DIVING IN THE MACHINE

MARK SENIOR EXAMINES A PILOT PROJECT INVESTIGATING THE POTENTIAL OF 3D SURVEYING TECHNOLOGY IN THE MUSEUM SECTOR

A developmental cultural heritage project is exploring the use of 3D technology for the creation of archive materials and to support audience interaction within the museum sector. Financially supported by the Flemish Government, the 'Duiken in de Machine' (Diving in the Machine/DIM) project is being led by the Flax Museum 'Texture' in Kortrijk, Belgium.

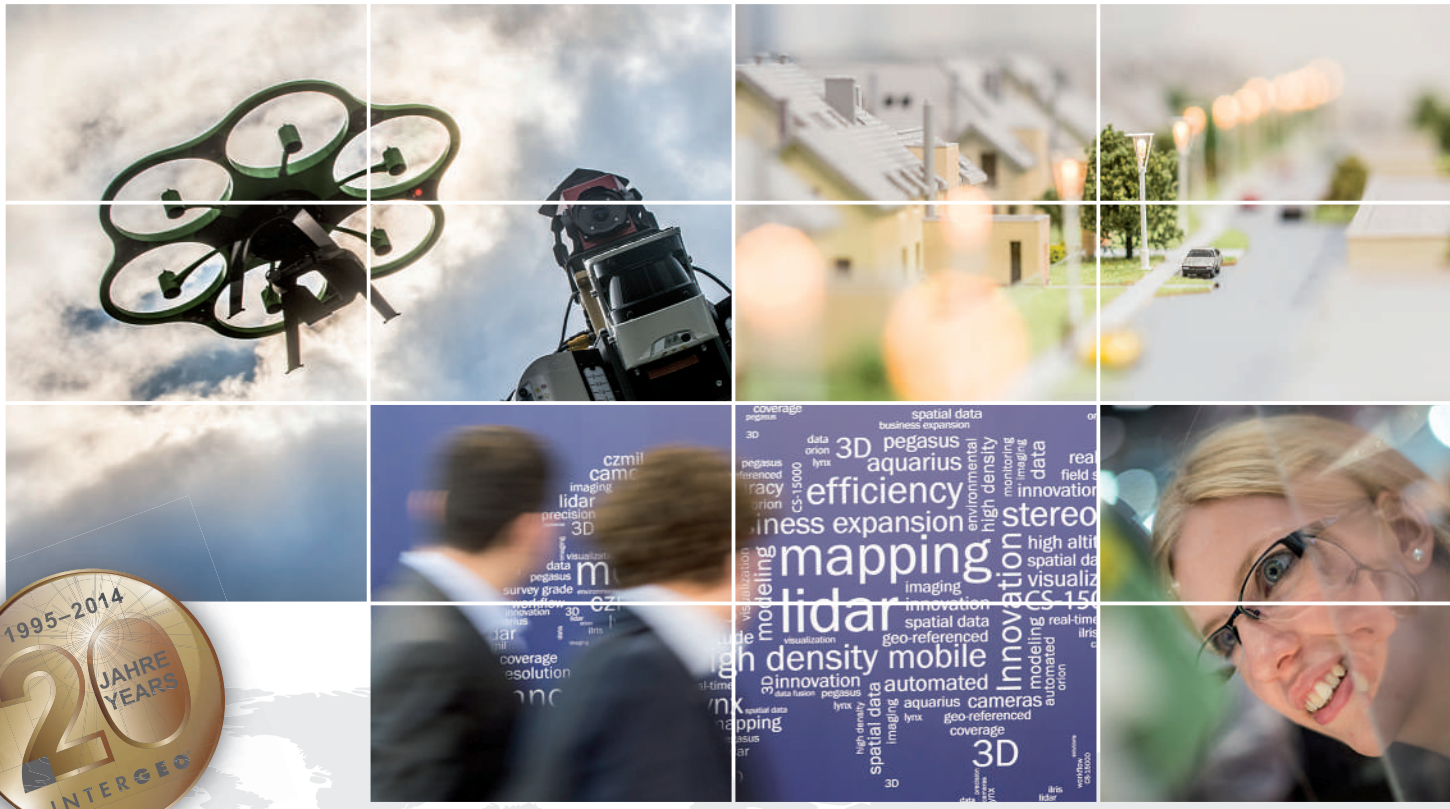
With a focus on industrial and agricultural heritage, in the form of machines, DIM differs both in nature and application from other heritage 3D projects, which tend to focus on the digitising of static, mostly architectural or archaeological, heritage. DIM is exploring the use of 3D technology for capturing detailed archive information and creating materials that can support audience interaction such as 3D visualisations.

The overall objective is to produce a manual of best practice, supporting practitioners when they are deciding whether to scan or not to scan, and then providing guidance on the scanning process. Offering practical advice, such as how to set up a digitisation project, the manual will also signpost and provide guidance on external resources that may be available such as educational institutions, voluntary organisations and support from the private sector. In addition to support and guidance in data capture, the manual also aims to collect and include information about the sustainable preservation of digital files. After all, there is little point collecting measurements and producing 3D models and other project deliverables if these are not available for future generations.

Choosing techniques

The DIM project consists of two distinct phases, the first of which is to explore and prove different digitisation techniques. With knowledge of the potential scope of any data capture (that is the physical scale and complexity of agricultural and industrial machines), DIM explored different options including measuring by hand as well as scanning, laser, CT and x-rays, in order to capture the dimensions of the machine components to add to existing documentation.

For heritage institutions, there are often more complex considerations than just preservation: for example, within the museum environment, audience involvement may be a primary goal. The easiest way to include school children and student groups with digitisation projects is by using simple hand measurements. This type of data capture requires little equipment or training and can produce usable results in short periods of time. However the data lacks accuracy, completeness and can be difficult to process for onward use.


1995–2014
20
JAHRE
YEARS
INTERGEO
czmil
lidar
precision
3D
data
pegasus
survey grade
coverage
spatial data
business expansion
3D
pegasus
aquarius
efficiency
stereo
mapping
lidar
Innovation
imaging
innovation
spatial data
geo-referenced
high density mobile
automated
cameras
coverage
3D