

User Story

Tracy Hill Sensorium

www.TracyHill.co.uk

FARO



FARO scene scanner being used to collect data imagery from Risley Moss, Cheshire.

FARO 'state-of-the-art' Scanning

AS-BUILT DOCUMENTATION / EDUCATION Tracy Hill visual artist based in the North West, currently working at the University of Central Lancashire exploits technologies that are intended for other uses to create imaginative artworks.

As a renowned supplier of high-quality portable coordinate measuring machines (CMMs) and 3D imaging devices, FARO technology is used throughout the world for high-precision 3D measurement and scanning. The ease of use, accuracy and ability of FARO products to generate accurate 3D documentation has allowed the company's portable CMMs and 3D imaging devices to become the measurement tools of choice across a diverse range of demanding sectors. In addition to solving dimensional metrology problems, FARO products are now used globally in areas such as architecture and construction, crime scene analysis, asset and facility management and crime reconstruction.

Although the list of industries served by FARO continues to grow and the range of applications for the company's universally applicable products expands, a recent project saw a FARO device used in a completely unique way, and amazing results to be achieved.

Born in Birmingham, UK, Tracy Hill <http://www.tracyhill.co.uk/exhibitions.php> studied Fine

Art at Bournville School of Art and Sheffield Hallam University. Amongst Hill's many strengths are her innate ability to recognise the potential of unconventional mediums and her talent for exploiting technologies that are intended for other uses to create imaginative artworks.

Whilst working at the University of Central Lancashire (UCLan) in the UK, the artist became aware of the use of FARO Laser scanners by University departments dealing in areas such as Civil Engineering and Forensics. Given Hill's readiness to embrace new ideas, she soon recognised the potential of the advanced FARO technology to be used in a less precise, although more aesthetic way.

Having borrowed a FARO Focus3D X 330, and FARO SCENE software from her colleagues, the artist quickly became adept at accessing the scanner's basic functions and in manipulating captured data. Then, given the effects she required, a period of experimentation allowed Hill to develop techniques beyond the normal scope of the instrument and software. Armed with the FARO Scanner, the artist was

then able to gather and manipulate data to allow the creation of a major installation – Sensorium.

Tracy Hill explained. "Sensorium investigates and reconsiders the relationship between digital technology and the aesthetic of the hand created mark. Our daily negotiation of data and reference points often brings with it a sense of dislocation and fragmentation altering our understanding and interaction with space.

"By adopting commercial scanning and mapping technology and combining it with traditional handmade processes an aesthetic is reintroduced seeking to offer a re-imagined perspective of spaces which maybe we have forgotten to see.

"As the title of the installation implies, 'Sensorium' draws on combinations of your senses, personal experiences and memory, in order to make connections with the visual clues presented in the space.

"The visual imagery is informed by digital data collected through the use of a FARO infra-red scanner whilst walking in the historic mossland >>

Tracy Hill Sensorium

http://issuu.com/tracyhill2/docs/final_pdf_sensorium_for_web/1



Tracy Hill, 'Sensorium' installation, UCLan Preston. Shown with FARO scene scanner used to collect data.

>> of Chat Moss in North West England, providing an analysis of the physical. The decision to create the drawing in charcoal connects to the underlying geology of the place, the view unseen. Finally the hand drawn mark allows me to reintroduce a connection to the aesthetic, to draw on my personal memories of place and experiences of touch. The very act of making the mark on the surface of the wall carries a connection of place through touch. Textures, boundaries, stability, pathways walked are all transferred experiences of place.

"The transience of the mossland is a characteristic which requires its visitors to draw on senses and an internal awareness of touch. Sensorium is a temporary installation, a brief encounter with an imagining of place. In a world of fast moving technological advances and equipment which can locate and direct us anywhere in the world, it is important to value places which sit quietly shifting and evading our control.

"The charcoal drawing is not fixed in the normal way, rather is slowly moving across the surface of the space and under certain conditions could disappear. This fragility is a direct comparison with the relationship we share with these mossland sites. It is not a fixed view, it is an offering to explore and reconnect with these liminal spaces.

Opportunities for adventure are offered, however we are also reminded that in order to achieve true understanding of place, we must understand the interconnections of human relationships to places. One must acknowledge the complexity of places and personal responses to experiences encountered."

Focus3D X 330 offers extra-long range offering precise scanning up to 330m, it is equipped with GPS and is able to perform scanning even in bright sunlight. Remote scanning as well as almost limitless scan data sharing via SCENE Webshare Cloud makes the laser scanning solution truly mobile.

SCENE - FARO's 3D Documentation software processes and manages scanned data easily and efficiently by using automatic object recognition as well as scan registration and positioning. SCENE can also generate high-quality coloured scans very quickly, while providing the tools for automated target-less scan positioning.

This point-cloud software for scanners is extremely user-friendly, from simple measuring to 3D visualization to meshing and exporting into various point cloud and CAD formats. Once SCENE has prepared the scan data, you can commence evaluation and further processing right away.

Scan projects can even be published on a web server at the touch of a button with SCENE WebShare Cloud. The SCENE WebShare Cloud is a secure cloud-based solution for storing and sharing scanning data with different project partners.

Tracy Hill concludes. "Given the boggy nature of the areas that I scanned in the course of collecting data for the Sensorium installation, the small size, lightweight and robust nature of the FARO device made it ideal for use in the field. As a complete novice in the area of 3D scanning, I was amazed at how quickly I was able to master the operation of the FARO Focus3D X 330. Having captured the required data, the fact that FARO's SCENE software is so intuitive, enabled me to experiment and to control and work with the scanned data to achieve the evocative and ethereal effects that I was looking for."

TRACY HILL SENSORIUM

Tracy Hill studied Fine Art at Bournville School of Art and Sheffield Hallam University. She currently works at the University of Central Lancashire researching and examining the unconventional precesses of printmaking. She is also working on developing acrylic and digital technologies can be combined to produce new ways to challenge the definitions of print. She is a very creative person who has the ability to recognize the potential of unconventional mediums to exploit technologies that are intended for other uses to create imaginative artworks. Some of her artworks include "Mire" which explores the historic meres and mosses of the North West.

WWW.TRACYHILL.CO.UK

– FOUR GOOD REASONS –

Quotes from customers.

- 1 Focus^{3D} X 330 offers extra long range - 330m, Focus^{3D} X 130 is a mid-range device offering precise scanning up to 130m.
- 2 Focus^{3D} X 330 is the smallest and lightest laser scanners on the market and therefore the ideal scanner for indoor and outdoor applications
- 3 Focus^{3D} X 330 is equipped with GPS and offer the possibility to perform scanning even in bright sunlight. Remote scanning as well as almost limitless scan data sharing via SCENE Webshare Cloud make the laser scanning solution truly mobile.
- 4 The FARO Focus3D X 330 is specially designed for outdoor applications due its small size, light weight, extra long range, extended scanning possibilities even in direct sunlight and easy positioning with to the integrated GPS receiver.



WWW.FARO.COM/FOCUS

SUMMARY

FARO have now opened up a new avenue for the exploration of their products. The ease of use and lightweight portability of the FARO Laser Scanner meant that it could be used for other unconventional ideas like how Tracy Hill used it to create visual based on senses and personal experience.