E-Capture Launches 3D Tablet for Architects and Archaeologists

3D documentation work is an important part of an architect´s job. Monuments, old buildings, indoors scenarios, stairs, ornaments, vaults and suchlike have to be captured faithfully on a daily basis. All documentation needs to be generated quickly and accurately. Is there any single device which enables architects to capture and generate high-quality 3D models of all the elements to be documented?

In response to that question, E-Capture R&D, a Spanish technology-based company, has introduced a new 3D accurate measuring tablet: EyesMap. The Spanish enterprise intends to revolutionise the world of measuring with this next generation of portable, easy-to-use and highly accurate instruments, optimal to fulfil most of the challenging architecture, design and archaeology jobs.

EyesMap has an excellent capacity for modelling 3D scenes both indoors and outdoors, as well as capture in 3D large objects like buildings up to small objects like coins. According to E-Capture, EyesMap is the only device in the market with this all-round capacity and versatility.

Photogrammetry

The EyesMap tablet incorporates two rear cameras, a depth sensor and a GPS system. It is able to measure coordinates, lines and surfaces of all types of objects up to a distance of 30 to 50 metres. To the same extent EyesMap can process detailed photogrammetric HR images containing up to 4 million points in less than 2 minutes. These photogrammetric color scans allow the user to create detailed 3D models of all kinds of objects, being able to generate a faithful reproduction of the original. EyesMap supports external cameras to achieve an even better performance if conditions do require so.

The integrated depth sensor is another useful technology within EyesMap which allows the user to generate a real time scan of the scene; obtaining a complete 3D points cloud of indoor scenarios in a fast and easy way.

Managing restoration sites

EyesMap is a very useful tool for the architect to manage restorations sites in 3D using just one single instrument, documenting the different parts of a job site in 2D/3D, capturing small ornaments and stairs or sculptures in 3D, generate true orthophotos (also 3D models) of the facades, document rooms, paintings, furniture, etc. Anticipating on latest developments and trends, the tablet also supports aerial images made by drones, for example, generating beautiful and very accurate 3D models of the buildings from the air (especially useful for roofs).

It may well be concluded that Eyesmap will contribute dramatically to improve the 3D documentation in the wide field of architecture.

Specifications

The tablet comes with Intel's 4th generation i7 processor and 8 GB of RAM to ensure a first-rate performance, both in the field and at the office. The system uses computational vision techniques blended with photogrammetry, precision sensor fine tuning, as well as a visual odometer and other advanced images measuring techniques. EyesMap supports Wi-Fi, 3G and BlueTooth which allows to share the measurement results in a split second once connected.

The EyesMap system is developed under Windows and will have an optional SDK kit available to developers who wish to realise their own specific customised applications on top. In addition to architecture and archaeology, very useful applications for Eyesmap can also be found in other sectors like interior design, criminology, civil engineering, industrial & reversed engineering, surveying, as well as in other professional fields like arts, medicine, 3D gaming/entertainment, security, etc.

More information

Architecture video: https://www.youtube.com/watch?v=SxJyhOKrLjk

Cultural heritage documentation: https://www.youtube.com/watch?v=4pl8lot1XV0

Interior design: https://www.youtube.com/watch?v=8xbx9RDgYU8

Company webpage: www.ecapture.es