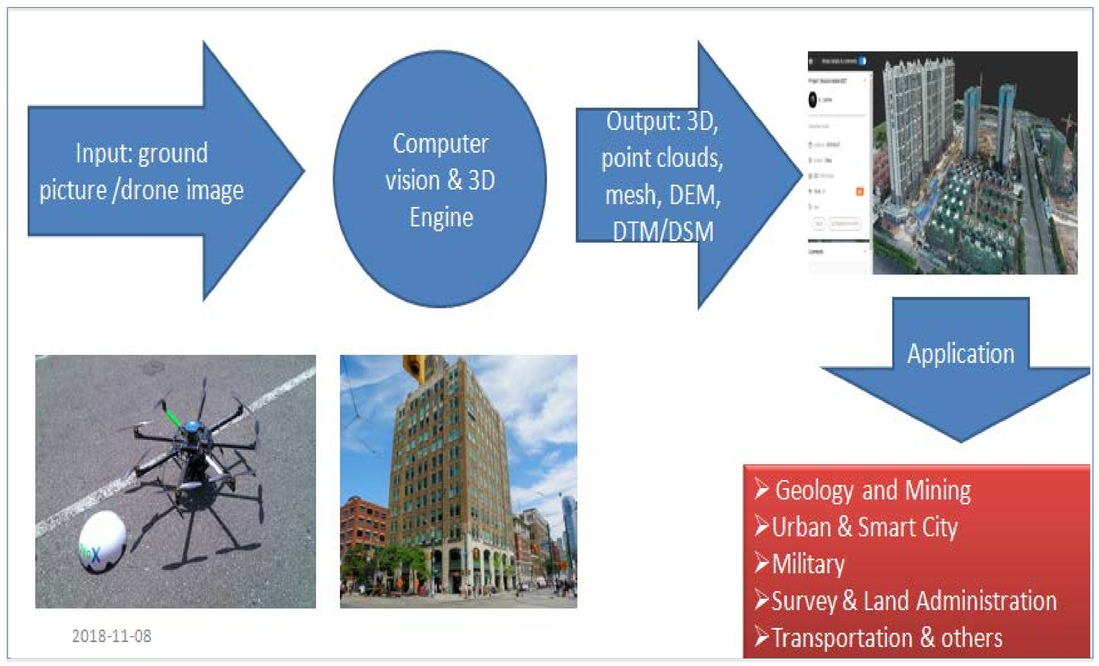
UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

Online DREIM
(Drone Remote Imaging & Mapping)

IPR (PATENT/ID/C) NO PI 2017702342

A Novel Technique to Extract Pseudo Invariant Features Automatically for Remote Sensing Applications

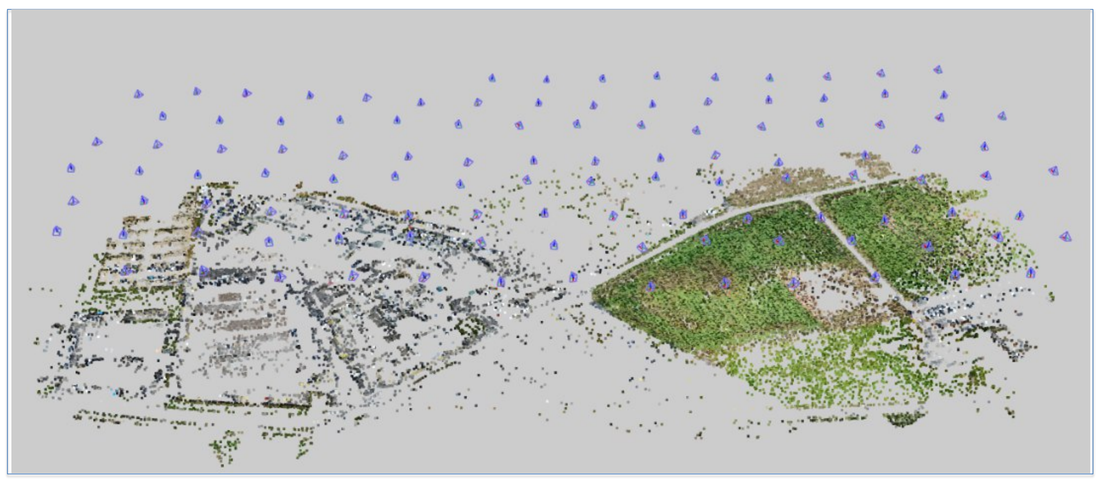


INTRODUCTION OF TECHNOLOGY

Stereo-photogrammetry involves estimating the three-dimensional coordinates of points on an object employing measurements made in two or more photographic images taken from different positions. The proposed solution turns ideas into 3D design with an easy-to-use online 3D modeling web application and cloud-based. The proposed 3D online innovative technological engine is beyond creating 3D real-world by Internet of Things (IoT) systems and is designed to support the Smart City concept and other applications like mining and mapping. The development of sophisticated photogrammetric algorithms and intelligent information processing technologies by the proposed computer vision techniques are implemented in ten steps (i.e. transferring, cleaning, initialization, spare, transferring, dense, mesh, texturing, transferring, and finalizing) to generate products such as 3D model, point clouds, mesh, orthophoto, DEM. The proposed 3D engine makes user-friendly, and widely available through a mobile phone or a web browser and cloud-based by taking pictures from a mobile, a professional camera, and drone images or a video captured with a high speed, quality, and low cost never before though possible. It allows to upload your images and give your 3D model and other useful products in 1,2, and 3 click, only.

INVENTION

It is from 3D Computer Vision to Application and Beyond. Web-based and cloud platform for turning ground images and drone photographs into true 3D models and 2D orthomaps, point clouds, DEM, DTM, DSM, and mesh. Reconstructed 3D model and a 2D map from the web-based by the developed sophisticated computer vision algorithms and computation.



ADVANTAGES

- Gets user connected to photography, photogrammetry and drone amateurs and professionals,
- user-friendly & no professional software knowledge required
- Up to 60 % faster & saving cost up to 75 % compared to existing methods,
- No software or key required,
- Shared it online and/or are downloaded for off-line use in any 3D software.

MARKET POTENTIAL

Consumer/End User

- Citizens, professional engineers (small scale)
- Research & education entities, city, mining, and transportation (large scale)

Industry

Government and private sectors, financial Service & Insurance (BFSI), Health, Retail & E-Commerce, Manufacturing, Government & Education, IT & Telecom, construction, safety & emergency, real estates, agriculture & others.

Project Leader : **Prof. Dato' Dr. Shattri Mansor**
Dept./Faculty : **GISRC, Department of Civil Engineering, Faculty of Engineering**
Email : **shattri@upm.edu.my**
Phone : **019-2244333**
Expertise : **Remote Sensing, GIS, Blockchain**

www.**sciencepark**.upm.edu.my