



Pointools Models Shape Restoration of Historic Theatre

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London, 14 September 2011 - Complex laser scanned computer models, created using software from Pointools, are helping architects design the most complete recreation of an English renaissance indoor theatre ever attempted. The indoor Jacobean theatre, the shell of which already exists on the Shakespeare's Globe site in London, will be restored to provide a brand new theatre space that will seat around 320 people, with two tiers of galleried seating and an authentic pit seating area.

'We commissioned a laser scan survey at the outset of the construction venture to enable the project management team to establish the exact dimensions of the space and to discover any hidden issues that may affect the design and build process of the new theatre,' commented Paul Williams, Technical Manager at the Globe Theatre. "The Pointools models will, primarily, be used by project architect – Allies and Morrison – to inform their design and quantify the interior dimensions of the space that the indoor theatre will occupy."

The original vision for Shakespeare's Globe Theatre extended beyond the iconic 'wooden-O' structure that already exists. When it opened in 1997 (after more than 27 years' of planning and four years' of construction) the indoor Jacobean theatre was left as a shell – divided and partitioned into rooms for educational workshops and rehearsals.

APR Services, the original survey firm to scan the Globe Theatre and a 3D laser scanning veteran, was again contracted to survey the indoor Jacobean theatre space. Using a Faro 3D laser scanner, APR captured around 3 billion millimetre-accurate measurements to detail the inside and outside of the complex building shell that included false doors and steps. Then using Pointools' point cloud software, the billions of individual measurement points were processed to create a visually stunning,



highly accurate, 3D replica of the existing structure and space for use in the design and construction process.

Tony Rogers of APR Services commented, “We completed the original survey of the main theatre at the Globe a few years back so it was important that we could tie the indoor Jacobean theatre data to the existing models.” He continued, “Using Pointools software we were able to create very accurate 3D replicas of the theatre to support architectural designs and decision making. It’s hoped that these models will support a faithful recreation of the indoor Jacobean theatre within the constraints of modern rules and regulations.”

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Note to editors:

The **Pointools** suite of software leverages the high-performance Pointools POD format for working with the largest point cloud models inside the broadest range of applications. Used by architects, engineers, contractors and surveyors to work with 3D laser scan data, Pointools software supports multiple workflows including Art & Entertainment, Forensics, GIS & Mapping, Infrastructure, Manufacturing, and Security & Defence.

Pointools offerings include stand-alone applications, CAD software plug-ins, and a third-party development platform for point cloud processing and visualisation; uniquely enabling point cloud model reuse across Bentley, Autodesk, Rhino, and SketchUp applications without time-consuming translation.

APR Services was established in 1991 by Managing Director Tony Rogers Bsc, FInstCES. Full membership of The Survey Association was granted in November 1996. During the same year accreditation under the ISO 9000 Quality Assurance Scheme was gained and later upgraded to the new standard. The company’s aim is to provide a tailored, high quality survey service to agreed standards & delivery schedules that are always met. The company continues to respond to the diverse needs of its clients, employing new and innovative technology alongside traditional surveying techniques.

Shakespeare’s Globe has become one of the most popular visitor destinations in the UK, at the heart of the regeneration of London’s Bankside. The theatre season plays in repertory from April to October each year and has gained an international reputation for performance excellence. In 2010, the Globe sold over 473,000 theatre tickets, achieved a record 91% of full capacity, toured productions all over the UK, Europe and North America and premiered two major new plays.

Shakespeare’s Globe Tour and Exhibition are open all year round and is the world’s only permanent exhibition dedicated to Shakespeare’s theatrical career. Shakespeare’s Globe is a charity and operates without annual government funding.