

Karaoke kings

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Karaoke Revolution, a hugely popular video game for Playstation, X-Box and Wii, used new tools recently developed by European research to create phenomenal animations that would otherwise have been nearly impossible. Fans do not care how they did it, but are very impressed with what they did.

The song remains the same, perhaps, but the video game is pushing technical boundaries. *Karaoke Revolution* is a hugely popular video game franchise that follows the format fairly closely.

But few fans realise, or care, that at the heart of the system is new technology developed by European researchers which allows players to infinitely vary the appearance of their avatar, or character.

Character-creation is a huge part of the appeal for these types of games.

“Using computer animation tools developed in the Salero project, Blitz Games was able to develop a system that allows players to create a huge number of different avatars,” explains Georg Thallinger, coordinator of the Salero project.

The software allows players to automatically adjust a wide number of physical variables, providing the ability to create an almost unlimited number of unique characters of different ages, weight, ethnicity, gender and many others. The game can also use these variables to generate random characters.

“In fact, it would not have been possible to offer such a high level of avatar customisation without the technology developed in the Salero project,” Thallinger adds.

It is just the beginning. Salero developed a broad range of software that can manage almost every aspect of the computer animation process, from audio production, synching and archiving to retrieving reusable media objects and accessing ‘intelligent content’ that can be automatically applied to any given requirement.

Salero partners created over eight productions combining computer generated audio and visual elements in animation, online games, TV shows, exhibitions and the performing arts.

Take MyTinyPlanets.com, which is a huge, flash animated game world aimed at children. Kids can adopt and name a planet, make friends, and play dozens of games. During the project, the website used tools to create animations to introduce games and content within its web-based game world.

Over the course of the project, MyTinyPlanets discovered that animated split-sequences were very popular, creating a lot of traffic and engaging

players for much longer. Salero's rapid animating tools allowed the company to create a multitude of characters for different game-world elements. Without those tools, the project would not have had the resources to create the large number characters that inhabit its world.

The Turing Machine

Similarly, animation and voice tools played a key role in The Turing Machine opera, which premiered in Helsinki in April 2008. Alan Turing was a famous English mathematician, considered the father of modern computer science, who was persecuted for his homosexuality.

The opera is comprised mainly of new electronic music and real-time sampling of old and new material. The production used Salero tools to create the stage setting, which featured projected graphical rather than physical props and backdrops.

In real life, a Turing Machine is a theoretical device that manipulates symbols contained on a strip of paper. Another example, the Turing Machine Cross Media Experimental Production, consisted of a large installation that contained an animated Turing, as if a machine had captured his consciousness.

Both productions used animations and audio elements generated with Salero's technology, and demonstrated its flexibility in an experimental media setting.

Spark and socket

Meanwhile, the Spark and Socket demo showed the dramatically enhanced efficiency enabled by the project's work. It was a highly successful early production with characters created and assets re-used

according to Salero methodologies. It meant two people created an entire animated sequence of almost four minutes in just two weeks. Traditional methods would have taken months, comparatively. By modern animation standards, that is a record-breaking development time for a cutting-edge animation.

100 percent automatic

The most complete demonstration of Salero's work, however, is the Interactive Video Jockey animated show which will be created using an automatic animation platform and will feature a customisable presenter, the video jockey, who introduces music clips chosen through, for example, SMS votes. The VJ will offer the latest information on the band, automatically drawn from news stories, fan and gossip sites. Emotional tags that cue particular expressions and tones help to automate the presenter, giving him more life-like expression.

The show can include other characters integrating information from other sources, such as a weatherman, or sports news reader. All this is possible thanks to the programme editor, another application developed by Salero.

The programme is 100% automatically generated. It reuses movements, applying them to different characters within the show, and it can use automatic, random scripts. It can combine audio from different sources and uses audio transformation.

It is the future of computer animation and it is a very impressive testament to the power and potential of Salero's work.

The target community is very interested in the tools and many of them will appear as plug-ins or upgrades for existing industrial applications, though Salero made part of the work, such as the programme editor, in

the public domain (see galactus.upf.edu/trac/gti-framework/wiki).

Automatic character generation also has other potential applications. It can customise characters in a game and even automatically generate dozens or hundreds of detailed extras for a crowded game scene. And it can generate random characters for ‘serious games’, such as those used in care homes to keep residents alert.

This is the second of a two-part special feature on Salero. Part 1.

www.physorg.com/news199442436.html

More information: Salero project - www.salero.eu/en/index.html

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