



**Completely Change Your Newsroom**  
(Without changing much at all)



***Avid***



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## **Abstract**

Since the first newsroom computer system, Basys, was introduced more than 20 years ago, broadcasters have witnessed an evolution from wire reading, scriptwriting and story assignments, to the addition of prompting and device triggering, to IT solutions that improve multi-station operations and technology administration. Though each of these iterations has been designed to add capability and control to the evolving and eventually digital newsroom, the features available to the key users—television news journalists—have retained their text-based origins.

In addition, new business realities have led to increasing workloads for newsroom staff, the result of a multi-year trend including the addition of multiple newscasts, more stories, and increased creative responsibilities. Newsroom computer systems have not risen to the challenge of incorporating digital video into the journalists skill set, nor provided the productivity boost required to address added editorial requirements—until now.

The introduction of the Avid® iNEWS Instinct system into the journalists' toolkit promises to change the productivity of the newsroom, while blending seamlessly with the way journalists work today.

## **Newsroom Computer System Evolution**

In the years since the original Basys newsroom computer system (NRCS) was developed, Avid Technology, Inc. has refined the complete system through a dramatic evolution. The technology started with Basys running under a VT system with terminal-only access, then moved to the DOS-based operating system—a limited environment wherein switching to a different application meant quitting the current one first. As desktop technology became more extensive, the Windows-based AvidNews® brought the capability to run other programs concurrently on the same computer, so that journalists could become more productive at their desktops by switching between applications. With the increasing maturity of the Windows OS also came dramatic user-interface (UI) changes which made the fundamental newsroom technology even more accessible by desktop users of Avstar.

With each NRCS iteration, the historic desktop trend has driven away from standalone operation and toward collaboration, integration with other applications, and more technology openness. Because of the far-reaching power the NRCS has over a station's operations, it has been ripe for enhancements to improve any number of capabilities and additions meant for many of these ancillary tasks.

As a result, there have been efforts from an entire broadcast industry sector to tap the NRCS through various database and communications protocols, Active-x integration, and even "Alt-Tab" interoperation—running the NRCS on a standard Windows computer so that the seemingly simple desire to run other desktop applications on the same system as the NRCS can be made possible. The goal of many of these methods has been to bring more power over the production process to the person who originates the idea. Consequently, there have been major advancements in productivity.

Today, the Avid iNEWS newsroom computer system already achieves the most complete evolution yet—a long way from terminal access—with station integration so thorough that it supports operation alongside and inside other applications (and other applications running inside it), device automation, multi-station and remote workflows, Web client access, and interoperation with nonlinear editing systems. And now, with the inauguration of iNEWS Instinct, Avid now introduces a whole new way for journalists to be more productive without changing the way they are accustomed to working.

Concurrently, broadcasters have witnessed parallel changes with the steady adoption of digital technology on the video production side. First, individual steps in the process

have been enhanced, such as nonlinear capabilities in editing and file-based video servers. Next, whole series of tasks, such as capturing footage, editing, audio production, and playback, have been compacted into single nonlinear applications. Finally, a far more capable, all-digital, nonlinear production environment has become the broadcast norm, including the linkage of production to newsroom control.

By integrating the nonlinear production workflow with the newsroom workflow, and the NRCS story creation with video, Avid has developed this next leap in productivity gains for news stations around the world. Avid iNEWS Instinct brings together script writing, shot selection, editing, voiceover recording, logging, split-audio editing and audio rubberbanding in a tool that is specifically tailored to the journalist. The unique interface allows the journalist to add more to the production process in a way that needs very little training. And it does so significantly because its workflow is all based directly on the way the journalist inherently interacts with the NRCS.

## **The NRCS Defined**

The NRCS is truly where everything in the newscast begins. It is the core of the newsroom—and has been entrenched there for a long time, regardless of whether the facility is based on a nonlinear production environment or operates in a tape-based workflow. Every newscast ultimately starts and ends with the NRCS: concepts are originated with the wires, constructed with scriptwriting capabilities, and ordered for payout with the rundown—all in the NRCS.

Additionally, the NRCS is utilized in different ways by different newsroom users and users throughout the station. Typical users include:

### **News directors, producers and managers**

News management staff manage the on-air content and the personnel in the newsroom; assign stories to staff; devise and manage the newscast as a whole in terms of the rundown, segments and order of the show, and last-minute float or drop decisions. They are concerned with the newscast big picture—everything that goes on the air during that specific half-hour slot.

### **Journalist/reporters**

The editorial users execute story ideas by going out and reporting on them, researching and inputting further information (interviews, footage, data, writing a script, and communicating the required visuals to editors). These users are concerned with accuracy (of information) and simplicity.

### **Editors**

Production users sometimes have access to the NRCS simply to refer to the script while editing the news story, but more often, their interaction with the newsroom computer system is limited to whatever sheet of paper the reporter prints out for them that includes the script and some scribbled time codes. These users are concerned with visually enhancing the story with the footage provided and with other material and techniques they use to improve the production quality of the broadcast.

### **Operations users**

Operations personnel often play tapes or clips from video servers and use other production devices that are required to put the news stories directly out to air once the newsroom user has completed the editorial portion. These users are foremost concerned with accuracy, automation and control.

### **IT staff**

The IT department ties the station together with station-wide (and multi-station) networked systems, archive plans, and the corporate infrastructure. They are concerned with stability, reliability, and integration.

## **Closing the Productivity Gap**

In an ideal news environment that includes all of these types of users, the people with the editorial responsibility for the stories they report on—the journalists—can maintain control of the product from conception to air. In the typical environment, however, the journalist loses control over how a story will turn out very early in the process.

For instance, in a facility that has not yet deployed a digital solution, writers will do research and begin constructing a story using traditional text-based newsroom tools. Time permitting, they may be able to preview the footage for the material they are writing about and suggest shots to use during the editing process, jotting down approximate time codes to indicate their opinion of the best shot or take. When they've completed the story they will hand the script off to the video editor, who sometimes has a desktop computer running the NRCS so they can refer to the script, but who most often bases the edits on a printout of the script.

The editor will make his best effort to create an accurate realization of the story the writer was envisioning. In some cases the writer may even have the task of sitting with the editor to produce during an edit session. This is in fact a rare luxury; most of the times the writer will entrust all creative and editorial control to the editor and not see the completed story until it actually runs on air.

This method has obvious disadvantages for the writers, who can lead the process only so far before relinquishing any influence they have over the story. But the disadvantages for the editors are twofold as well: time spent putting together quick journalist stories like simple voiceover and voiceover-sound on tape pieces takes time away from exercising their skill and craft on packages, long-form pieces and sweeps pieces. And merely executing on a journalist's shot list seems like rote work, something they feel an intern or a journalist should be able to handle. The obstacle has been ensuring that everyone in the newsroom is using the correct tool for the job at hand, which has been the missing link in the newsroom productivity gap—and training non-editors on skilled production tools is a frustrating endeavor, especially when everyone at the station, including the journalists, is increasingly burdened with more stories, more tasks, and more newscasts.

## **Journalists: doing more**

The reason that so many compromises happen during the production cycle is simply that it is a never-ending race against the clock. Installing nonlinear editors (NLEs) such as Avid NewsCutter® on the journalist desktop helps to diminish those compromises, but only for users who grasp the concept of a timeline—and all the other features and power tools that go with a traditional NLE. Most newsrooms have at least one journalist standout that can drive basic NLEs; these users are valuable to have on staff, but are unfortunately few and far between.

Why is it that more editing-savvy journalists do not bubble up, embracing and becoming proficient at completing their own stories? There are a few primary reasons:

### **Station Policy**

Certain facilities restrict journalists from completing their own stories. In many stations this is a legitimate policy, providing distinct boundaries between roles and keeping structure in the production process. In these cases—wherein the journalists may not complete their own stories—it has become clear that they still have a lot more to contribute to the production process to save time, meet deadlines, and keep editorial and production roles well defined. No matter what the policies are in the newsroom, the ultimate goal should be to provide tools that are tailor-made for each discipline and that don't blur these lines. Improvements will be seen almost immediately to the newscast—in time, quality, and accuracy—when the right tools are in place.

### **The Comfort Zone**

The reality is that even the simplest of NLEs can look just like the cockpit of a 747 for a user whose primary tool is text-based. In a high-pressure environment where nearly every user pushes the limits of time and productivity it is difficult to embrace and learn a new tool if it is not a natural extension of a current toolset and skill set.

On the other hand, other obstacles have appeared in recent years that make it more compelling for broadcasters to equip their journalists with creative tools to supplement their editorial expertise.

### **Personnel Limitations**

What happens if the station adds multiple newscasts without the addition of new personnel? Everyone's workload multiplies, a fact of life in this 24-hour news environment. With the right toolset, journalists can pick up the slack on non-craft-edited pieces such as VOs and VOSOTs—which at many stations make up 80 to 90% of the newscast—or do 90% of the legwork that can then be handed off to and finely finished by skilled editors.

### **Budget Constraints**

In other cases, stations have had staff cutbacks but still need to maintain the their newscast status quo in terms of the number of daily broadcasts—with an emphasis on ensuring that the quality of the on-air product does not suffer. Assigning basic pieces to journalists while craft editors take on finishing work, finessing, and package editing keeps the productivity flowing while the production values remain high.

A deciding factor regarding increasing responsibilities can be simply how much production should be permitted in the newsroom. Journalists don't need to create product for air—but skilled editors should be able to spend their talent crafting a story, not searching for the right shot and waiting for someone's approval.

When the shots are already selected, the order is already prearranged, and the timing is already accurate, news editors are then free to put their skill and creativity into telling the visual parts of the story—with compelling transitions, effects, titles, graphics, motion effects, and the kind of on-air quality that gets attention from viewers.

That means using the right tool for the job.

## Building the Right Tool

The Avid iNEWS Instinct system is the storytelling tool designed for journalists. With a simple, unified interface, this patent-pending technology combines the iNEWS NRCS with real-time shared video assets and a built-in media management system



News Material Provided by WFTV Television

**The first indication that this is a tool built for journalists is that it's designed directly around the NRCS.**

Bridging the newsroom and production environments, the Avid Broadcast solution provides seamless integration across systems, departments, facilities, and other manufacturers. Linking newsroom to edit room, promotions to news production, network to affiliate, operations to third-party devices, and users at desktops facility-wide, the Avid solution removes obstacles and introduces all-new efficiencies to a smooth, collaborative workflow. These multiple points of integration are what enable broadcasters to experience a superior level of facility fit with an end-to-end infrastructure, while providing every desktop—every node on the network—with the greatest productivity enhancements.

With desktop productivity in mind, iNEWS Instinct lets journalists tell the story their way, using the knowledge and skills they already have about story creation. With a simplified, script-based video UI, control of text, images and timing, and the ability to play cuts-only VOs and VOSOTs directly to air (while creating rough sequences for craft editors to finish at their production workstations), Instinct fits the changing role of journalists and increases the quality of their product, quickly and intuitively.

Instead of keeping the video workflow walled off from the text workflow—a practice that becomes more outmoded with every added newscast or reduced budget—Avid iNEWS Instinct links both the iNEWS NRCS and the Avid Unity™ shared storage network. The Instinct system considers both the text and the video assets that make up a story to be a single object. Thus, when a story is created in iNEWS Instinct, a video sequence is also automatically created behind the scenes. This key function allows the journalist to add a selected video clip to a selected block of text in the script at any point—the fundamental first step in editing the pictures to words.

## **Using iNEWS Instinct**

Building sequences with iNEWS Instinct is an intuitive, logical process which most journalists will grasp with minimal training time. Because all the tasks and assets they require are available in a single, integrated interface, they have everything they need at their desktops. The only expertise required for developing iNEWS Instinct stories is a sense for storytelling—and the abilities to type, click, and drag and drop.

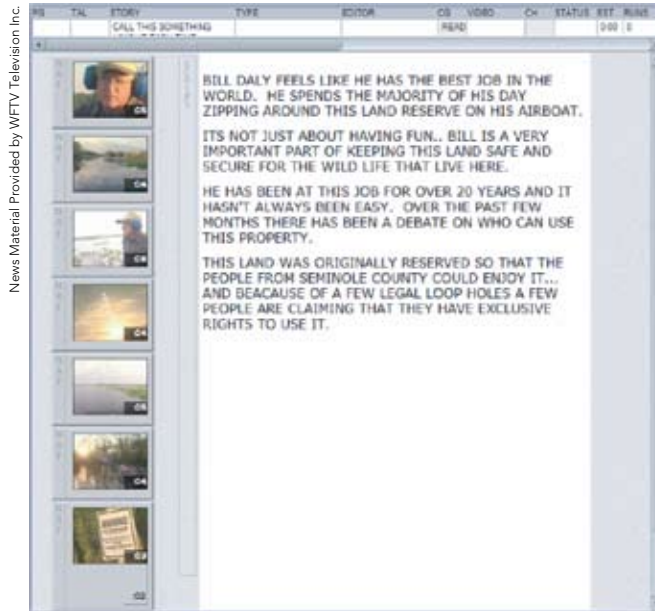
When users find the perfect shot or sound bite to add to the story, they may simply highlight the text in the script where the video should appear, select the type of edit they intend to create at that point (B-roll, SOT, Voice), and drag it to the script. They don't need to worry further about setting audio levels on the voiceover track, or ducking the nat sound level on the b-roll track when an SOT clip is inserted: iNEWS Instinct takes care of the rest.

Users don't need to spend time tweaking "out" times either; the presenter's read rate is used automatically to calculate how long a shot needs to be when no video "in" or "out" is specified.

iNEWS Instinct handles special circumstances too—those frequent times that last minute changes occur or the video time doesn't precisely match the copy time. Even if the script copy changes, as the user adds or deletes words in a segment, the timing of the corresponding video clip is also adjusted so the two never go out of sync. The "out" frame of the video clip can be dynamically adjusted to match the copy time when using the "Trim to Fit" tool to quickly match up the copy and video time. In the event there is not enough video to cover the amount of text in an edit, a red "video required" dialog appears with the amount of time remaining to be covered, and indicates where there is no video.

This is all done without the use of a traditional horizontal timeline. The patent-pending, vertical storyline-style editing window removes barriers to a complex, multi-track editing interface when the journalist just needs to put together a quick piece—but needs to tell the story just right.

**The simplified iNEWS Instinct editing interface is vertically oriented like an NRCS news script.**



## The System Works

A variety of functions are built in that “predict” the editing style required on these most-common types of news stories. The purpose of this method is to present the user a simplified user interface even for complicated procedures, while the more-intense processing occurs in the background.

Specifying the type of shot to place in the script, including B-roll, SOT, or Voice, instructs iNEWS Instinct how the audio for that track should be handled. For example: if a user includes a “B-roll” shot in the script, the natural sound track level will be set 100%, while a “SOT” edit, indicating natural sound in the background, will be set at a lower level than the volume of the person being interviewed.

Recording a voice-over track, including setting input levels and track settings, is normally a complex task but iNEWS Instinct simplifies it greatly. A user can simply click right into the segment of the script where the voice track is to begin and hit “record.” A 3-2-1 countdown sounds off during the “pre-roll,” and while the user records the voice track, the corresponding video plays in the monitor to visually assist in pacing.

In the world of multi-track audio levels for news video, the voice track is obviously king. Anytime a voice track overlaps with an audio track of another type, the other track is ramped down to a level that is predetermined and configured in iNEWS Instinct by the facility administrator. Once the voice track has ended, the other track is ramped back up to the appropriate level. In traditional systems this type of audio manipulation would take many steps using a complex UI. It happens automatically with Avid iNEWS Instinct.

Journalists who graduate past straight cuts may decide to ramp up their technique with L-cuts, also known as split-audio editing. This is most-often done to create a more polished-looking story, but it is also done to extend video from a prior cut to cover up flaws like camera bobbles or bad edits on the next cut, where the original source audio is still required. Split-audio edits can be accomplished by dragging the video-only handle from one shot into the next shot in the story. As with most of the Avid iNEWS Instinct editing techniques, a simple click-and-drag achieves much more.

This mode is especially good for users that are comfortable using the mouse for choosing video in and out points. A keyboard method of creating split audio edits is also provided that allows for quick video-only clip extensions. The user simply stops dragging the cursor at the point at which the video of the previous shot should extend, and types the "extend" shortcut.

**A NewsCutter XP system shows how the sequence created in iNEWS Instinct, left, would be created in NewsCutter's timeline-based NLE, right.**



When users find that they are building these essential pieces with such ease and simplicity, they may not grasp the complexity that would be required in a traditional timeline-based nonlinear environment. When they see the sequences side by side, however, the differences between the effort involved in each—and the reasons that craft editing belongs in the hands of the skilled news editor—become clear.

## **Creating the News-time Hero—every day**

The benefits of providing such tightly integrated access to video during the writing process are realized right away, because iNEWS Instinct is a true shared storage client on the Avid Unity system. The Instinct system can share, access and use all of the same resolutions as a NewsCutter or NewsCutter Nitris™ DX workstation. That means journalists can contribute to the production process on stories using resolutions ranging from DV 25 all the way up to Avid DNxHD™, without rendering, encoding, or dubbing to tape. Add the supporting capabilities of video previewing, media asset management, and send to playout, and iNEWS Instinct becomes a true desktop hero at news time.

Researching news stories and locating assets—no matter how many stories the journalist is working on—take place in an uncluttered, organized pane that stores results windows until the journalist makes the decision to remove them, and which appends each new research result in its own tab so that the previous result is never lost. Users familiar with the Avid Interplay production asset management system will notice that iNEWS Instinct has its own direct access that lets them locate and work with clips from shared storage. And iNEWS users will appreciate that even with the welcome addition of video, they can access all the rundowns, stories and wires they always have in the iNEWS NRCS desktop client.

Probably the feature most surprising to enterprising newsroom users who have longed for creative control of their product from concept to air is one they'll use under the tightest deadlines, at the last minute, when the only things between the story and the newscast are the final few minutes before airtime. The "Send to Playback" feature lets users send sequences created with iNEWS Instinct from the application directly to an available playback server.

There, it may be accessed by a producer or other newsroom manager to be previewed in its entirety prior to going to air—or it may be cued up for immediate broadcast, breaking the news to the world just moments after the completion of the story that remained under the journalist’s editorial control from beginning to end.

**A video sequence can be opened by a nonlinear editing system for finishing, or sent directly to a playout device.**



In a single, unified, and elegant desktop interface, everything the journalist needs throughout the entire story production process is within reach, from beginning the story right up to handing it off to an editor for finishing—and right out to air. And perhaps most significantly, this groundbreaking new tool—a tool that completely changes the landscape of the newsroom—is intuitively easy for journalists to operate from nearly the moment they sit down in front of it.







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