

case study



Bluefish444 video cards support all CG at Kanal 75

Kanal 75's gets real-time racing stats

By James Careless

In Sweden, you don't have to go to the racetrack to gamble on the ponies. Instead, you can go to one of the 2,500 off-track betting centres run by ATG, the Swedish horse-betting company. With annual revenues of US\$1.4 billion, ATG has a lot invested in attracting bettors to its establishments. This is why the company enhances the off-track experience by offering live racing video via its own satellite TV service, Kanal 75 (www.kanal75.se). This is also why Kanal 75 provides extremely detailed on-screen racing information on screen, using character generators connected directly to ATG's extensive database.

Kanal 75 doesn't use commercial character generators to post racing information. Instead, the company has developed its own fully-automated character generator systems, in order to provide the high levels of performance and reliability that it needs. ATG also keeps a team of on-staff developers on Kanal 75 to keep an eye on the system, and to keep improving it.

What's At Stake?

As a company whose customers play the odds, ATG has a stake in always providing absolutely accurate data to them. It's not just a matter of good sportsmanship; if the wrong data should be posted on Kanal 75 and a customer make a money-losing bet as a result, "they could take a VHS recording of the error to court, and we would be in serious trouble," says Kanal 75

Senior System Developer Peder Wistedt.

It was for this reason that the company decided to develop its own fully-automated character generation system; one that would draw data directly from the ATG server. This was no small task: not only does the server hold a tremendous amount of information, but its data base is constantly being refreshed and updated. As a result, any automated character generation system at Kanal 75 would have to be stay on top of these updates, plus be tremendously robust and resilient; because failure is really not an option. Add the fact that horse racing – like any sport – has its own important statistics and terminology, and it made good sense for ATG to develop its automated solution.

The Technology

On the software side, Kanal 75's automated character generation system is built upon a series of predefined templates; each of which is automatically populated by the ATG server. As the day progresses, the templates are broadcast as required by Kanal 75's own server; based on a schedule defined by the channel's programmers. "We originally intended to have 15 different templates," Wistedt tells TV Technology Europe. "However, such has been the demand for this service that we now have close to a thousand."

To date, Kanal 75 has developed a family of Radix character generator products; all built using Bluefish444 HD

and SD video cards (www.bluefish444.com). For instance, "Radix Point is an easy-to-use mouse-based point application with XML-based library, which is used on a daily basis at Kanal 75," says Wistedt. "All of Radix Point's symbols are TGA-file based with alpha channel, and can be specialised for the exact needs of every show. In the library that we use, there are arrows, rings and number pads to point out horses."

Next is Kanal 75's Radix CG Basic. "This is a fast Character Generator (CG) integrated with the Radix Graphics System; our automation system that handles CG machines," Wistedt says. "It doesn't do animation, but Radix CG Basic supports very fast text updates for timing and such at 25fps or more. It is being used at three local TV stations (and at some Swedish race-tracks) all the time, and also by SVT in OB sports events." Ironically, Kanal 75 isn't using Radix CG Basic yet, but later this year the channel will use it to replace ten Deko machines.

Finally, Kanal 75's Radix TGA Sequencer plays TGA files straight from a hard drive with only a frame start delay. It is used to play out live visual effects such

as 'smoke' or 'raining confetti' in Kanal 75's daily shows.

Results and Plans

The decision to build custom character generators has worked out well for Kanal 75. Not only does its system meet the channel's unique horse-betting needs – and keep its parent company out of the courts! – but "it has proven to be cheaper for us to build our own character generation systems, rather than by them commercially," says Peder Wistedt. "It's gone so well, in fact, that we are now selling our in-house character generators to other broadcasters."

In addition to its current products, Kanal 75 is currently developing other products. One of the most noteworthy is Radix WMN Transcoder: it will capture race video in real-time as one-second Windows Media Files, then automatically assemble and Web-post them as complete races just 20 seconds' after the winner crosses the finish line.

"It is fascinating to develop such unique applications for Kanal 75," says Peder Wistedt. "It is even more interesting to think that our in-house solutions can solve problems for other broadcasters too." 📺

