



FIREPRO
GRAPHICS

AMD



Shifting the video wall into overdrive

How Vizrt is using AMD FirePro™ professional graphics and HP workstations to deliver unprecedented levels of performance

Customer:

Vizrt

Industry:

Large-scale Interactive Presentations
Broadcast
Digital Signage

Business opportunity:

- Simultaneously drive up to 40 displays in one video wall from just a few computers
- Operate within one desktop space
- Enable synchronization to external sources
- Achieve extreme resolutions

Solution:

- AMD FirePro™ professional graphics, AMD Eyefinity technology and the AMD ATI FirePro™ synchronization module
- HP Z-Series workstations driving multiple displays
- Vizrt graphics software

Business impact:

- Fewer workstations needed to drive a video wall
- Reduced equipment cost
- Shorter set-up time for Vizrt and for the customer
- Much less rack space required
- Faster project delivery through customised technical cooperation and priority support from AMD

Indispensable broadcasting tools

Video walls are everywhere and as they require specialist content production tools many broadcasters, publishing houses, production companies and corporate institutions use Vizrt's innovative solutions. These range from 3D graphics tools and map applications, to integrated video workflows and online publishing tools.

"Our broadcast customers are increasingly using video walls in their studios," comments Christian Huber, Executive VP IT and Logistics at Vizrt.

"That means we have to drive the very large number of displays that make up these walls, 20, 30 or even 40, simultaneously and that is quite a challenge. Having one computer per display is not an option cost-wise, space-wise or power-wise. We want to use only a small number of computers each of which can contain multiple graphics cards with each card providing multiple output ports. These graphics cards need to have very high performance to drive this large number of outputs at extreme resolutions."

He continues, "In addition, we need to synchronize the workstations so that the animations and videos displayed on the wall are 100% synchronous over all screens and computers. If this is not done, the picture would be broken up, you'd see some tearing and some splits and this is absolutely not acceptable for viewers and broadcasters." He raises another issue, "In the broadcast environment, the video wall should run on the same sync source as the TV camera. If the frequency and sync of the TV camera filming the video wall is not the same as that of the video wall itself, you will see some tearing and the animation would jitter."

AMD and HP for 24/7 performance, stability and global support

Vizrt's software is used by CNN, Fox, BBC, Sky, ITN, ZDF, Star TV, NHK, The Telegraph, Die Welt Online and both the New York and London Stock Exchanges. To consolidate its technological and market leadership in the digital media industry, Vizrt has now standardised on AMD professional graphics and HP workstations.

"We have now switched to AMD professional graphics for our video walls," says Christian. "We saw that we could get a much higher density of output channels per computer compared with the competitor's solution we'd used previously."

AMD FirePro™ professional graphics cards are certified for many applications and support Microsoft® DirectX® 11 and OpenGL 4.1. AMD Eyefinity technology allows the operation of multiple high-resolution displays simultaneously, enabling the grouping of multiple monitors into a video wall as one desktop workspace. The AMD ATI FirePro™ S400 synchronization module allows these cards to be synchronized to external sources (genlock) and allows synchronization of 3D rendering of multiple graphics cards in different systems (framelock).

Of course, the underlying hardware must be up to the task. Christian again, "As many of our systems are live on-air 24/7, we need the utmost reliability and stability. We operate world wide, which means that our supplier must be able to provide exactly the same configurations everywhere in the world. Every time a new generation of workstations is released, we thoroughly test for stability and performance in comparison with other systems on the market."



ATI FIREPRO™ V8800 PROFESSIONAL GRAPHICS



AMD FirePro™ Fast Facts

- AMD Eyefinity¹ technology supporting up to 40 displays in one desktop
- AMD FirePro™ V8800 graphics with 24/7 stability and global support
- The AMD ATI FirePro™ S400 synchronization module to link multiple workstations

When we did that five years ago, HP came out a clear winner and we decided to standardize on their workstations. We now have exactly what we need. We mainly use HP Z800 workstations with dual quad core Xeon® E5620 2.4Ghz CPUs, 6GB RAM. Each workstation is equipped with multiple AMD Firepro™ professional graphics cards and the workstations are daisy chained using the S400 sync module."

He continues, "Our Viz Engine rendering engine makes use of the genlock and framelock capabilities of the S400 boards using the API from AMD to ensure that the rendering is 100% synchronous and is genlocked to the house sync of the TV studio."

Complete satisfaction

According to Christian, AMD professional graphics deliver a number of benefits. "The AMD solution reduces the number of workstations required for a video wall. This means reduced equipment cost, less set-up time for us and for the customer and much less rack space." There is a benefit too, from the relationship between AMD and Vizrt. "This is a high performance solution and there has been excellent cooperation at the technical level. For example, AMD have been very quick to respond to our requests for additional functionality in the S400, to our complete satisfaction. All our requests were satisfied extremely quickly and up to now we are very happy with the quality and speed of response and resolution. We expect the AMD relationship to be even closer in the future and we are already thinking of using their graphics products in our other solutions. We are currently evaluating the latest card and once that process is complete we'll be adding that card to our hardware options."

"It is particularly important that images displayed on video walls look realistic, with the smoothest possible appearance so a big advantage here is the outstanding anti-aliasing capabilities of the AMD graphics cards."

Christian Huber, Executive VP IT and Logistics at Vizrt

Voting for a win/win solution

Elections are one of the biggest ratings boosters for public channels and commercial broadcasters alike and many Vizrt customers use video walls for their live election night broadcasts. Christian comments, "Broadcasters strive to outdo each other on their presentations as they take feeds from multiple sources and display graphics, charts, pie charts, bars etc that are updated live. This is where the AMD solution scores. It's very flexible and can be configured to meet virtually any price performance ratio. It's a win/win solution."

Staying ahead of the game

Summing up, Christian concludes, "The combination of AMD and HP is working extremely well and all our expectations from our vendors have been met. We've been using HP workstations to drive our video walls for a number of years, have never regretted that decision and HP have never given us a reason to change, either. Now we've switched to AMD, too, sales are sure to increase; we are offering a more comprehensive solution to our customers and at a price point not previously possible, so that smaller broadcasters with more limited budgets can afford the same type of video wall solution as a big broadcaster."



For more information, visit www.amd.com/firepro

¹ AMD Eyefinity multi-display technology can support multiple displays using a single enabled AMD FirePro™ professional graphics card; the number of supported displays varies by card model. Microsoft® Windows® 7, Windows Vista®, or Linux® is required in order to support more than 2 displays. Depending on the card model, native DisplayPort™ connectors and/or certified DisplayPort™ active or passive adapters to convert your monitor's native input to your card's DisplayPort™ or Mini-DisplayPort™ connector(s) may be required. See www.amd.com/firepro for details.

