

Change Your View When Purchasing a New Multiviewer

By: Mike Garrido
Multiviewer Product Manager
Harris Broadcast Communications

The performance expected from a monitoring wall has come a long way from having a bank of hardwired televisions with printed labels underneath. Multiviewers have expanded expectations beyond the traditional, and are today expected to provide monitoring solutions for an expanding universe of requirements.

The diversity of manufacturer solutions on the broadcast market means that the customer must be well-versed on his immediate needs, as well as where technology advancements are most likely to lead. The return is a multiviewer investment that will last beyond the next technical cycle.

There are a number of variables to outline upon initiating the search for a new multiviewer, based around expectations, environment and performance.

Ease-of-use and maintenance are at the top of the list. No one wants a system that is so complex that only a few can operate it with confidence. Beyond the obvious, the expectations for a multiviewer have to satisfy the daily operation:

- Is it going to be used for confidence monitoring or production?
- What does the user expect from the multiviewer in terms of features and benefits?

There are multiple ways of assessing expectations, but the answers lie in what the user wants or needs. A system used by the same operators on a regular basis will need to provide consistent operation that rarely changes. Other environments such as outside broadcast (OB) trucks may require that the system requirements change every time the multiviewer is used. The changing needs could be as simple as using a quad view, or as complex as having dozens of sources on one screen with counters, metadata, audio and alarming. The product's technical flexibility should cover as much of this user intent as possible.

Know Your User

Different environments have different expectations. Single-room systems should take into account how sources will be viewed and monitored. A broadcaster with interest in viewing full-screen sources will need to verify that feature is present when assessing a multiviewer. Multi-room systems that may be used in a control room and a commons area, such as a front lobby, will need multi-room flexibility, while the operators will need to understand the different audiences they are serving.

The production environment will require the multiviewer to interact with other systems for the best control possible. Master control requires this too, but also calls for access to many more sources. The needs change depending on the application. OB trucks require all of the above plus the added requirement of different layouts for different events. Requirements for game coverage events change from sport to sport, and events such as elections, concerts and parades have different requirements. The ideal multiviewer should be flexible enough to provide solutions for all of these broadcast and production environments.

OB trucks carry the additional requirement of ruggedness a requirement that some multiviewer manufacturers overlook. The environment becomes physical in OB trucks. Multiviewers have to handle heat, cold and travel. The product should be physically reliable and durable enough to handle the changing temperatures and bruises of the road.

Maintenance And Performance

Screens are getting larger and more sources are being used per screen. Losing a source in this environment is akin to losing control of the operation. Maintenance is therefore critical to ensure performance. A loose connection can adversely affect the outcome; ideally, every multiviewer component should be solid-state and lockable to ensure optimum performance. This will not create a bulletproof system, but it provides a great deal of confidence for operators in outdoor environments where ruggedness is essential.

Multiviewer performance is much more complex than just putting up layouts with many sources. More emphasis is now placed on multiviewer image quality in every area, from the outputs that drive the screen to each individual PiP. The screens being driven are often HD, and the image – no matter how small – is expected to give the best possible representation of the original.

Furthermore, SD and HD signals with varying aspect ratios, WSS and AFD all must be handled seamlessly while the system is performing the expected video and audio monitoring. Most every multiviewer in the market satisfies these needs, but it's up to the next product generation to evolve these features. The addition of automated responses for different alarming conditions, like having a PiP translate to full-screen upon with a video alarm, is becoming more common. More advanced product designs allow for a series of such automated features that simplify the operation.

Future Outlook

Of course, systems must be expandable. Facilities should be able to add more sources to the multiviewer or drive more screens as they grow. There is always a forward-looking element for designers when developing concepts for a control room, production room or truck. Futureproofing considerations and questions include:

- The maximum number of screens or sources that are needed
- Current and future standards
- Will this facility still be able to operate effectively if there is a staff reduction?

These are all important considerations that extend beyond the multiviewer.

So, what should the ideal multiviewer look like? It should be expandable with sources and screens, and offer an architecture that allows for flexibility in development. HD and 3Gb/s took many by surprise from a financial point of view — even with the many industry discussions and forewarnings — and there is a lesson to be learned. Not all components are designed to be everything all the time, but architectures can be established that allow for important changes in direction. The best multiviewers follow this design. Reputable manufacturers today are making plans for 3D and IP as they develop systems that provide current and future solutions and not just boxes that solve immediate needs.

Educated multiviewer buyers should be aware of the design and user needs. They should be aware of the environment and system needs, as well as future expectations of the product. A multiviewer purchase can be difficult if you don't know your immediate needs and where you wish to take things in the future. Buying the wrong multiviewer will leave you spending more money sooner to compensate for a lack of options.

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