



Hunter steals the show with AMD-powered graphics on Chinese Idol

High-end graphics for Chinese television

Beijing-based Hunter, an interactive creative division of TVM, has built a reputation for producing on-air graphics during live television programs. The company's past credits include the 2012 Olympic Games and Euro Cup 2012. Most recently, they were selected by CCTV to design the on-air graphics for the Chinese broadcast of World Cup 2014.

As Allen Hyoga, Interactive Research Director at Hunter explains, "Technologically, we were among the first companies in China to introduce the interactive cross-screen approach, which connects the video wall display in the studio with at-home viewers through real-time content. Our multi-screen graphics are produced efficiently and are of top quality thanks to the combination of our German 3D engine Ventuz and AMD GPUs."

Hunter's most recent challenge is Dragon TV's blockbuster hit Chinese Idol, the Chinese reality/singing competition modeled after the successful shows Pop Idol (UK) and American Idol (US).

Real-time effects for a broadcast blockbuster

Like its highly successful British and American counterparts, Chinese Idol searches for the best undiscovered vocalist in China based on viewer voting and participation. Chinese Idol begins each show with an animated introduction that takes viewers on a journey through synchronized sound, motion graphics, animated text, and video images.

Hunter was tasked with creating not only a dazzling opening sequence for the show, but also the daunting task of generating dynamic graphics to accompany the singing competition—live, both in-studio and on-air. Chinese Idol's producers selected Hunter based upon their earlier work designing the visual imagery and real-time, interactive on-air graphics for Asian Wave, another Chinese talent show featuring contestants from many different Asian countries.

"We've been working on Chinese Idol for two seasons now. We have a highly experienced production team comprised of about seven members, including a 3D modeler, a texture artist, a back-office R&D programmer, and other personnel responsible for creative design," says Hyoga.

CUSTOMER:

Hunter
<http://www.tvmining.com/>

IN PARTNERSHIP WITH:

Ventuz

INDUSTRY:

Broadcast television

CHALLENGES:

- Produce real-time graphics for several national TV shows
- Power ultra high-resolution in-studio video walls
- Enable intensive 3D modeling renders during live broadcasts

SOLUTION:

- Ventuz multimedia software powered by AMD GPUs AMD FirePro™ and AMD Radeon™ graphics featuring Eyefinity multi-display technology

RESULTS:

- Drives live graphics video wall displays for Chinese Idol broadcasts
- Enables intensive real-time graphics rendering on Asian Wave broadcasts
- Powers ultra high-definition displays (up to 10,000 pixels) on a variety of other shows.

AMD TECHNOLOGY AT A GLANCE:

- AMD Radeon™ graphics
- AMD FirePro™ graphics

"Our software company recommended AMD graphic cards, as they felt it would work better with their application and deliver a higher level of performance. With AMD's Eyefinity technology, we can conveniently combine screens, and as a result, the application can handle ultra-high resolutions."

Allen Hyoga

Interactive Research Director, Hunter



Case Study: AMD FirePro™ and Hunter ▾

During each episode, Hunter creates live, in-show graphics that include dynamic text, 2D/3D animations, and contestant images. They also must produce real-time data graphics, including the results of online voting and the show's "Win a Ford" automobile lottery.

Hyoga explains, "For example, when the judge says, 'Let's have a look at the results of our online voting,' the large in-studio screen must display real-time tallies. Or when a competitor qualifies for the next round, we need to instantly present relevant previous scenes, coupled with some special visual effects."

"For the producers, they're mostly concerned with the quality of images and multimedia. Our main task is to deliver that support as the program happens. There are several rounds of competition following different rules, which can be confusing to some audience members. Through our multimedia, we strive to provide the audience with an intuitive understanding of what's happening, enabling them to be well-informed of the rules and procedures while enjoying the performances," says Hyoga.

Ventuz & AMD – a dynamic software/hardware combo

"Ventuz is a powerful, real-time multimedia production software application that can create animations and add subtitles. We use it for many interaction-based applications. There are many voting sessions where the ballots are collected and the results are then visually presented dynamically, featuring visual elements

created in real-time," says Hyoga. As part of the Ventuz-based workflow, Autodesk 3ds Max 2014 and Maya 2014 are used to build 3D models. Textures and motion graphics are created using Adobe Photoshop and After Effects. AMD professional graphics are used to output the HD video from Ventuz to a BlackMagic switcher for TV broadcast.

"Ventuz recommended AMD graphic cards, because they feel they work better with their software and deliver a higher level of performance," says Hyoga. "The integration between software and hardware is seamless and very convenient for us."

Hunter soon discovered that AMD graphics offered some distinct advantages in terms of display support for their video walls. "In our studio projects, a high resolution is generally required for our screens. With AMD Eyefinity technology, we can conveniently combine the screens and, as a result, our application can handle ultra-high resolutions," says Hyoga.

AMD Eyefinity technology is a revolutionary multi-display technology with six mini DisplayPort 1.2 outputs, enabling up to six independent 30" displays – a massive 16.4 million pixels.*

New shows with even bigger graphics challenges

The video wall is now an essential component of today's modern broadcast studio. Beyond the success they've found on Chinese Idol, Hunter uses the powerful

combination of Ventuz software and AMD GPUs for in-studio displays across a number of other productions. The pairing enables the distribution of high-resolution graphics onto multiple screens with drag-and-drop ease. In-studio graphics communicate seamlessly with on-air content, which helps ensure a smooth workflow across an entire show's production.

On the show Asian Wave, Hunter ran Ventuz on a system featuring an AMD FirePro W8000 GPU because it could drive a 5000 pixel display. "We considered various graphic cards before settling on the AMD FirePro series, which offered us a combination of features. In addition to high-definition display support, we had to do a great deal of real-time rendering, which placed heavy requirements on the GPU," says Hyoga. "We needed a more robust graphic card, so we chose the AMD FirePro W8000."

"Another recent project we undertook was the Spring Festival gala for Beijing TV. The resolution for that video wall was around 10,000 pixels so we used the AMD FirePro W9000 GPU for that," says Hyoga.

Before the Spring Festival broadcast, Hunter also worked on a warm-up program called Global Shine featuring an ultra high-resolution screen of approximately 8000 pixels. "We used an AMD FirePro 9000 GPU on this project. In this case, we had to frequently use 3D modeling, so the actual rendering work was very difficult. When we lowered its graphics acceleration, it worked very well. I am considering group rendering using several graphic cards in the future, with the aid of an image lock, for sync," says Hyoga.

"We previously used graphic cards from NVIDIA. In some 3D applications, especially when rendering, we experienced some problems. I don't know whether it was a problem with the driver or with the product itself, but sometimes triangular facets looked seriously jagged. Even when we accelerated the speed, the problem continued, causing some damage to the overall image. So, we prefer graphic cards like AMD Radeon™ GPUs or, if there are even higher requirements, we will choose AMD FirePro™ GPUs."

Allen Hyoga, Interactive Research Director, Hunter

* AMD Eyefinity technology supports up to six DisplayPort™ monitors on an enabled graphics card. Supported display quantity, type and resolution vary by model and board design; confirm specifications with manufacturer before purchase. To enable more than two displays, or multiple displays from a single output, additional hardware such as DisplayPort-ready monitors or DisplayPort 1.2 MST-enabled hubs may be required. Maximum two active adapters supported.

W9000 (6xMDP) supports a maximum of 6 x 2560x1600 DP1.1 displays. Based off DP1.2 bandwidth availability for MST supports up to: 4 x 1920x1200 @24bpp 60Hz displays, 2 x 2560x1600 @24bpp 60Hz displays, 1 x 4096x2160 @24bpp 60Hz display

See www.amd.com/eyefinityfaq for full details.

in.amdfireprohub.com