



Quantel White Paper

The HD News business model



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About this White Paper

The business of managing, creating, and delivering news content to the viewer has changed dramatically over these last few years. Yet many TV, cable and satellite broadcasters still work in a traditional tape-based environment. Therein lays the challenge.

Broadcasters are presently focused on how to transition from tape and linear editing in news, as well as creative services. The goal is to convert to a cost effective, disc and file based workflow, exploiting new acquisition formats and delivering content to new media outlets, with required metadata established.

High Definition or HDTV is clearly a factor in these decisions. For many broadcasters it makes sense to transition to HD now, as it's clearly more cost effective to make a change once, rather than proceed to SD non-linear and then again to HD. The cost of upgrading later on can be prohibitive, depending on the solution and the manufacturer. For others, SD non-linear may be the answer, but please ensure that any solution purchase is HD 'future proofed'. It only makes sense that the purchase of a system in SD be HD capable from day one. Why pay for the same system twice to broadcast in another resolution later? Amortize the system once, and only once.

In the eyes of many broadcasters, there has been a lack of equipment available to satisfactorily answer these requirements. They must focus on gaining the maximum productivity from their people, equipment and resources in a cost effective manner.

Following are a few key questions that concern Broadcasters today:

- ◆ What efficiencies can be gained from transitioning away from tape-based solutions to server for ingest and playout?
- ◆ How can we best exploit the content that "we own", focusing on two revenue streams; our traditional broadcast signals and driving content to the web, as well as alternative devices like cell phones, PDA, etc. ?
- ◆ What is the learning curve for this "disruptive technology" ?
- ◆ What is the overall cost of the solution?
- ◆ What is the cost if I don't transition?

The questions above affect the financial bottom line, as stations are required to operate as profitable businesses. Delivering content to the viewer today, at a cost they can afford is certainly challenging. Whether you are a small, mid or large market broadcaster the cost of cameras, trucks, and ancillary devices is effectively the same. It is only the scale of the solution that differentiates the overall cost. Broadcasters require non-linear editing and server based news solutions that scale for the size of the market. After all, a station creates news revenue based on commercial spot sales, and that is determined by their ratings within the market.

So, broadcasters must purchase enabling technologies to save operational costs, add capability, enhance quality and efficiencies. Technology is the solution, but the decision is based on solid business principles.

This White Paper addresses the current news model and demonstrates how the transition from linear tape-based news to an SD and HD ready, non-linear news environment can be achieved.

Who wants to change and why:

Each of the key players in a news operation can benefit from a move away from tape. It's worth looking at their points of view in detail, and determine the available choices.

The General Manager's View:

Successful broadcast stations/facilities are typically managed by people who understand the 'big picture', and they focus on the details. News is a business that is all about viewer's eyeballs. The business that gathers the most eyeballs is invariably the most profitable, and is determined "a winner".

General Managers have watched profits erode, and they cannot stand idle. Nor can their owners. So, decisions must be made. "Am I going to be a buyer, a seller or a holder of a station/facility? Am I going to attempt to raise my EBITDA (earnings before interest, taxes, depreciation, and amortization) to add profitability?" In all cases (buyer, seller, holder) transitioning to a non-linear editing and server based news solution makes good business sense.

General Managers purchase solutions for three reasons; return on investment, protection of investment, and low cost of ownership based on added value. Once they follow those basic principles the only thing left is to set up a transition evaluation team usually consisting of key personnel.

The News Director's View:

Broadcast news operations are living in an ever changing world. If you are a News Director, you must deliver compelling content to the viewer, preferably prior to the competition. You require solutions that make difficult problems simple, and in a resolution that people demand. Knowing that HDTV is becoming the preferred method of "watching" television the News Director must act quickly.

In the recent past for some, and the present mode of operating for many, crews shot on tape, stories were edited on tape, and the broadcaster played out to air on tape. Faster to air usually means better ratings than the competitors. What is the cause and effect if your competitors have moved away from tape? How has that affected your ratings?

In the first decade of the 21st Century, your audience expects to learn about major events as they occur. They might be at home, work or travelling. The news audience has access to the internet and wireless devices capable of receiving text, sound and video wherever they may be. They're no longer satisfied with the "talking head". They want pictures and sound that are descriptive, and that tell them the real story as it is unfolding.

Increasingly, more viewers have digital video cameras of their own. Some are capable of HD. Many viewers are watching HD programming, so their move to own this technology is a "slam dunk". Sports are a leading driver in the move to HDTV, as it offers fast moving pictures that high impact on the viewer due to the enhanced picture quality.

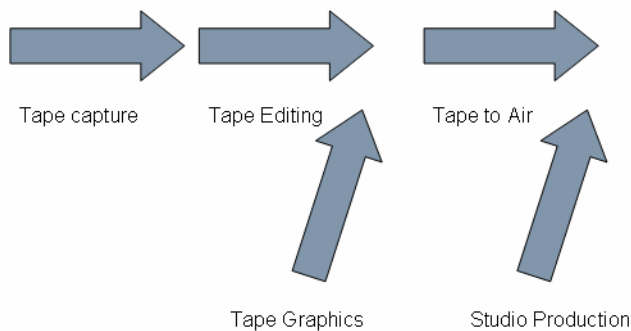
News Directors now require technology that is equally happy working with video or with data, because the business imperative is to get the best result wherever it comes from and wherever it goes to. Increasingly, HD is part of that imperative.

That's why News Directors require technological solutions designed to provide a first-to-air, cost effective storytelling environment with HD built-in as standard. They must be able to afford the transition, both in cost and in user ability.

The Journalist's and Editors View:

While some broadcasters want to keep journalists in their traditional role, increasingly others want their journalists to edit; telling stories with pictures and sounds, not just words. Many journalists desire to make this change. And, the video journalist or VJ is born.

The complexity of a tape-based environment required journalists to brief editors on their ideas, and then leaves it to the editor to interpret their needs. In order to accomplish this task it is possible that the editor might require material from the graphics department. This is a linear process: Frustrating for a journalist as well as the editor, and costly to the broadcaster.

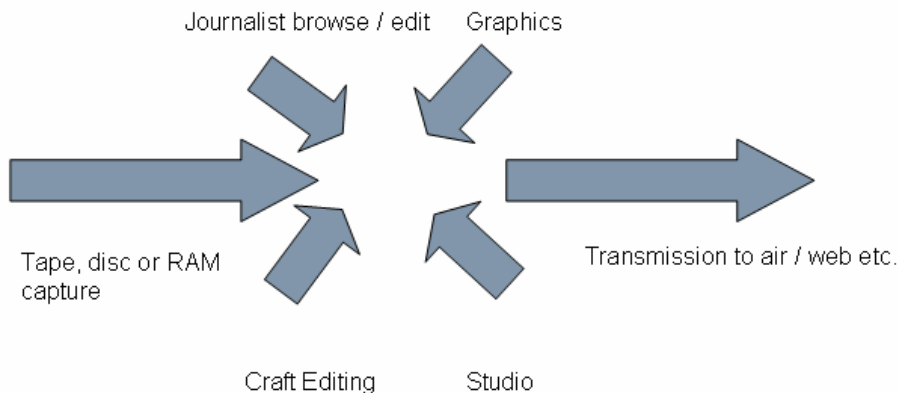


*Traditional Tape based News Packaging:
A multi-generation, sequential, linear 'step by step' workflow*

Meanwhile, craft editors in linear suites see desktop non-linear editing (NLE) systems accelerating ahead in toolset, performance and workflow.

Craft editors (Creative Services; Production and Promotion) enhance the look and feel of news stories. Craft editors must have the creative tools that significantly improve the look and feel of the station.

In a modern Quantel Newsbox workflow, all material ingested is immediately available to all users, even while it is being ingested, at SD and at HD. Journalists, craft editors, news editors, and designers will work concurrently on shots or stories, massively reducing time to air. The user interface scales from very straightforward browse stations to fully featured craft editing systems. This benefit allows a commonality of language interpretations and applications.



*Modern News Packaging using Quantel Newsbox:
Efficient collaborative shared workflow*

The Director of Engineering's view:

Engineering Directors are charged with the task of implementing the tape to server transition smoothly. That's no small task, understanding that enabling technology must work reliably, be easy to use and train on, and be future proofed as much as possible. The Quantel Newsbox solution meets those requirements, both in SD and HD.

There must be a concern for what legacy technology will remain in-house, and how it will interface. The engineering director understands where the cost efficiencies in the transition lie; maintenance of legacy equipment, cost of tape stock, VTR head replacement etc. Workflow is of paramount importance as the whole idea of the transition is to enhance capability, as well as creativity. Anything other than an acceptable workflow is just a waste of time and expense. And, the metadata must travel with the clips, and that means down to the single frame.

How technology choices affect the business model:

Some might get the impression that all disc based news technologies are the same. Not so. There are major differences between systems and these differences impact the business model.

A few broadcasters might consider buying 'prosumer' PC or Mac based systems. This can provide some with a solution that fits their application, and has a financial appeal, because it's inexpensive. By using only standard IT technology and nothing else, the individual components appear to be relatively inexpensive and the choice of components appears wide.

However, lack of credible HD resolution rules out the prosumer route for many. There are hidden costs associated with using Prosumer technology that can negate any apparent savings, related to the original purchase. Poor integration can mean poor workflow and higher staff overhead. Stories can take longer than expected to get to air and are very difficult to re-version. Highly complex media management means bloated disc arrays.

Critically, support proves inadequate for broadcasters in many cases. Broadcasters typically require 24/7/365 operational support – which is nothing like the prosumer market - and prosumer software incompatibility between vendors can occur, whereby version changes are limited.

Of course, there are systems on the market that can work at HD resolution, but these can be very costly either at time of purchase or later on in the "dreaded" upgrade. In many cases these offerings don't scale easily, even at SD resolution.

Some of these offerings are actually multi-vendor; meaning the company who provides them has implemented a number of solutions together to create a workflow. Different user interfaces, code bases and architectures can mean hidden operational and engineering costs. Typically three various servers are required to ingest, edit and playout, adding to cost and operational complexity.

Designing a system for affordable HD:

Quantel designed Newsbox from the ground up in order to satisfy the business requirements of broadcasters, who want to move from linear to non-linear with the option of an affordable path to HD from SD or to SD/HD today.

Newsbox combines the openness of scalable software and IT technology with the power and quality of purpose built hardware – all designed and built for the needs of Broadcasters and supported 24/7/365.

Newsbox HD news a practical proposition as it has the power and integration needed to deliver HD at an affordable price, effectively at the price of SD, and scales easily as requirements change. And because Newsbox uses a common GUI, toolset and language, there are none of the problems associated with 'mix and match' products.

The need for Scalability:

Quantel systems are designed around a single code base that supports different levels of toolset and platforms.



Whatever the functionality, the interface is the same. From basic browse, cut and voice-over toolsets for journalists' or producers' desktops, to fully featured layering, compositing & graphics. Ingest and playout applications and even third party applications can be made to look and feel the same, using an 'Active-X' plug in.

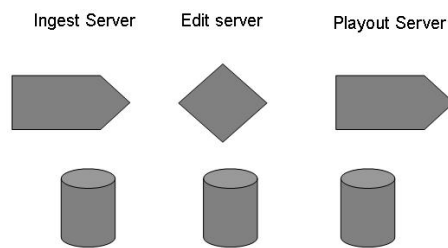
All this means journalists; producers and editors get the right level of tools and the right amount of power to do the job. Users find that learning the Quantel user interface is simple, and moving between systems is easy.

The need for an Integrated Server Architecture:

To publish a breaking news story on the air you need to ingest the material, cut the story (& add any graphics & effects), and then play out to air:



Some manufacturers need three devices to do this:



Broadcasters observing manufacturers that have created this multi-device architecture will not be surprised to learn that an HD upgrade comes with a very big price ticket. In fact some systems have to use two edit servers just to provide protection in case of a lost disc. An upgrade such as that can completely blow out the amortization schedule and the pricing model originally conceived.

We're confident that in the SD to HD transition broadcasters can find other ways to utilize their funds.

In contrast the Quantel Newsbox utilizes a single Integrated Server Architecture, or ISA. You don't need to go through an ingest server, or ingest server partition or play out server. Even browse applications can be used to cut out a sub clip and have it cued as fast as the operational staff can press buttons. So, simple fast breaking stories can be on air in seconds. Isn't that the required objective?



*Quantel Newsbox uses an integrated server architecture:
Speed to air is extremely fast*

The need to manage material efficiently:

Finally, once the broadcaster makes the transition from tape to disc, they will need to rethink how to manage stories. Suppose that you desire to delete one or many legacy stories and these stories contain shots that you want to keep? Some solutions actually allow you to delete the old clip (destroying the specific shots that you want to keep).

Other systems won't allow you to delete the old clip (keeping the disk unnecessarily full), so there is a need to defragment & consolidate the disks. When working at HD resolution this problem is amplified, as there is so much more data. The workflow suffers severely in this scenario.

In Quantel's Newsbox the largest unit of video is a frame, not an entire clip. That's a good thing. The Quantel technology that allows this is referred to as Frame Magic™. The operational benefits are huge. One, the broadcaster will never accidentally delete material that they desire to remain on the server. Two, the broadcaster can always delete material that they don't require. Three, the broadcaster never is required to defragment the disk, which otherwise is a frustrating process in a busy station. Fourth, time to air is minimized – in a breaking news story, each frame from a feed is ready for use as soon as it is ingested; no waiting!

Once again, the benefits are huge. Because Quantel Newsbox uses Frame Magic technology, the broadcaster requires less disc capacity, needs less manipulation of the data and database, and has less risk of an expensive operational mistake. All of this with a faster turnaround to air either in HD or SD.

Summary:

The business advantages of moving from linear to non-linear, server based news creation are clear, and it makes sense to consider HD now rather than later. Please keep in mind that your technology choice should support the business model that is required. To find out more about how Quantel's Newsbox SD/HD solution can assist you in your transition please contact your local Quantel representative. Please go to <http://www.quantel.com/tv> and look under 'About Us' for local contact details.

White papers giving more technology background can be found at <http://www.quantel.com/site/en.nsf/HTML/whitepapers?OpenDocument>

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