



TELEVISION NEWS PRODUCTION AND DELIVERY
THE DIGITAL REVOLUTION IS HAPPENING IN NEWS –
WHAT ARE THE CHOICES?

This report considers the implementation of new technologies in news production and delivery. It also raises questions, answers some others and highlights some of the key issues in this complex area..

Large digital news production systems are invariably customized solutions offering a particular blend of digital production tools, management systems and overall integration. They rely on the co-operation of automators, asset management providers and newsroom computer systems to work.

Incredible as these systems are, there is a growing demand for something simpler and more contained: “out of the box” systems that are products, not projects. These new “out of the box” solutions are ideally suited to stations where an immediate improvement in workflow is required and where the projected ROI may not support the high capital cost of a customized system.

Why you should consider buying straight out of the box?

Since the first digital server systems were installed in newsrooms around a decade ago, a key driver has been to place video editing capability on every desk-top. This has been achieved with great technical success and many broadcasters have reaped huge financial benefits from these projects. But not all. Some have been dogged with delays and cost over-runs and have struggled to achieve their original objectives.

Some key thinkers in the industry are starting to question the motivations driving these systems. Are they more the product of boardroom politics than sound operational judgment? The ambition to have a single working environment from which everyone completes their daily tasks sounds very attractive. As does unlimited access to every frame of video shot, not just today but from the archive too. But all of this comes at a price. There's a lot of technology required to achieve this and, unless you're prepared to cast aside every pre-existing system and workflow, the task of integrating old systems with new can be both hazardous and very expensive. It makes life hard for operational people too. They have to continue to work and produce programs with technology changing around them. Your output and therefore the economic viability of your news operation will suffer.

We are in the 21st century - the news industry is driven by economics far more than by technology. ROI is everything. Who would spend a dollar to save fifty cents, even if the new systems looked great?

So what's new?

For those yet to embrace digital technology there are some exciting new opportunities. The technology is now mature and mature technology is suited to mass markets; and mass markets mean lower prices. So if you're prepared to re-think your objectives, and you can build a workflow around some packaged “out of the box” system products, there are bargains to be had.

GOOD BUSINESS

At recent broadcast conventions in the USA and Europe “out of the box” or “ready to go” products were announced with innovative technology and new product features. Products aimed specifically at broadcasters. Put simply, the idea behind these new products is to offer all the benefits of server-based production with the installation and commissioning risks removed – and at jaw-dropping prices. This new range of production packages are aimed at the small to medium scale markets - the fastest growing sector to service all the growing TV channels. These “out of the box” systems can be supplied as complete, working systems: they are all fully integrated, with ingest controllers, a mix of newsroom and craft editing workstations, playout and media management. The great thing is they work “out of the box.” All you need to supply is the building, the talent and the content.

So what’s the catch? Well, there isn’t one. You just have to think about your system design a little differently. This isn’t customized, it’s ready made.

To enjoy the business benefit from these new systems you need to work out which of the packages is the best fit for your operation. That’s part of the thinking behind this report. It could help you decide whether these new “out of the box” systems are right for your news production and delivery.

Why go digital in the first place?

Before you look at one of these new server based systems you need to be very clear about your objectives.

Why go through this process at all? One or more of these, maybe:

- * Replace existing, near obsolete systems – they are slow and they can't grow
- * Greater efficiency – improve workflow
- * Competitive advantage – improve your on-air look
- * Better technical quality – you need systems engineered for the 21st century.

Summarized as: I need to achieve more with the same number of people or the same with fewer people. I want a faster, more efficient workflow and I want the viewers’ experience to improve and my ratings to go up.

This perfectly defines server-based news workflow. If you agree with this statement, you probably want a server-based system. So how big a system do you really need?

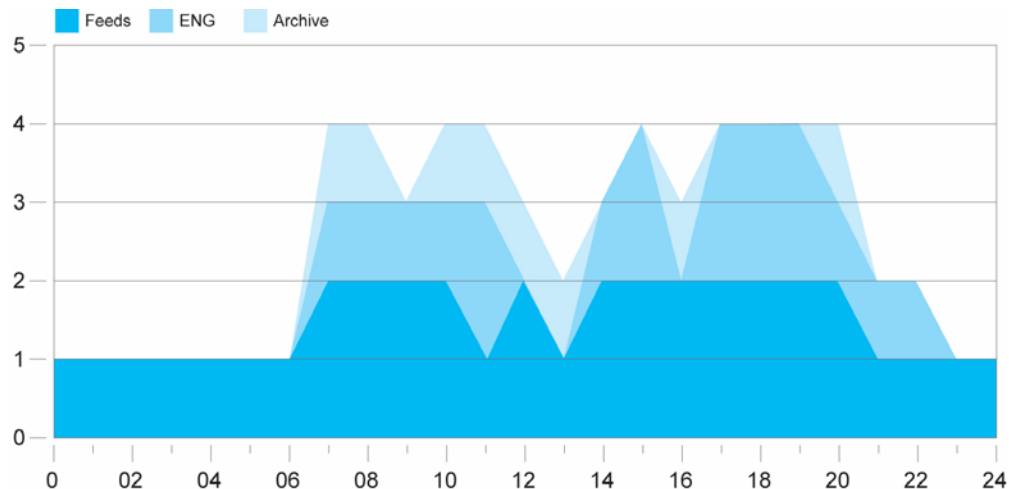
HOW BIG A SYSTEM DO I NEED?

The input survey

How much recording capacity do you have now? Do you know how much daily recording, editing and playout you make? If not, try measuring. A simple survey, run for a few weeks, will reveal a lot. Try keeping a log of how many feeds you're recording at any one time. Don't forget to knock out the duplicate recordings you have to make on tape. One server recording reaches everyone.

Also keep a log of how much material arrives from live truck feeds and field tapes. They're probably brought in by the photographers or the reporters. And finally, try to track how many tapes are retrieved from archives.

After a few weeks, you should get some good averaged figures. You can plot a graph like this one and it'll tell you quite a lot about the design of your server system: it immediately shows you how many ingest ports you need at the busiest time of day. Possibly not as many as you imagined.



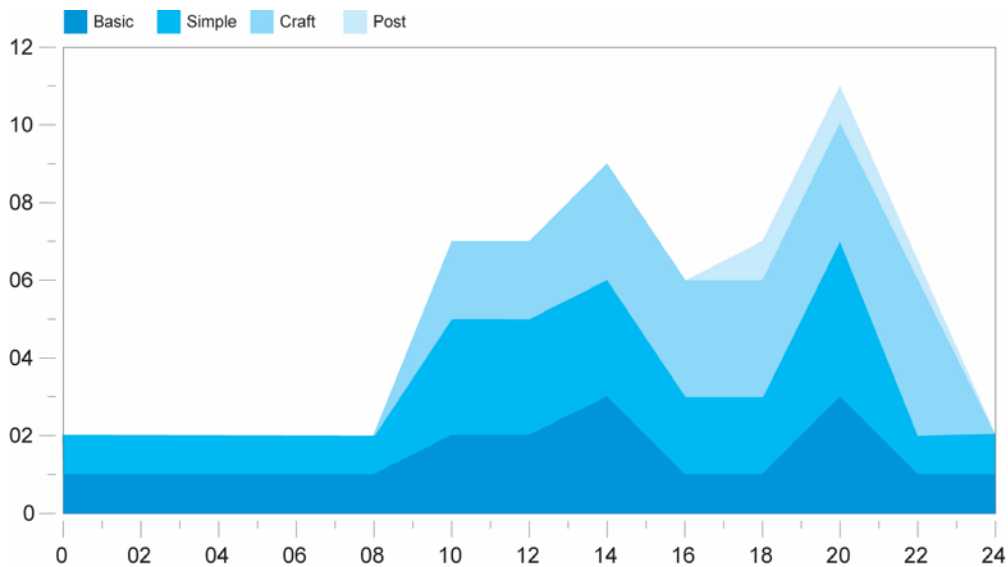
If you add up all the area under the curves, you have a good indication of how much media you record in a day. This is why it's important not to double-count duplicate feeds taken on tape. You'll add a good margin to this estimate anyway.

Once you've established the server basics, you can think about how many editing workstations you need. This is where the process can become more political than technical. Do you want editing everywhere, or just where it's needed. And just how complex does the editing really need to be?

The editing survey

Look at the work that's done by editors. There are probably some stories or items that require considerable skill and complex editing facilities. They're the job of the craft editor using a sophisticated editing workstation. But there will be others, quite possibly the majority, where the video transitions are all cuts. Those that might have been made in two-machine tape editing suites.

Many of the jobs in live television require little or no real editing at all. Selecting headlines or teases; cutting a story out of a long feed or joining up some shots as a storyboard for someone else to finish. In the linear world these jobs still require at least a pair of VTRs and an operator, probably an editor.



This survey, also averaged over a period of weeks will yield a lot of useful information. This graph shows you how many editing workstations you need to have working at any time. Even without factoring in an estimate of the efficiency gains of server-based non-linear editing, these numbers may be a lot less than you thought.

READY TO WEAR OR MADE TO MEASURE?

With this information you're ready to start designing a news production system. You have an idea how big a server you need and you know how many editing workstations of various capabilities you need to make your programs. So now the choice is this: do you put in sufficient editing to handle this requirement or do you really want everyone in the station to be able to view and edit at the same time? If it's the latter, you probably need a customized system.

You can take advantages of the incredible low entry price tags and significantly reduce risk simply by installing sufficient technology to meet your production requirements. It is simply a question of managing expectations, emphasizing the benefits and not promising features and effects that no-one really needs.

There's a similar decision to reach with wider integration. Anything is possible in a customized system, of course. But there are risks, and therefore costs attached. It will be made to work, but it may take some time and it might be a while before you realize any ROI benefit. Packaged systems have been designed to work "out of the box"; the workflow is predictable from the start and the benefits are both quantifiable and instantaneous.

Conclusion

Every broadcaster has their own idea of the perfect digital news production and delivery system: totally integrated, highly resilient, idiot-proof and user friendly. For the manufacturers, the problem is that no two broadcasters will ever agree on how this utopia will be constructed. So almost everyone has to carry development costs and associated risks. The costs, both direct and consequential, are inevitably borne by the customer.

If you can separate the ideal from the acceptable – that is, install just enough technology to achieve your technical requirements and no more, you are almost certain to reach your business goals too. The products are now available to make this happen.

News production and delivery is going digital - we hope this report has provided a snapshot of some of the questions you need to ask when considering your next move.

Quantel, as a leading innovator in this field, are more than happy to answer any or all of the more detailed questions that have arisen from this report.