



The Centre for Digital Documentation and Visualisation

Glasgow School of Art
Historic Scotland

Centre for Digital Documentation and Visualisation

The **Glasgow School of Art** and **Historic Scotland** aspire to develop a world leading centre for the digital documentation and visualisation of the historic environment and to realise the benefits for Scotland. In 2010 both organisations came together to form the **Centre for Digital Documentation and Visualisation** (CDDV) as the vehicle to deliver cutting edge technology together with renowned expertise from both organisations.

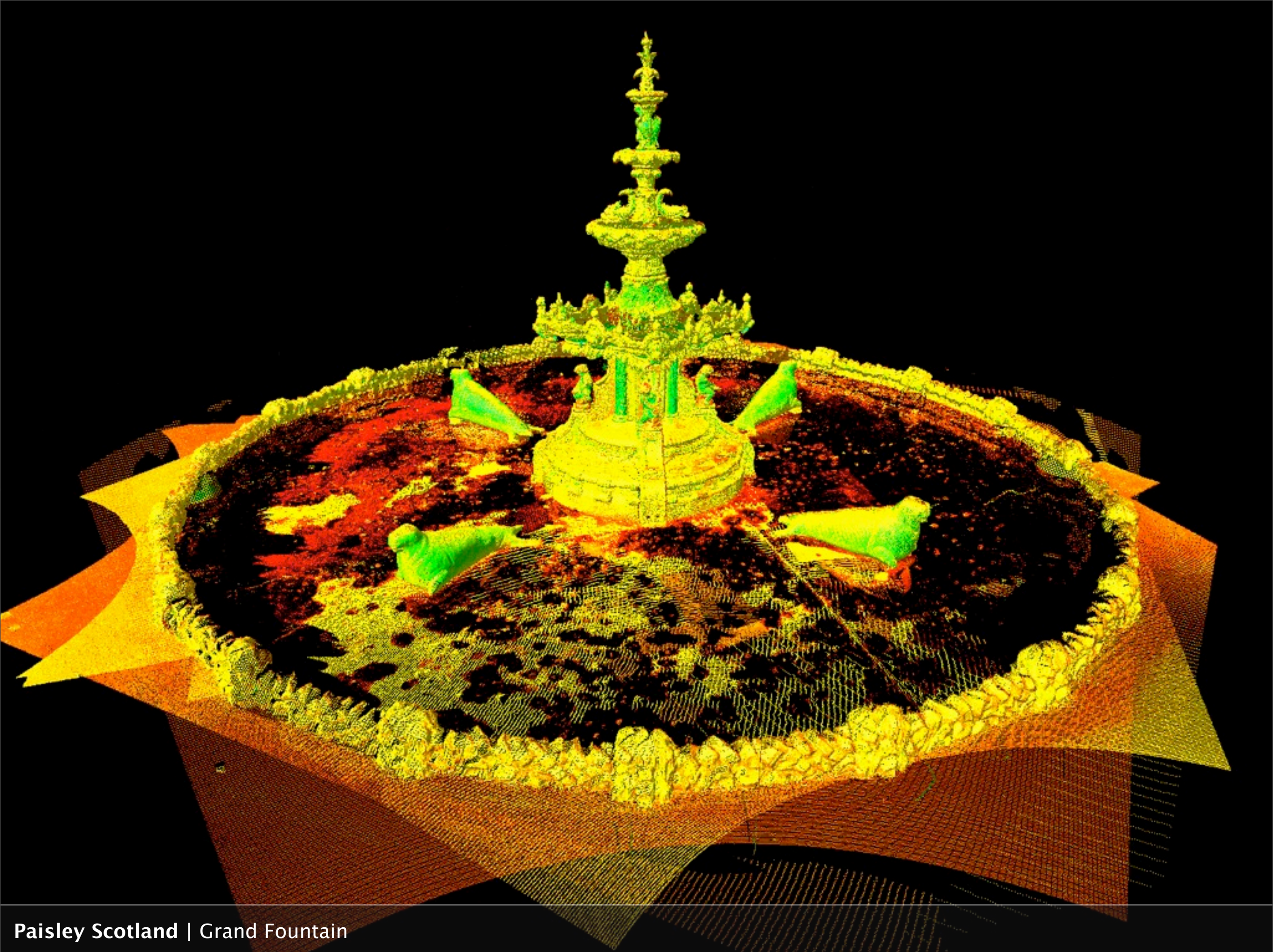
The CDDV promotes and celebrates Scotland's cultural heritage at home and abroad as well as enhancing Scotland's reputation for developing innovative research. The CDDV is currently working on the documentation of the five Scottish UNESCO World Heritage Sites and five International Heritage Sites in a project known as the **Scottish Ten**.





Paisley Scotland | Grand Fountain

Friday, 9 September 2011



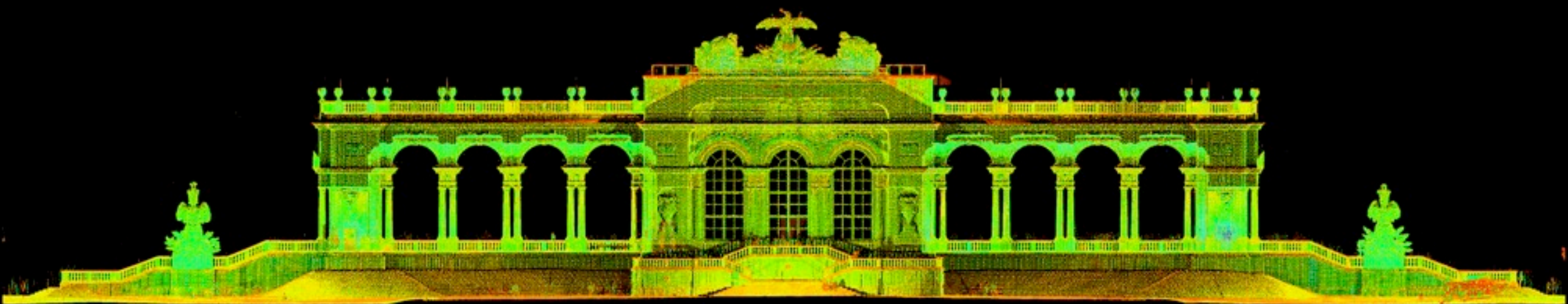
Paisley Scotland | Grand Fountain

Friday, 9 September 2011



Paisley Scotland | Grand Fountain

Friday, 9 September 2011



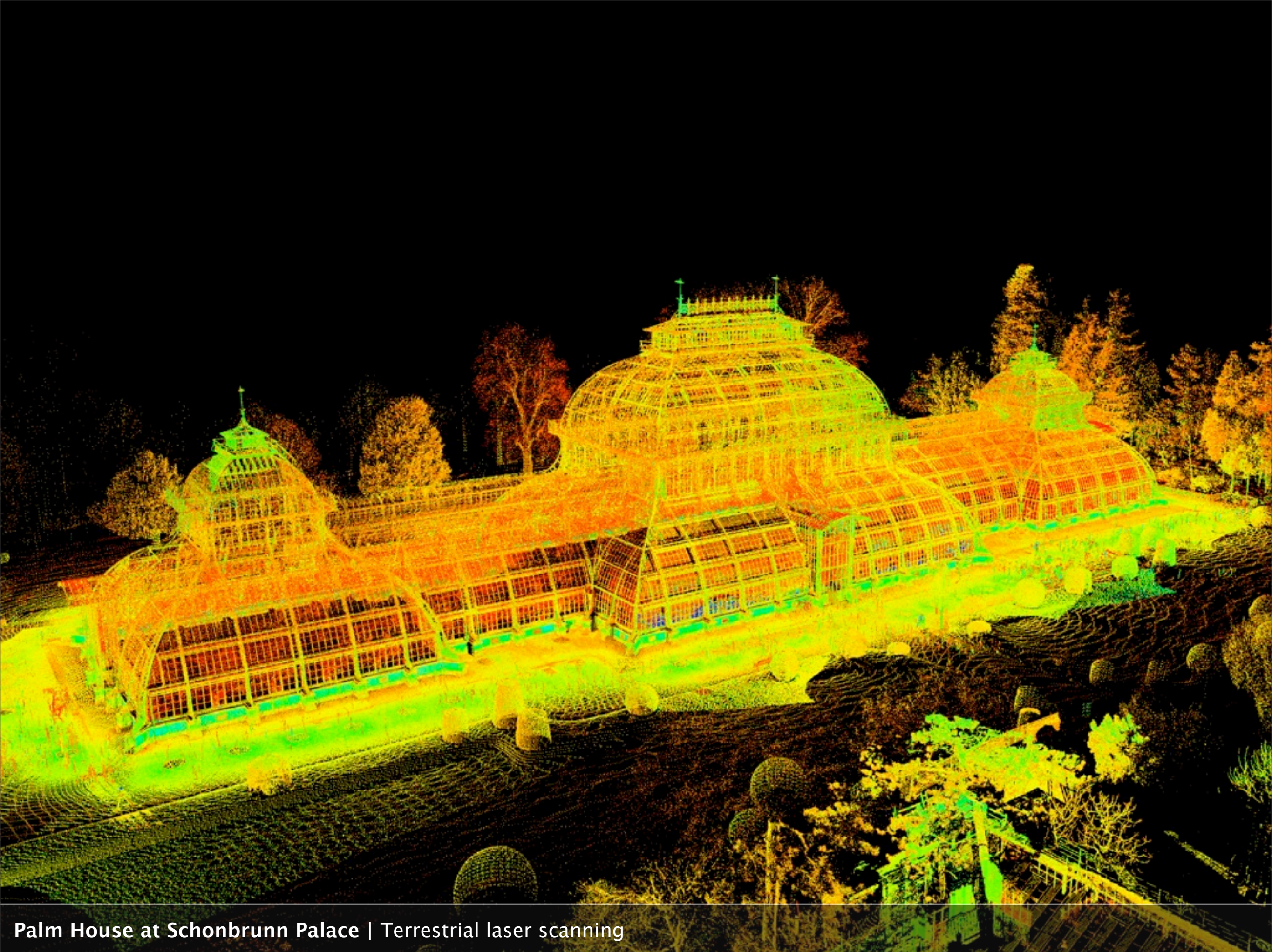
Gloriette at Schonbrunn Palace | Terrestrial laser scanning

Friday, 9 September 2011



Gloriette at Schonbrunn Palace | 3D documentation

Friday, 9 September 2011



Palm House at Schonbrunn Palace | Terrestrial laser scanning

Friday, 9 September 2011



Stirling Castle | Royal Palace

Friday, 9 September 2011



Scottish Ten | Mount Rushmore National Memorial

Friday, 9 September 2011











Scottish Ten | St. Kilda

Friday, 9 September 2011



C D D V

R o s s l y n C h a p e l



Rosslyn Chapel | Exterior Facade

Friday, 9 September 2011



Rosslyn Chapel | Interior Sculptures – the Green Man

Friday, 9 September 2011



Rosslyn Chapel | Interior Sculptures

Friday, 9 September 2011



Rosslyn Chapel | Interior Sculptures

Friday, 9 September 2011

Rosslyn Chapel

Roslin Scotland

Built 15th Century

Reason for Survey

Extensive restoration scheme

Assist conservation programme

Education and interpretation

Metrics

Scanworlds: 142

63 interior

80 exterior

Hardware: Scan Station 2

HDS 6100

Perceptron

Artec MHT

Nikon D3X

Registration: feature

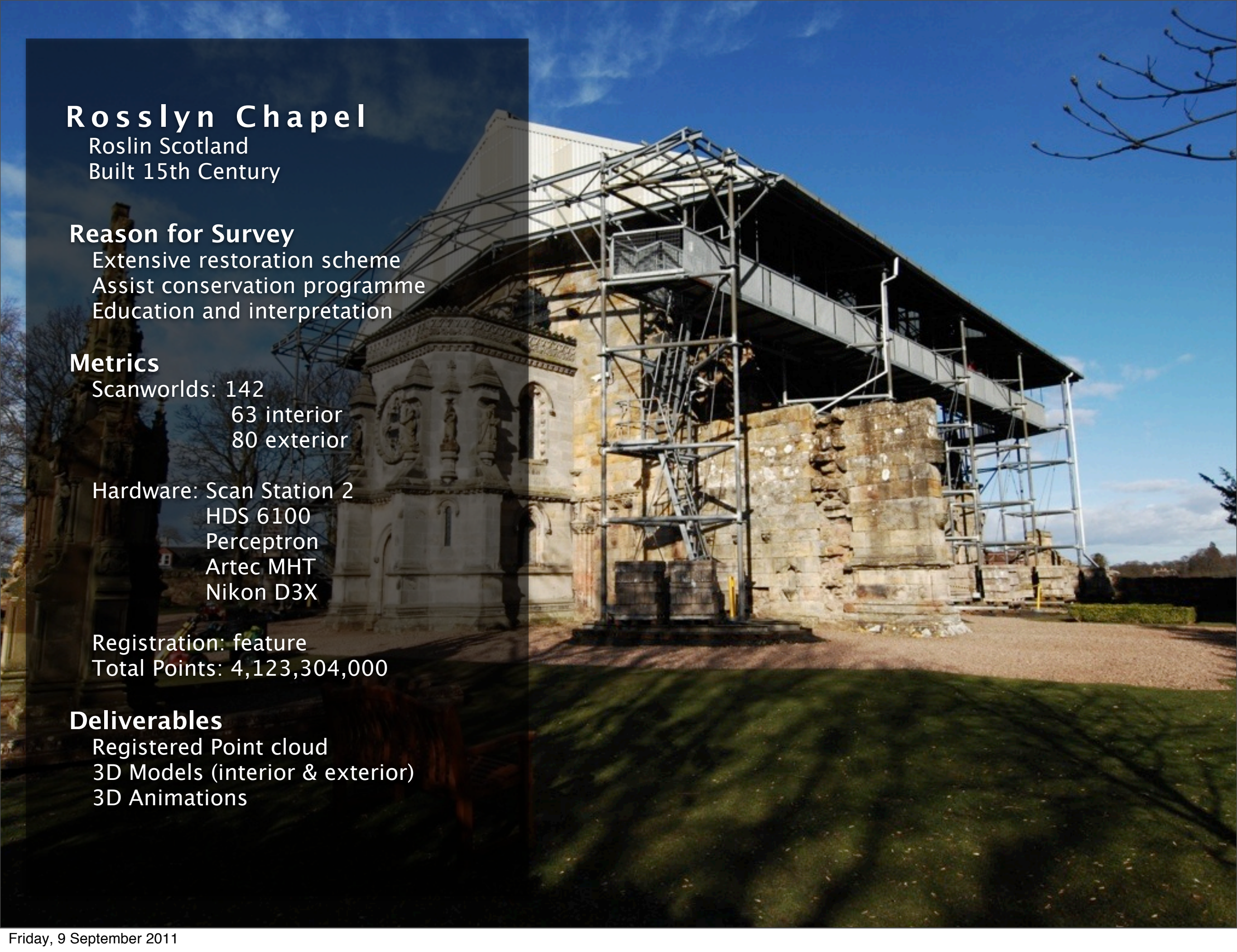
Total Points: 4,123,304,000

Deliverables

Registered Point cloud

3D Models (interior & exterior)

3D Animations





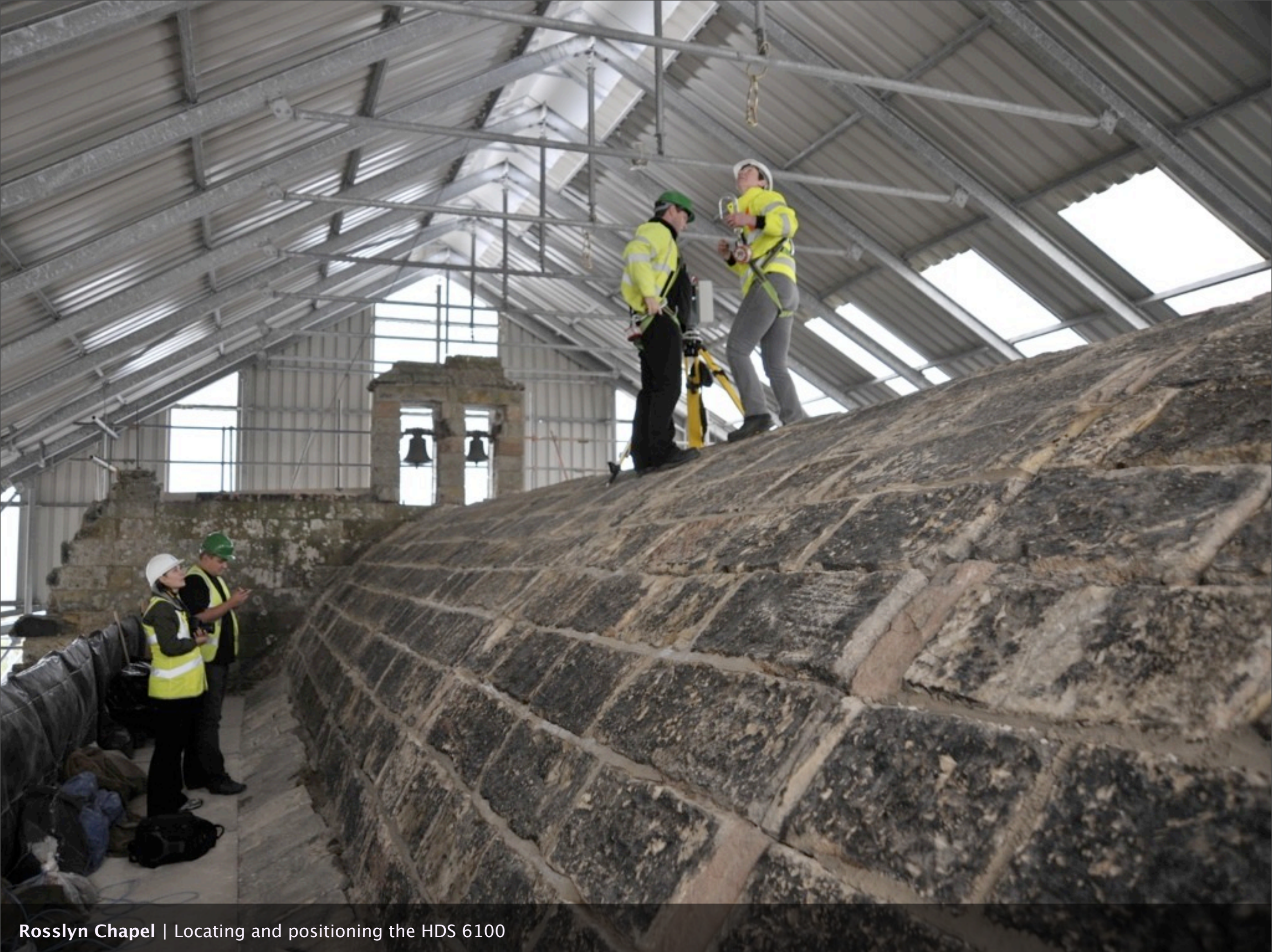
Rosslyn Chapel | Interior vault

Friday, 9 September 2011



Rosslyn Chapel | Vaulted roof with original stone work exposed

Friday, 9 September 2011



Rosslyn Chapel | Locating and positioning the HDS 6100

Friday, 9 September 2011



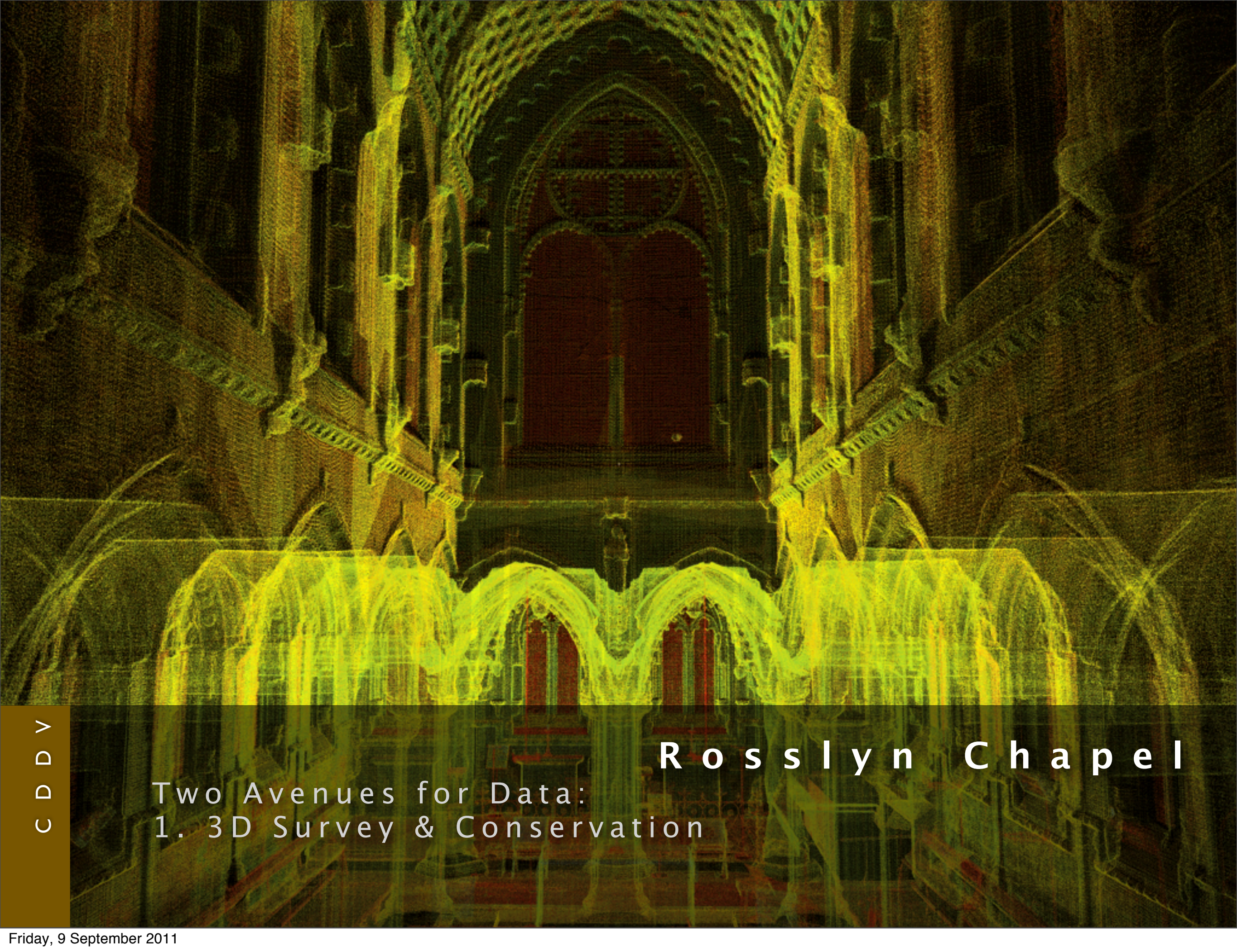
Rosslyn Chapel | Remotely operated HDS 6100

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Rosslyn Chapel | Interior scanning with HDS 6100

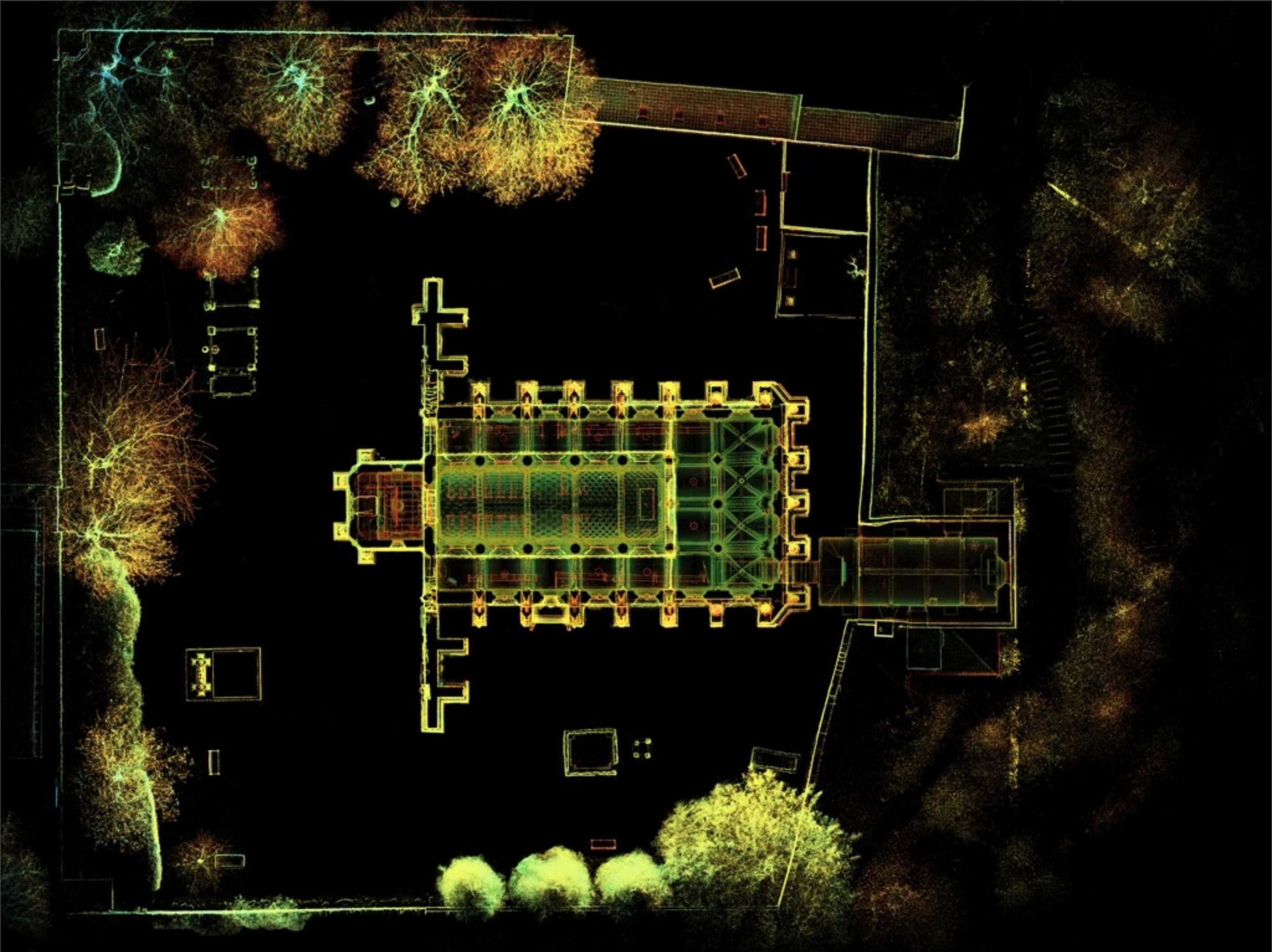
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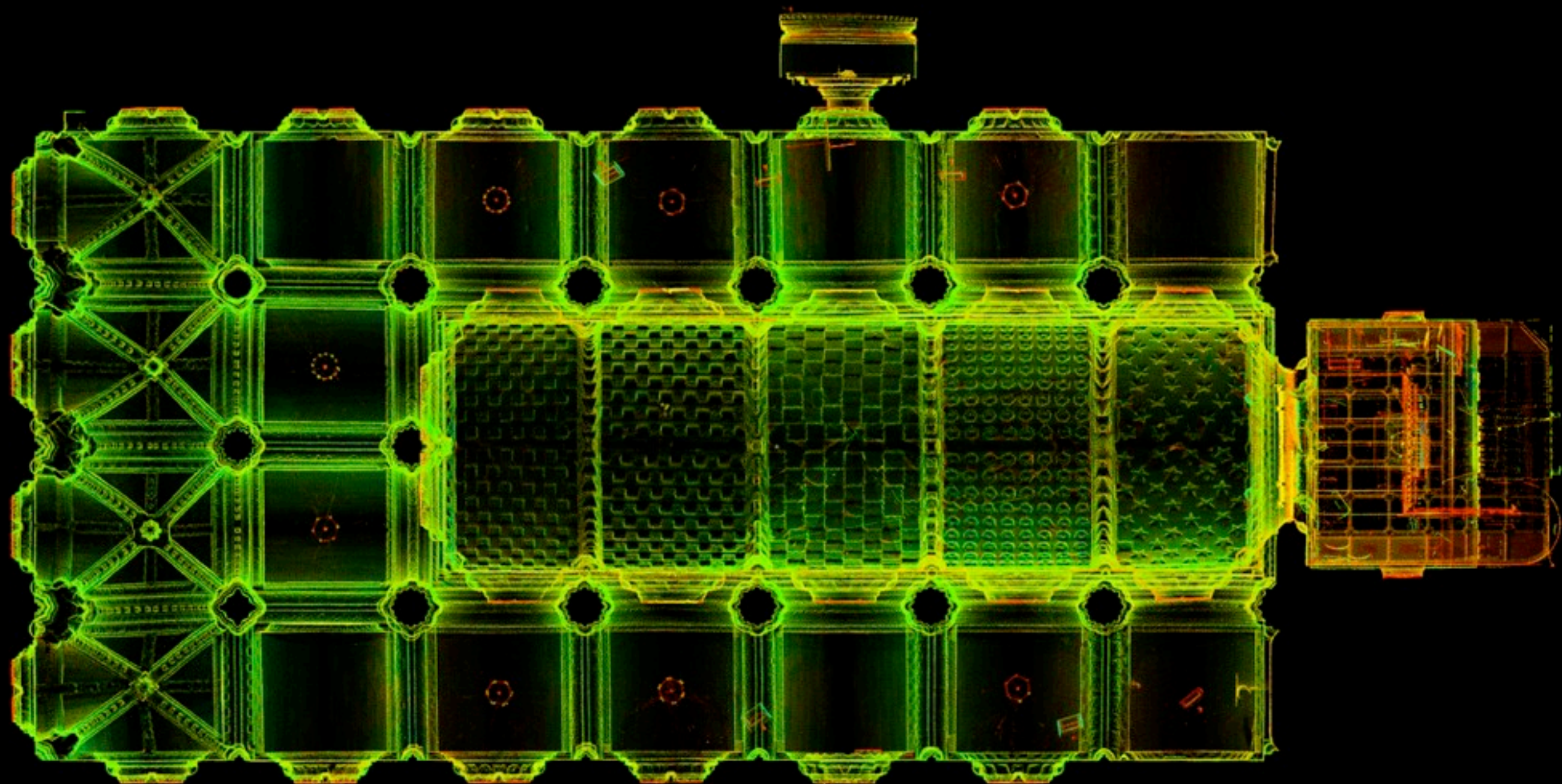


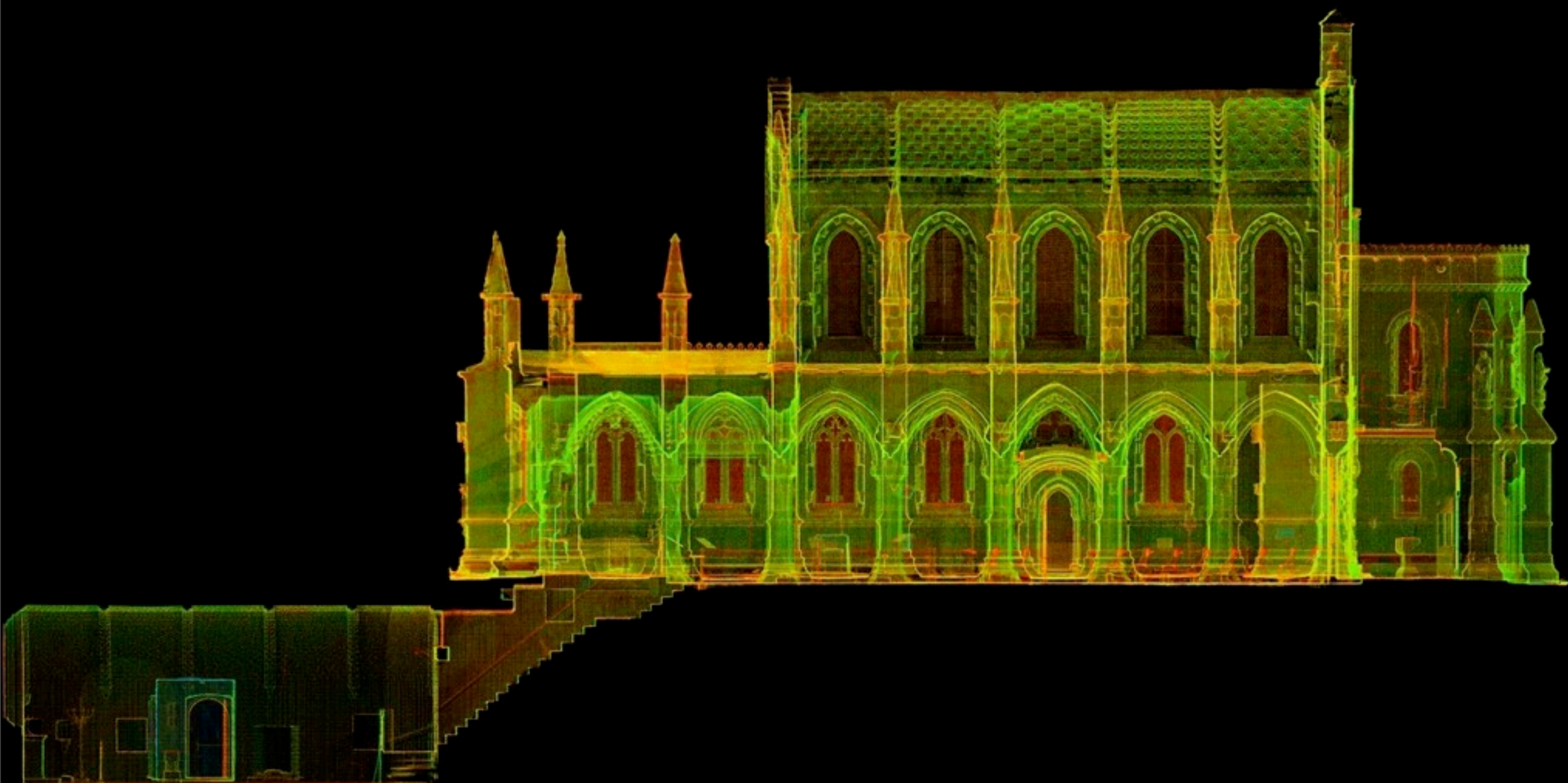
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R o s s l y n C h a p e l

Two Avenues for Data:
1. 3D Survey & Conservation

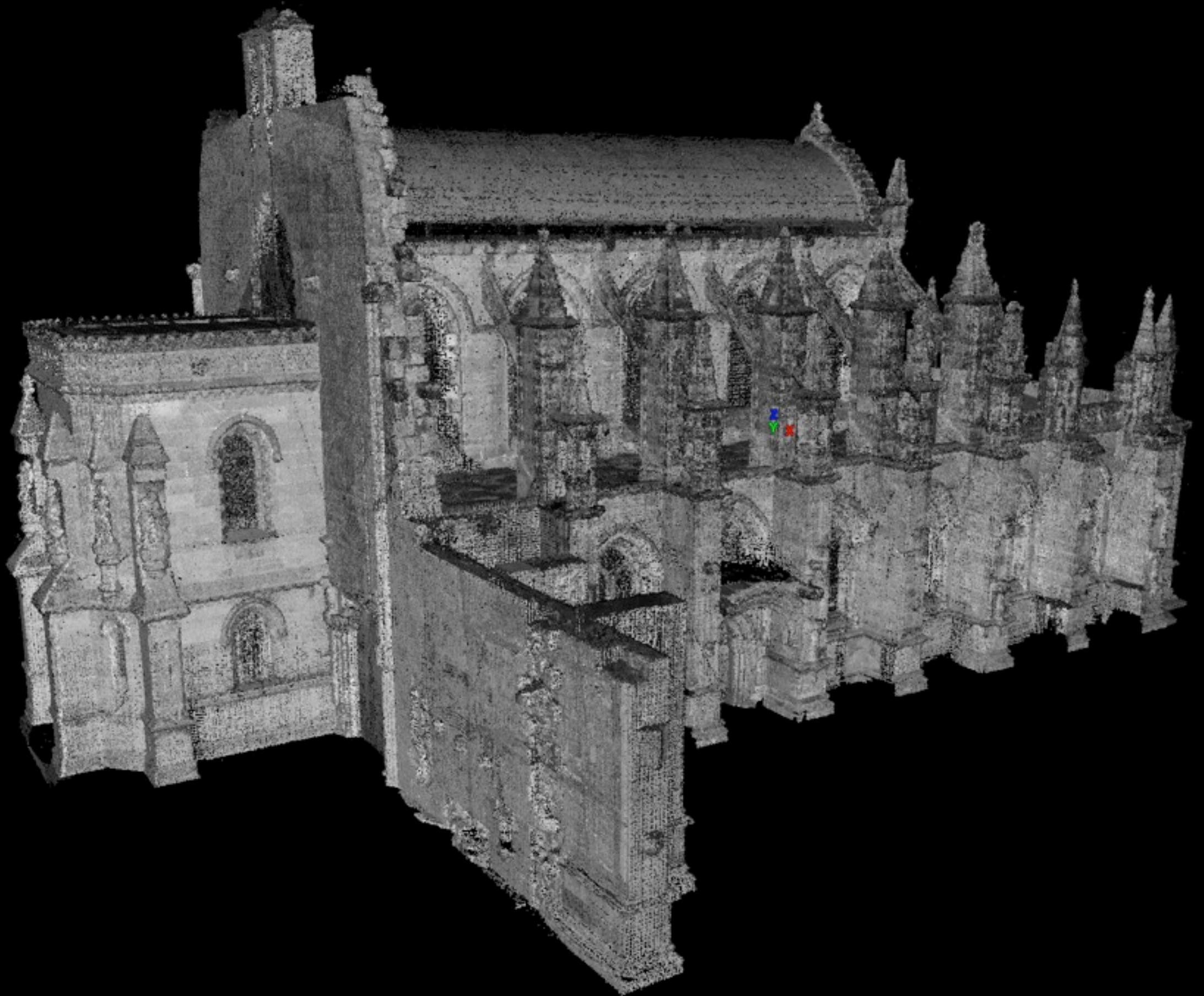






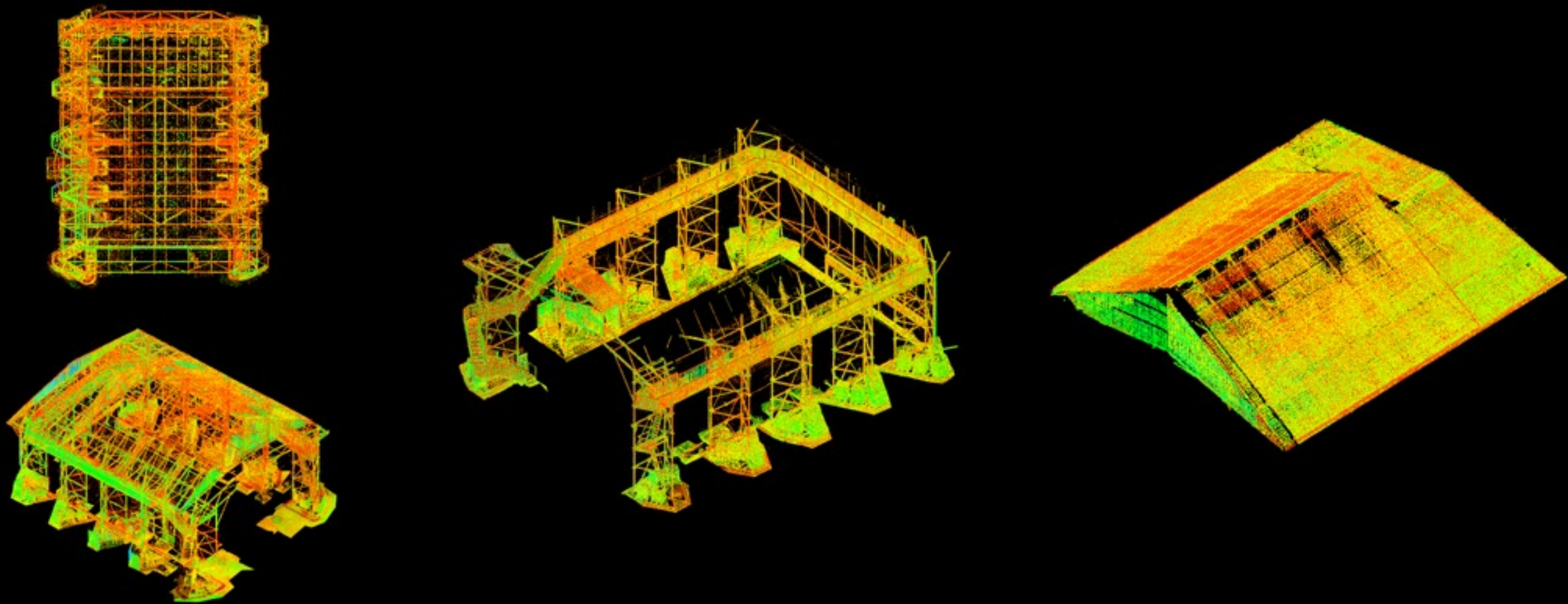


Rosslyn Chapel | Initial results of the registered point data

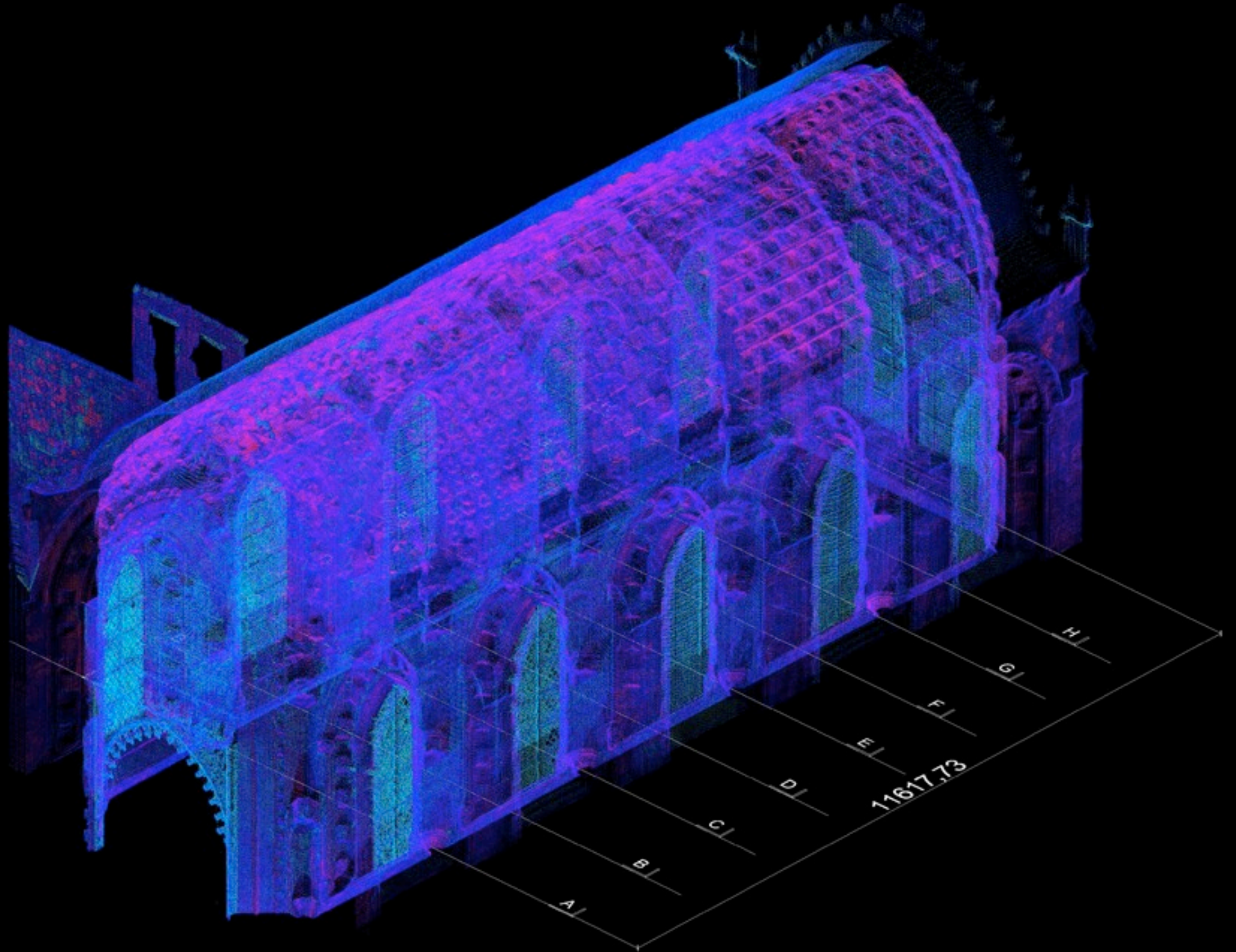


Rosslyn Chapel | Edited point data with the temporary roof and terrain removed

Friday, 9 September 2011

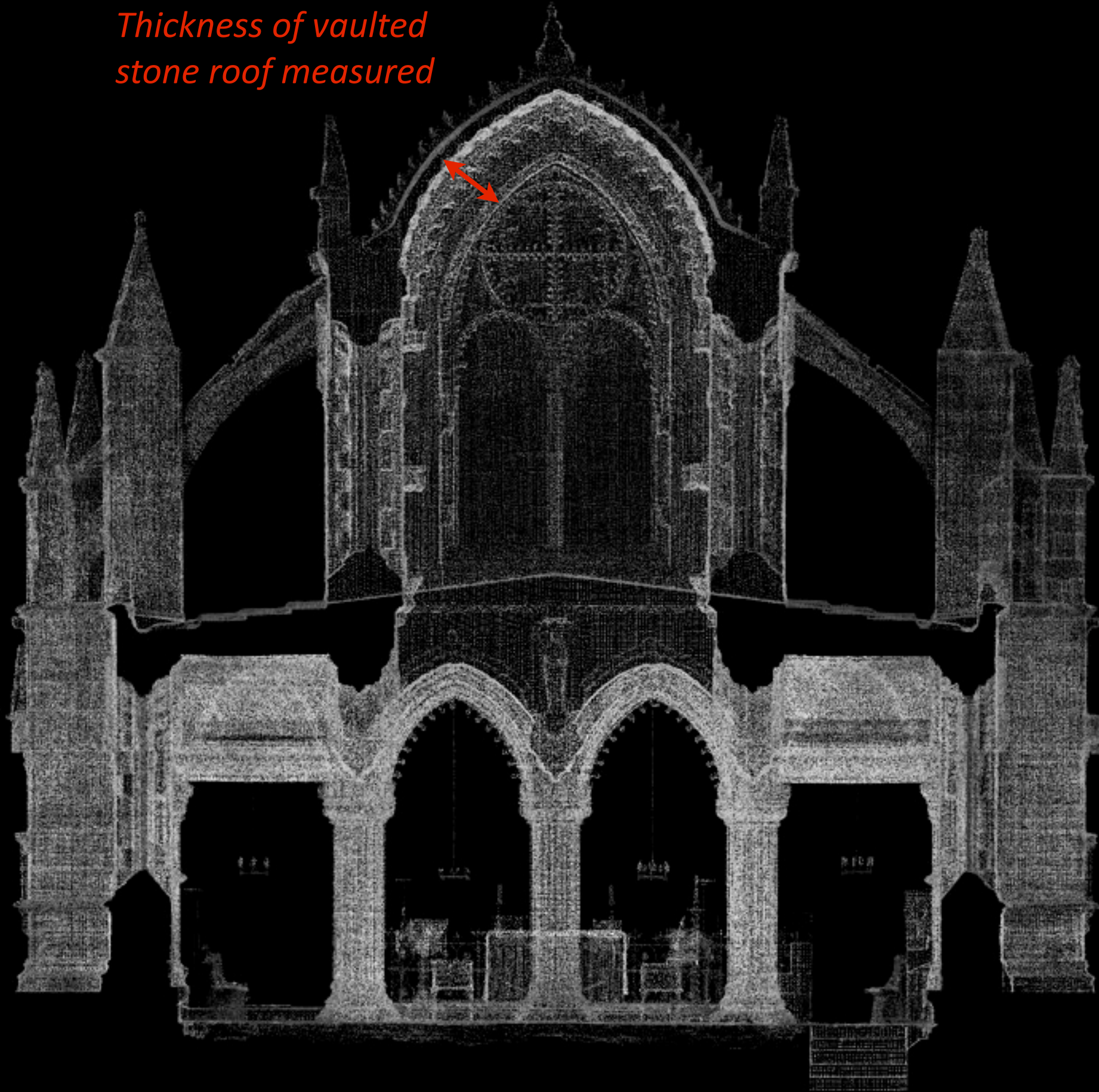


Rosslyn Chapel | Point data for temporary roof

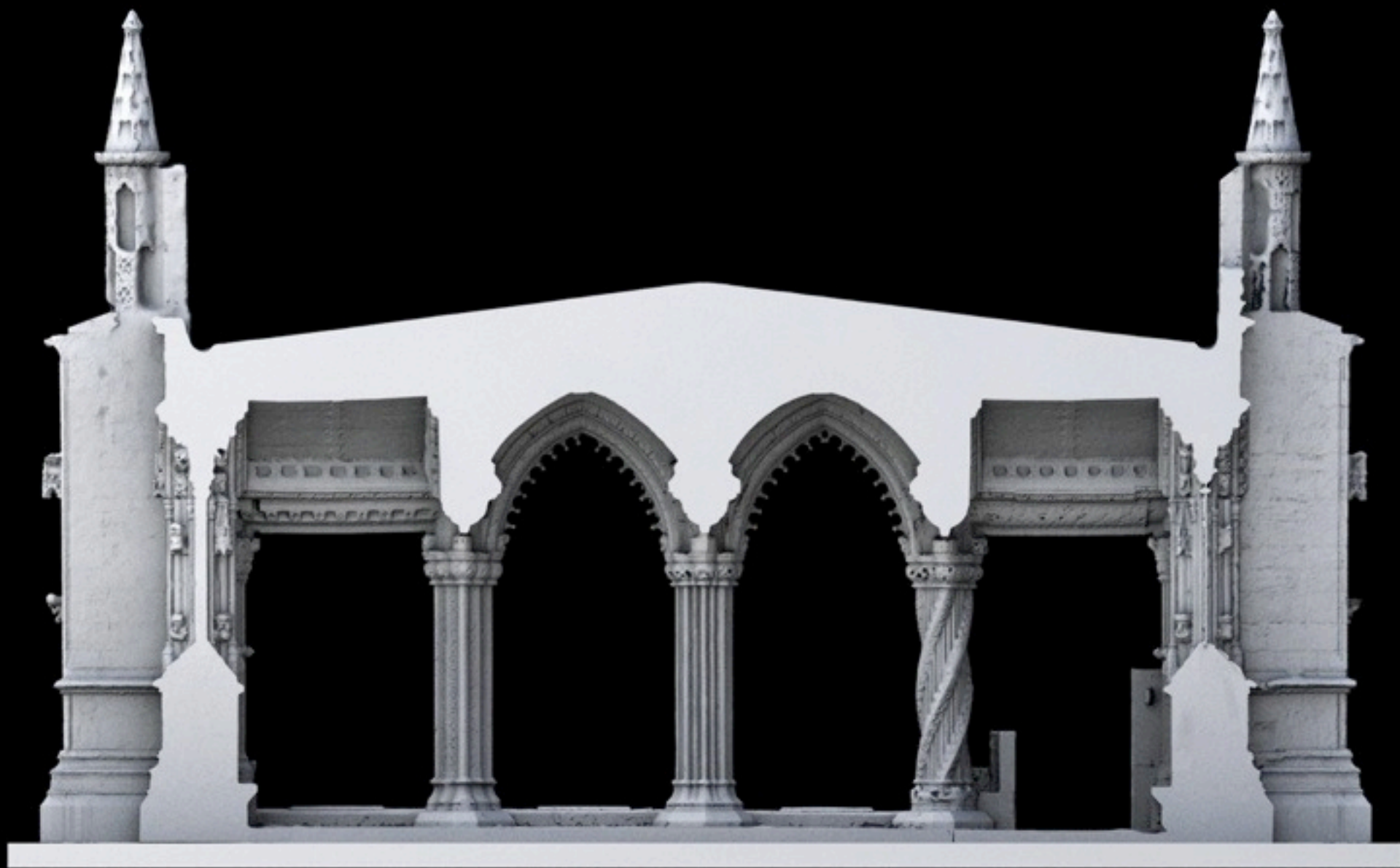


Rosslyn Chapel | Lateral cross sections generated

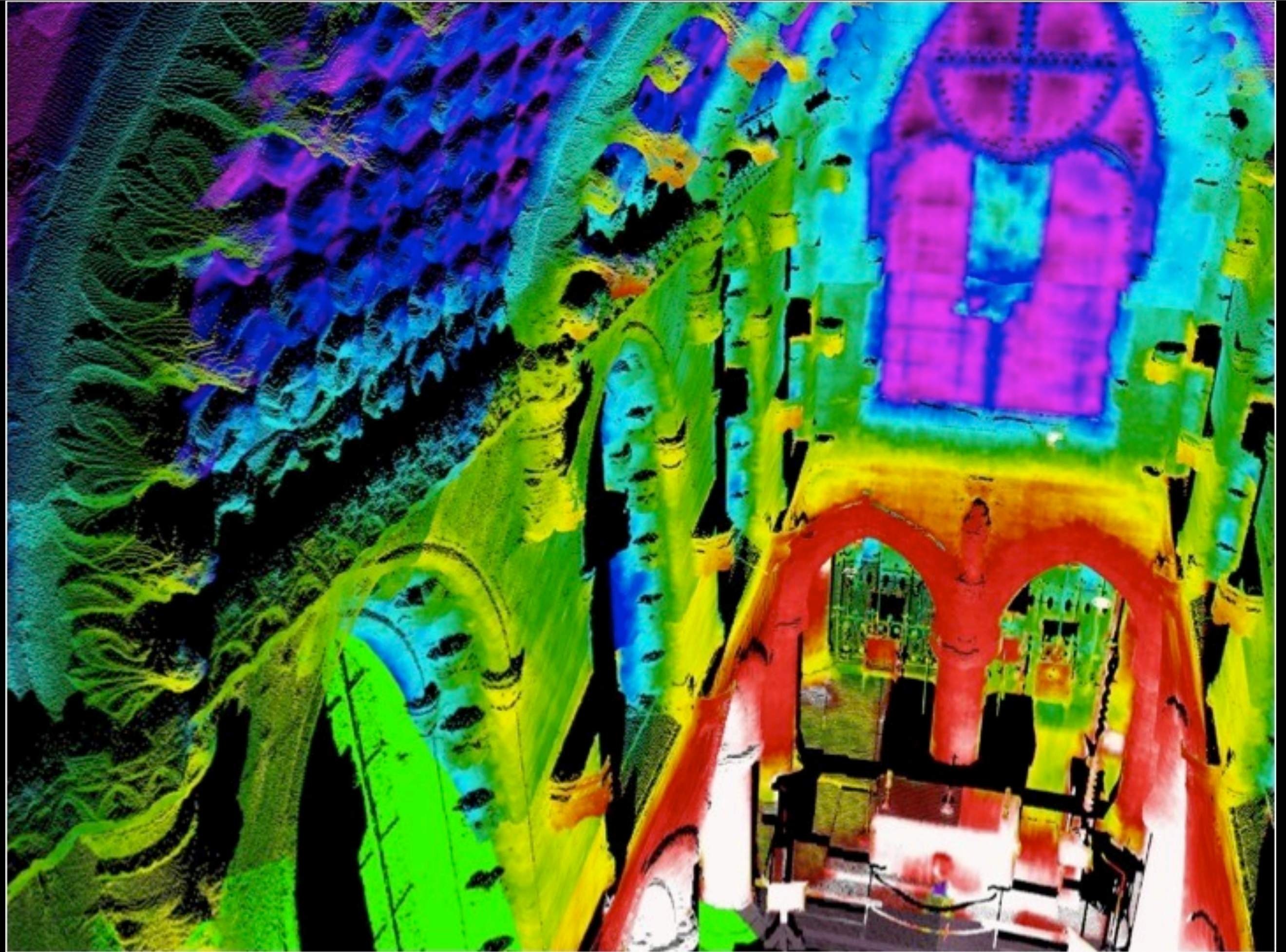
*Thickness of vaulted
stone roof measured*



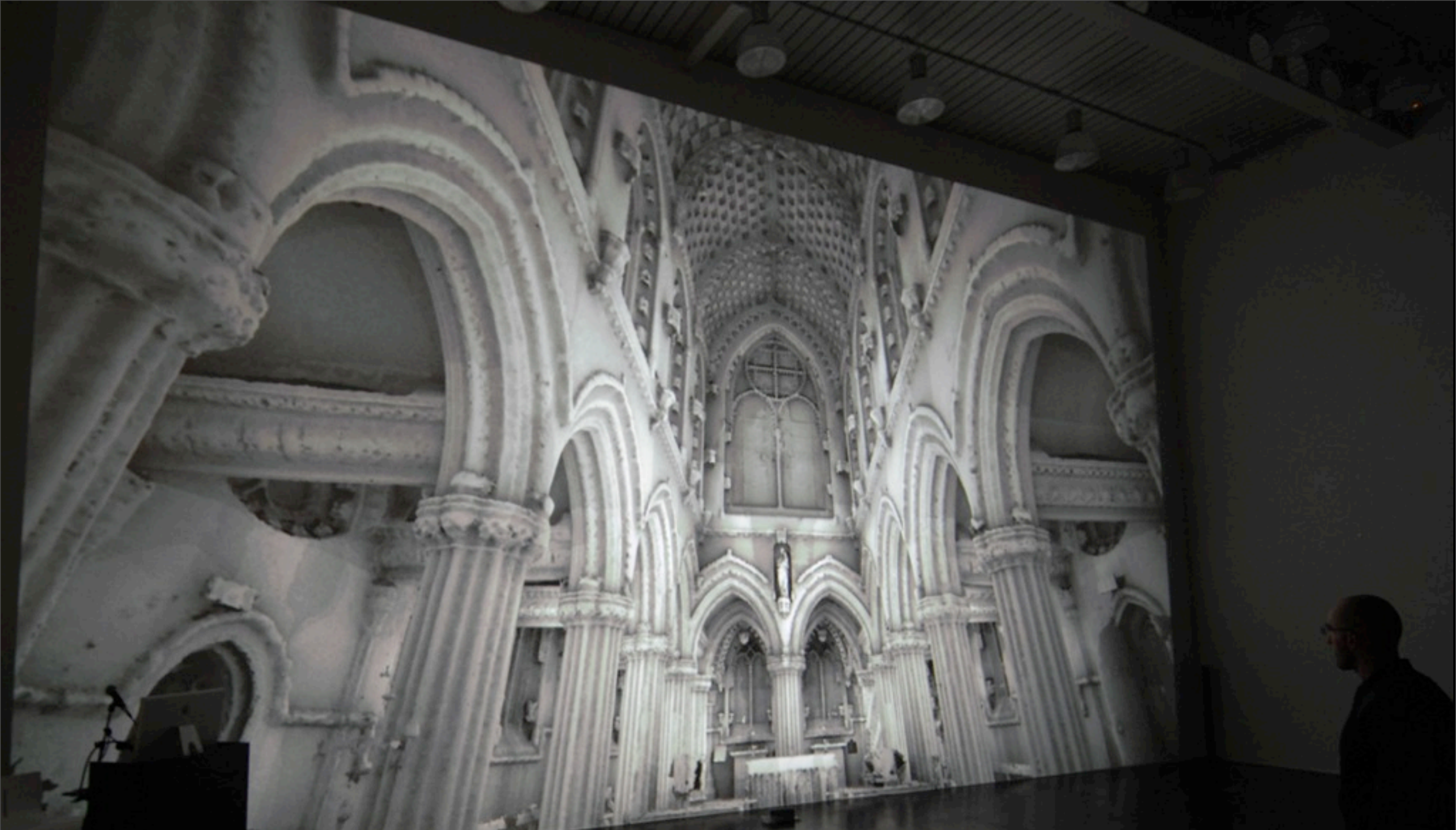
Rosslyn Chapel | Edited point data – cross sections



Rosslyn Chapel | Meshed data from the HDS 6100 showing interior columns



Rosslyn Chapel | Thermal imagery applied to point cloud



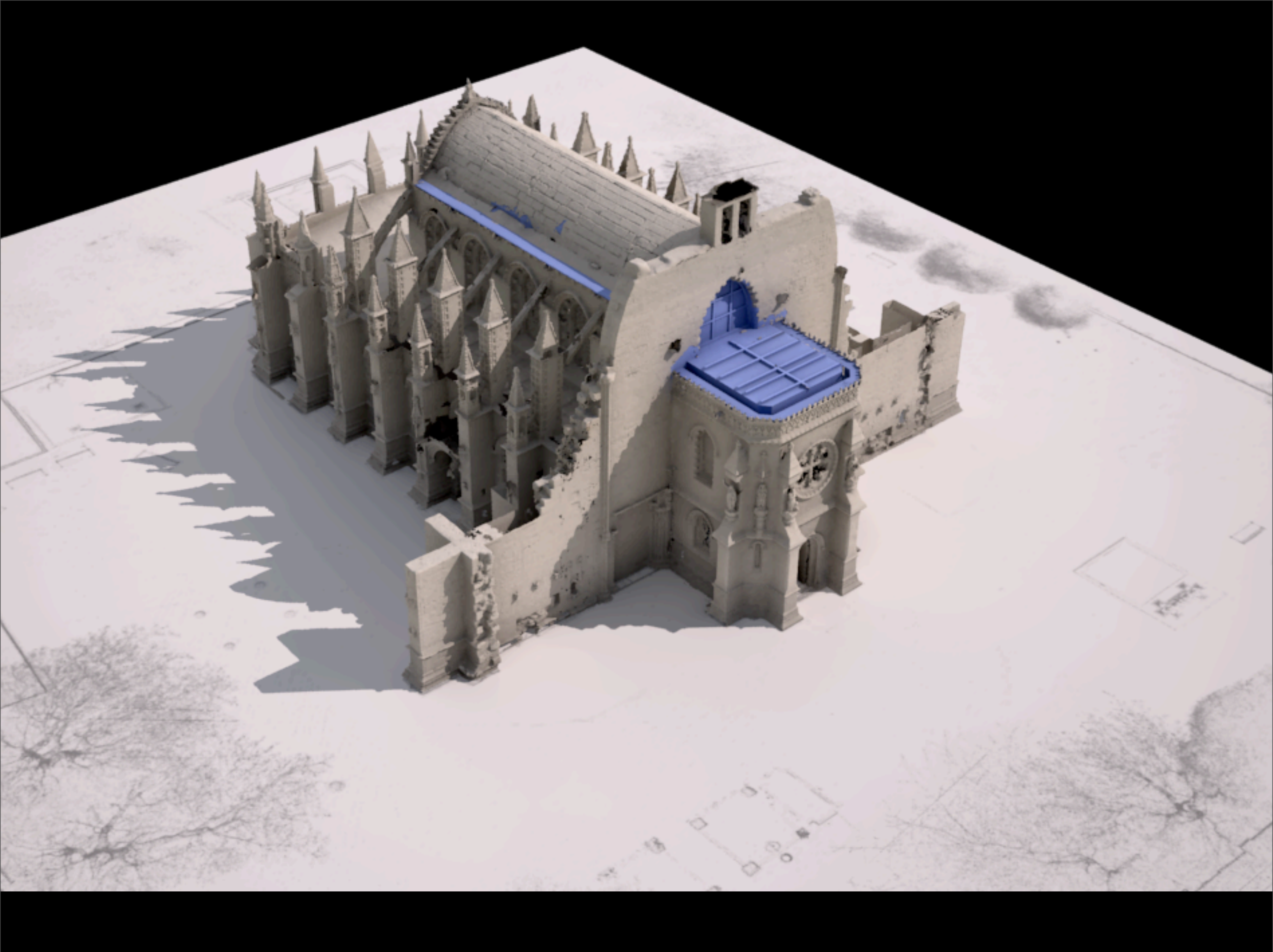
Two Avenues for Data: 2. Interpretive Content

R o s s l y n C h a p e l



Rosslyn Chapel | Meshed point cloud data

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Rosslyn Chapel | Meshed data from the Perceptron

Friday, 9 September 2011



Rosslyn Chapel | Meshed data from the Perceptron

Friday, 9 September 2011



Rosslyn Chapel | Meshed data from the Perceptron

Friday, 9 September 2011



Rosslyn Chapel | Meshed data from the Perceptron

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Rosslyn Chapel | Meshed data from the Perceptron

Friday, 9 September 2011

Thank you ..



DIGITAL DOCUMENTATION 2011

Scottish Youth Theatre
Glasgow Scotland • September 21 + 22

Digital Documentation 2011 is a 2-day international conference that brings together leading experts from the heritage, new media and research sectors to present and discuss the various aspects of advanced documentation, digital survey and 3D representation.

Organised by the Centre for Digital Documentation and Visualisation, the Digital Design Studio at the Glasgow School of Art and Historic Scotland, the conference will be held at the Scottish Youth Theatre in Glasgow.

Ticket price:
£150.00 for the two-day event

For further conference information:
<http://www.digitaldocumentation.co.uk>

Contact:
info@digitaldocumentation.co.uk

