



# Quantel White Paper

## The Economics of News



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## **About this White Paper**

The News business has undergone massive recent change - yet some TV, Cable and Satellite broadcasters still work in a traditional largely tape based environment, or with very early disc based systems.

Many of these broadcasters are now looking to move forward – especially to leave tape and linear editing, for both News and Creative Services. The goal is cost effective new disc and file based workflows, exploiting new acquisition formats and delivering to new media outlets.

Increasingly High Definition is also a future factor in these purchase decisions. It is important that any purchase is HD 'future proof', so they can move to HD later. No one wants to buy a system that may be obsolete within a few years, before the investment is paid off.

The lack of satisfactory answers to these needs is inhibiting these broadcasters from gaining the maximum productivity from their people, equipment and resources.

There are a few key questions that most concern Broadcasters today: What real efficiencies can be gained? How best to exploit new delivery media? How best to train and use staff to get the best results? How to make changes on a limited budget in acceptable timeframes?

These questions go directly to the financial bottom line, as stations need to be run as profitable businesses and the market today is challenging.

Broadcasters purchase enabling technologies to save operational costs, add capability, enhance quality and efficiencies. Broadcasters are now asking, "Why would I want to purchase an SD solution today, and then repurchase at a later date an HD upgrade to that same system, at a considerable cost (or worse still a wholly new system) when it is entirely possible that my facility is still paying off the original investment?"

News systems vendors are understandably most comfortable talking about technology or tools – but the real driver in News is the business model.

This new White Paper looks at the current business issues in news and how an easy business transition from linear Tape or early disc based based News to an integrated 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 towards an integrated news environment. It's worth looking at their points of view in detail, and determine the available choices.

## The General Manager's View:

Successful Broadcasters are typically those run by people who understand the 'big picture' as well as the important detail. News is a Business and successful businesses make the right moves at the right times.

A General Manager may be a long term incumbent who has seen industry profitability under pressure or a new player who has bought a station for a variety of reasons – for example in order to grow it and keep it, turn it around sell it on at a higher price or simply as a cash generator.

Whatever the motive, the News Station must be a viable business. Financial performance ratios are commonly used tools to judge the health of a business. The 'top level' or primary ratio is ROCE (Return on Capital Employed), often expressed like this:

$$\frac{\text{Earnings before Interest and Tax}}{\text{Total Capital Employed}}$$

This lets the General Manager relate operating profit to the capital invested in the organisation. In a News company with old paid off (therefore depreciated) equipment, some ratios can appear good<sup>1</sup>. However the real picture is more complex.

In old-style tape based News, the anchor journalists are very powerful people, key to the channel branding. The craft editors are also powerful people because their skill and speed on complex systems make the seemingly impossible happen.

A key question for any organisation is 'are we getting the most out of our people and systems, especially the expensive ones?'

Two other ratios are especially useful here:

$$\frac{\text{Direct Labour}}{\text{Sales}} \quad \frac{\text{Production Overheads}}{\text{Sales}}$$

There's a lot of editing required making a live television news show work – but most of it is actually quite simple storytelling, using cut edits. Do you really need highly experienced editors, working in complex edit suites, to be editing single shots? Are you really getting the best out of your Journalists – some of which may be very highly paid? Are you spending significant amounts of money running VTRs? There is a clear opportunity to look at the workflow associated with making television news and allocate tasks to the people best suited to carrying them out.

General Managers run stations as businesses. They want to see a return on their capital. They want to see assets fully utilised. They want to increase the value of the business.

A common business school maxim is that momentum to change one area is often helpful in changing another. This is an opportunity for bold management to grasp – and HD can be a part of the change process.

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<sup>1</sup> ROCE is expressed in a variety of ways, for example as

$\frac{\text{Earnings Before Interest and Tax}}{\text{Total Assets} - \text{Current Liabilities}}$

### **The News Director's View:**

Broadcast news operations are living in a fast changing world.

If you are a News Director, you want to get compelling stories out to the audience ahead of rivals. You want your staff to produce great stories, with no technical hassle.

In the recent past, your crews shot on Tape, your stories were edited on Tape and you played out to the transmitter from Tape. If you could get a great story to air faster than your competition, that meant great ratings.

That all worked fine until your rivals started to use disc based editing systems, potentially beating you to the punch.

Your rivals probably still shot on Tape but they edited on disc and played out to the transmitter from Disc. Unlike Tape, disc is non linear – they could make changes easily and – up to a point - they could share information between system over network connections while the job was in progress - a big step forward for News.

However, many early non linear systems went in 'piecemeal' as point solutions, so the benefits of a truly integrated Newsroom weren't really delivered.

Then things changed again.

In the first decade of the 21<sup>st</sup> Century, your audience now expects to learn about major events almost as soon as they occur. They might be at home, at work, or travelling.

The News audience now also have access to the Internet and wireless devices capable of receiving text, sound and video wherever they may be.

They're no longer satisfied with someone just reading a written report and expect to see and hear from correspondents at the scene. They expect to see the events for themselves – live, if possible.

More and more viewers have digital video cameras of their own – some even have HD. So, News Directors now need technology that is equally happy working with video or with data – because the Business imperative driving the News Director is to get the best result wherever it comes from and wherever it goes to – and increasingly HD will be part of that imperative.

That's why News Directors need technology designed to provide a fast to air, cost effective storytelling environment for with HD built in as standard.

### **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 with words.

Many individual Journalists themselves want to make this change.

Journalists are smart people and this is the 21<sup>st</sup> Century. In the engineering complexity of a tape based environment (or where a complex early non linear editor was used) Journalists need to brief editors on their ideas which it is up to the editor to interpret.

Then the editor might need to have material made by the Graphics department.

All of this is a sequential process (especially so when tape is involved), frustrating for a Journalist in a hurry and costly to the Broadcaster:



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

The business justification of a Craft editor is to enhance the look and feel of News stories. It makes no business sense to have highly skilled staff denied creative tools that could significantly improve the output of a station. Nor does it make sense for simple 'cut' edits to be performed only by Craft editors in Craft editing suites.

Today all material needs to be available to any designated user as it is ingested. Journalists, craft editors and designers need to work concurrently on shots or stories, massively reducing time to air.

The user interface needs to scale from very straightforward browse stations to fully featured craft editing systems, so that there is a common way of working for everyone and a common language between applications.



## **The Director of Engineering's view:**

Engineering Directors are the people tasked with actually making the technical change happen. They have an awful lot of detail to think about – but without losing sight of the 'big picture' issues.

Before making a major new technology change, the wise Engineering director will be thinking very carefully about their present technical infrastructure and working practices. Most days have predictable peaks and troughs but big unexpected events can hit anytime.

A lot of expensive people and equipment can be required to cover these demands in conventional tape workflows. One example would be a long-experienced linear editor, working in a multi VTR linear bay, insert editing single cut shots onto striped tapes. So, the Engineering Directors headline 'wish list' for new technology typically includes several key requirements. On a basic cost level, VTR tape stock and head replacement costs are reduced or eliminated. In workflow terms, everyone who needs to can now see and edit content as soon as it arrives. Similarly, anyone who needs to can share content, find out what a story is, where it is and whether they can use it. Also, finished stories can be aired as soon as they're finished. All of this must be possible in the future at HD as well as today at SD – and all at a reasonable budget.

It will also be important that if requirements increase in the future, the technology should scale to meet new needs at a reasonable price.

The Engineering Director then takes a hard look at real requirements:

Typically most stories are simply shots cut from source footage. You don't necessarily need highly trained linear editors to do that. Journalists, Producers and in some cases Cameramen are quite capable of doing the work – and basic story-telling mostly needs only basic editing.

Where effects and graphics are needed, it would be great if graphics artists and craft editors could share the footage concurrently. Simple graphics can be made on a simple graphics workstation if there was a pre-designed template. Highly skilled craft editors and designers are better used adding value to special reports, designing better templates and improving the station 'look'.

The people who write the headlines, intros, traffic reports, recaps and teases are capable of selecting shots themselves, given the right level of tools.

With these thoughts about the business in mind, it's now time to think about technology that will fit the business needs.

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 today in SD and tomorrow in 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 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 at time of purchase. 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, 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. At HD these problems would be even greater.

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 during a later 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 SD and future 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.

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 is a practical proposition as it has the power and integration needed to deliver SD today and HD in the future at an affordable price. Whatever the resolution, performance is very fast and SD can even be converted to HD 'on the fly'. It 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.

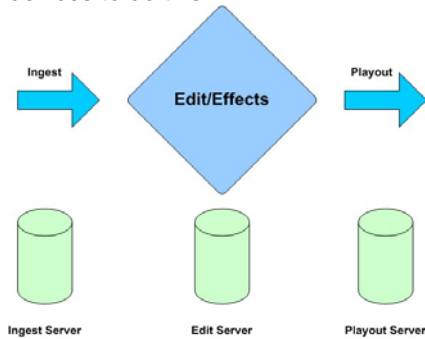


Whatever the functionality, the interface is the same. From basic browse, cut and voice-over toolsets for journalists' or producers' desktops, to fully featured layering, compositing & graphics. Ingest and playout applications and even third party applications can be made to look and feel the same, using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

In fact some systems have to use two edit servers just to provide protection in case of a lost disc. Day to day that all means making, managing and moving unnecessary media. In the long term an upgrade can completely break the original amortization schedule and pricing model.

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.



*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 simple engineering idea gives enormous business benefits. The Quantel technology that allows this is referred to as Frame Magic™. The operational advantages of Frame Magic are huge:

- The broadcaster will never accidentally delete material that they desire to remain on the server.
- The broadcaster can always delete material that they don't require.
- The broadcaster never is required to defragment the disk, which otherwise is a frustrating process in a busy station.
- 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, without waiting.

In summary, 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 to truly integrated non-linear, server based news creation are clear and it makes sense to consider HD. The world is changing fast and for Broadcasters anywhere, HD futureproofing makes sound commercial sense. Any new technology choice must support the current and possible future business model that is required.

To find out more about how Quantel's News systems 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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