

Tangentix, University of Bradford, Onteca

Web delivery of high-definition 3D graphics



About the Project

A spin out start-up from the University of Bradford, Tangentix had been exploring the use of 3D graphics compression. When the TSB grant was announced, they saw an opportunity to collaborate with the University and Onteca, an independent games developer specialising in web and mobile. The aim was to develop their technology to successfully enable the viewing of high definition 3D graphics in a web browser, on any platform. This would be a leap forward from the current method of downloading 3D models to stand-alone viewing applications on a computer. Tangentix believed they could speed up the process - aiming to do it in real time - and using the web, publish it on any device.

An opportunity to test the technology came through the University's Archaeology department. They needed to view hundreds of ancient bones as part of their work 'From Cemetery to Clinic: Digitised Pathological Data'. As the only large-scale collection excavated and published of leprosy patients in the UK and one of a handful worldwide, the 3D digital archive of bones dating from 1118-1418AD preserves fragile dimensional information that is otherwise under threat from attrition through handling. It also provides a virtual training and research tool for clinicians, human osteologists, archaeologists and the wider public.

The consortium scanned in hundreds of bones and converted the high-resolution models into a format that could be delivered to the web, enabling it to be accessed directly and shared worldwide. The project gave Tangentix a practical test proving they could deliver quickly, with great effect.

Fast Facts

Sector: Software, Video Games

Funding Source: TSB 'Collaboration Across Digital Industries' Fast-track

Total Project Value: £100k

Duration: January - September 2011

Market Impact: A slice of the games development market, set to become worth over £50 billion in 2012

Creative Industries KTN input:

Facilitating and promoting the funding calls, starting with the Feasibility Studies, which encouraged the initial collaboration to flourish.

Benefits of Funding

Tangentix had briefly met Onteca previously; however, it was through collaborating in an earlier TSB Feasibility Study that their relationship began. Successfully winning the CADI funding call cemented their relationship and the team were able to focus staff and resources to solve key problems around compression algorithms and the delivery of 3D geometry over the web. The University of Bradford was able to allocate a dedicated member of staff to the project who otherwise would not have been available.



Scanned metatarsal processed with the Tangentix technology.

“The project has enabled us to collaborate effectively and eliminate key technology risks using our shared knowledge. As a result, we have increased the number of opportunities we could pursue further with a view to commercialisation.”

Paul Sheppard, CTO
Tangentix

Results

Tangentix are excited about the future and the opportunities that lie ahead as they take their technology to market over the coming year, with an eye on games development, which in 2012 is set to become a market worth in excess of £50 billion, success is surely not far away. 3D printing may also bring interesting opportunities. Tangentix aims to double its team size, with their next team member looking at how to bring their technology to market. Watch this space.