check it, and make notations on it without affecting the show that is on air. Notations saved at the prep station will remain on the script when it is recalled during the show.
- Q Allow system to be set up for 4 different user profiles that are specific to job duties including TD/Director, font op, supervisor and administrator.
- Q TD/Director position will have full edit access to Air and Preview panels.
- Q Font ops will have the TD/Director Air panel on left and a Preview panel on right.
- Q Supervisor position will have read only access to Air and Preview panels.
- Q Administrator will have full access to Air and Preview panels and any system admin functions.
- Q Provide clear visual indication as to whether scripts have been copyedited. Possibly through using designated colors on the script tabs.
- Q In iNews, a specified character in the Status field of the script form indicates that the script has been copy-edited. The Status field is a variable field.
- Q Provide clear visual indication when a copyedited script has been modified after copyeditor approval, and therefore needs re-editing. Again, through designated color on script tab.
- Q In iNews, a specified character in the Status field indicates a script that needs re-editing due to modification.
- Q Clearly identify scripts that have been modified in iNews after a Director has marked and saved notations on the system.
- Q Allow the user to delete selected or all user notations from the Air or Preview panel using Delete or Delete All buttons on the touch screen.
- Q Retain the rundown data in the event of a communication loss to iNews.
- Q Allow each workstation to load the script from a list of show specific files. Each user should be able to load multiple shows.
- Q Save shows for a customer-specified amount of time to either a local or network drive. Should be able to view this archive as it was previously viewed in the control room with saved notations.

As these goals evolved during the engineering phase, it became clear to Autocue that this application, while originally designed for CNN's workflow with iNews, would hold as much value to users on other NRCS. Because QScript shared so many resources from other components in Autocue's QSeries product line, the tightest integration would be achieved with QNews.



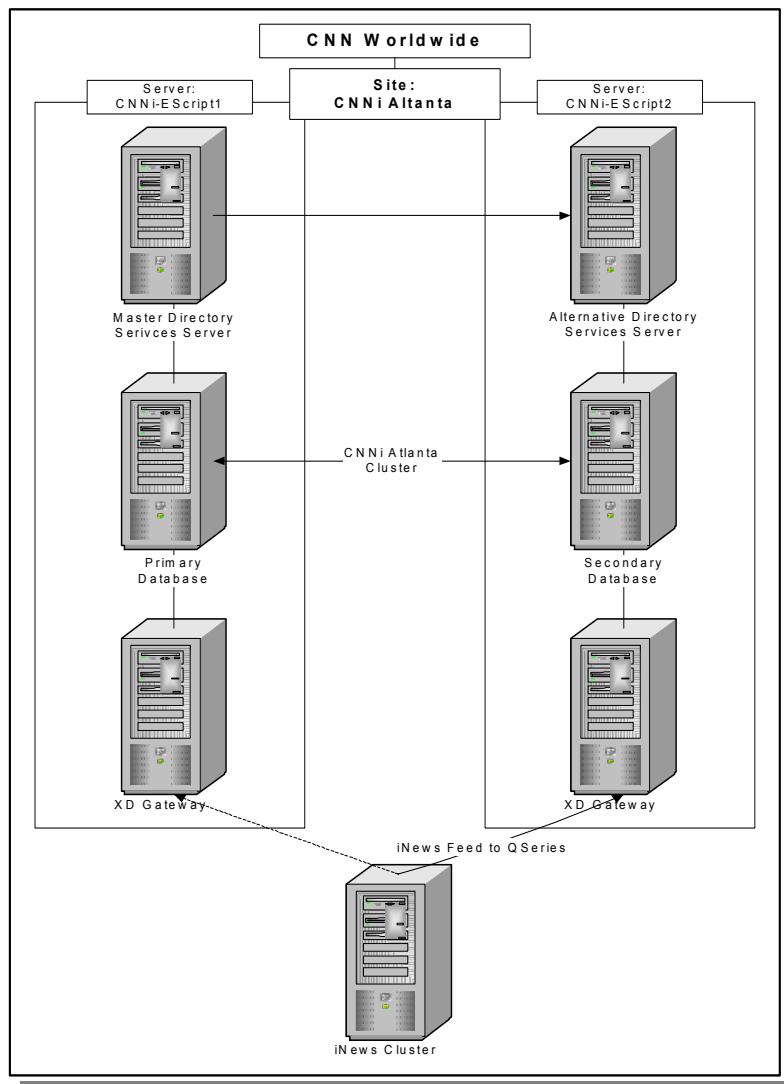
QNews script view



The solution grew out of the data typically sent from the NRCS to the teleprompter. So it was appropriate to begin this project using some code from both of Autocue's QNews and QTV's WinCue Pro prompter software where a tight relationship existed between systems for updating rundown information.



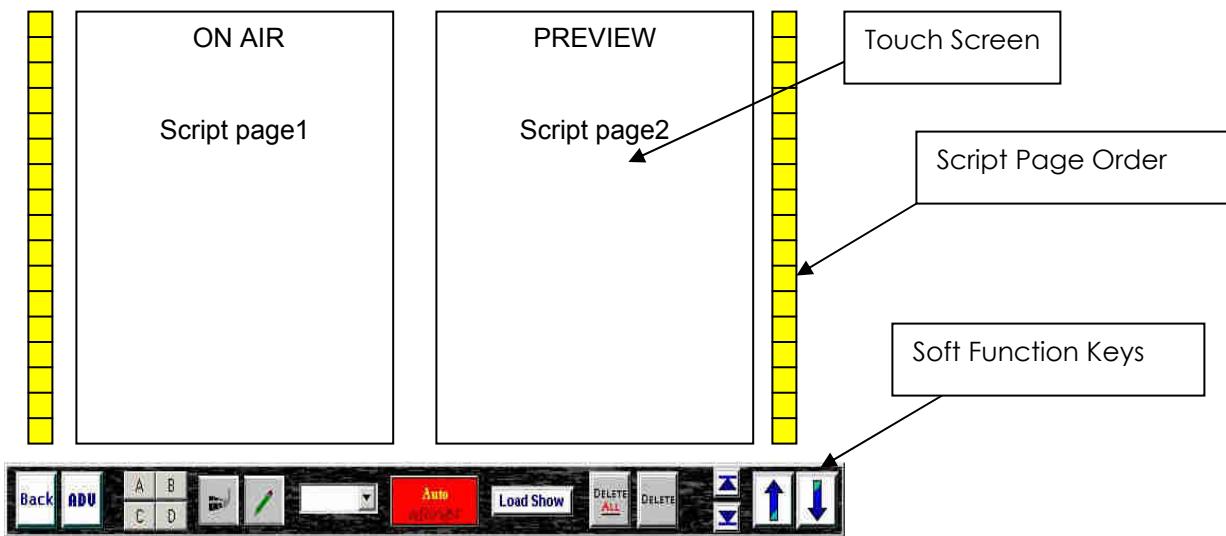
The QScript system architecture at CNNi is as follows:



Because QScript runs on top of Autocue's redundant database environment, CNNi chose to run their system in a redundant mode. The data comes from the iNews NRCS database, directly into the active XD Gateway server, which parses the information and feeds it into the QScript database. As changes are made to the rundown within the NRCS, these changes are also immediately reflected within QScript and therefore immediately available to the user.

## Design

Designs for QScript began to take shape quickly as the project got under full swing in January 2003. Early views looked like this:



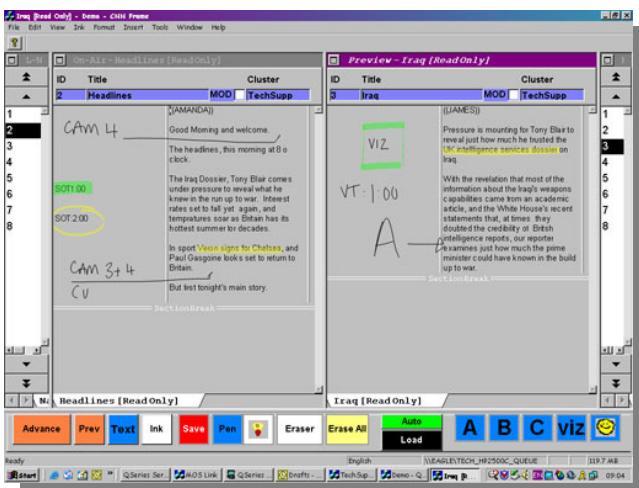
While QScript was conceived as a wireless production system, CNNi chose to physically connect the user workstations to the QScript network with a wired network connection. After several experiments, they choose to use flat touch screens that could be used either with a fingertip or a stylus.

Beginning in the spring of 2003, beta releases were used by CNNi off-air to find bugs, conduct load testing and to enhance functionality as hands-on experience was collected.

### QScript On-Air

Ahead of schedule, CNNi went on-air with QScript in June of 2003. Under live conditions, CNNi directors observed some of the hidden benefits. Because directors could prepare for their shows earlier and because out-of-order scripts no longer congested the production process, much of the pressure and anxiety that accompanies producing a live newscast, dissipated. Control over this part of the production process was a stress reliever.

With some experience under their belts, Autocue and CNNi could push the envelope further by adding additional features such as 'personal inking', archiving and printing. This additional functionality allowed different groups of users to apply different sets of notations to the same script, provided a way to archive and subsequently retrieve the marked-up scripts and added the ability to print the scripts together with the notations.



Final implementation of the main screen work area took this form.

The custom QScript layout displays two scripts at the same time - typically the current on-air script on the left-hand side and the next script on the right-hand side. The narrow bars on either side of the screen provide a quick way of navigating between scripts when in manual mode.

The director can make annotations (scribbles, highlights or stamps) on either

script, with a choice of pen colors, widths and opacities. Once the annotations have been saved for a particular script, they will be displayed immediately on all other workstations viewing that script.

Across the bottom of the screen are easy-to-access buttons that help the director to navigate or annotate, quickly and easily. QScript is designed to be fast and simple to operate ... relieving complexity, not increasing it.



This view is of QScript while being used in a wireless mode. This allows the user to be freed from a fixed position to mark up and annotate their show. In a wireless implementation, QScript can easily be mounted on cameras in the studio making it easy for camera operators to see the scripts and anticipate camera cues.

The implementation of QScript at CNNi was a success and has resulted in CNN adopting QScript for all their facilities under a global license.

"We have simplified our entire production process," - Anne Woodward, Director of Technical Operations

**"There are no more late or out of order scripts. Everything is right there at their fingertips," - John Davies, News Production Supervisor.**

Whether by evolution or revolution, QScript has, after 20 years of NRCS development, finally achieved the goal of paperless news production.

For further information about QScript visit the Autocue website on [www.autocue.com](http://www.autocue.com)