



Buying criteria for Multi-viewing solutions

By Jan Eveleens, CEO Axon group.

Broadcast television is all about images and during the production process there are several stages where actually looking at and checking the images is important. These used to be systems where individual (CRT) monitors (in different sizes) would display one video signal each. With the rapid developments in flat-screen technology and CRTs quickly disappearing, this has changed. In most modern broadcast facilities images are now displayed on large flat-screen or projection systems and video signals (accompanied with diagnostic/status information) are now displayed in windows of programmable size and position.

This development leads to a new product category in the broadcast domain: Multi-viewing systems. A multi-viewing system takes the various input signals and scales, resizes and positions these images in the right position on the screen(s).

There are a couple of key criteria that are important when selecting a vendor for your multi-viewing system.

First, there are some technical characteristics that are important to consider and evaluate. Especially in (live) production environments it is crucial that the delay in the video is kept to an absolute minimum to avoid lip-sync problems but even more important to be able to allow the staff in the control room or OB-van to react quickly enough to the live events outside the control room. Furthermore the video-processing in the flat-screens usually generates some delay as well. Add to that up to 2 frames of delay in today's HD cameras and you understand that the video delay in the multi-viewing system should be as small as possible and in any case be not much more than 1 field. And please do check the small print. Some systems advertise with small latencies but this is only for a small number of inputs. The latency in many systems increases substantially when more inputs are added.

Another thing that you may want to check is the boot-up time of the system. Perhaps you think this is not so important as the system is always switched on in advance (or never switched off). However the boot-up time becomes very important when during a production something in the multi-viewing system goes wrong. If for whatever reason you have to reset it and it takes a few minutes to show a picture again, the production crew is not going to be too happy.....

Modularity of the multi-viewing system is probably also something you would want. Broadcasting facilities tend to evolve over time and it makes your life so much easier if you can increase the number of inputs by simply adding a board to the multi-viewing frame. The modularity can also help to avoid your whole multi-viewing system going down when there is a failure somewhere in the system. When architected properly in a modular system you will only loose the few inputs on the module that is



affected by the failure, where the rest of the system will continue to operate, and/or can be brought back to life very quickly by swapping it with a spare module. Finally a modular system allows you to integrate other functions in the same rack (eg embedding, de-embedding) allowing very space-efficient setups.

Let's also not skip over the basic 'must-have' features: make sure you check the flexibility of input formats (SD, HD, 3Gb/s, DVI, etc), output formats (resolution, HD-SDI, DVI, etc), clocks and timing input formats (LTC, VITC, ATC, etc), audio bars, UMD, etc

A final element that is easily overlooked is the availability of an intuitive and powerful setup, control and monitoring that manages your multi-viewing system, allows for storing preset-based settings of size and position of images and is also able to control a router (of your choice) feeding the multi-viewing system. Remember that this will be the day-to-day tool for the operators to and you probably do not want to have them cursing you for the next 10 years.....

Last but not least the monetary elements. Obviously the purchase price will be an element of the selection process, but in fact it is the total cost of ownership that really matters. So, you have to take other cost factors in consideration too. How much does the vendor charge for that monitoring and control software? Is there a per seat license fee potentially even recurring every year, or is it freely available from the website with no limitations on the amount of installs? Support costs are also an important element of the total cost-of-ownership. Do you select a vendor where you need to sign-up for an SLA with a recurring yearly charge or do you pick that vendor with a simple and straightforward support model where you get a lifetime free upgrade of firmware and software updates in addition with access to on-line and telephone support by skilled technicians who do not ask for your credit-card details when you log a support request with them.

Note to the editor

AXON Digital Design B.V

AXON Digital Design develops manufactures and markets modular systems and equipment for the processing of audio and video signals, serving many of the major players in the broadcasting industry. AXON creates space and cost effective solutions for a flexible and high-density infrastructure and aims to delight every client that it serves. AXON's engineers, designers, sales team, back office support team and distributors are driven by our customer's success; we actively seek out the challenge of staying ahead in development, innovation, customer-loyalty and customer satisfaction. The long and personal involvement with our international customer base of acclaimed broadcasting companies is testimony to AXON's dedication to supporting and serving a worldwide industry.

The AXON team is made up individuals, from more than 5 countries, supported by and working hand in hand with more than 55 distributors covering the globe, to ensure our customer's success.



AXON is headquartered in the Netherlands and has offices in the UK, China, Dubai and USA.

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