



Braith McClure General Manager Surveying Mesh or Model for Construction



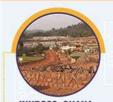
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KINROSS, GHANA
Aerial survey of gold mine near Kumasi - for digital mapping data used for future planning of mine sites and volume calculations of stockpiles.



LESOTHO, AFRICA
Topographical surveys and as-built
drawings of school sites.



ESKOM MAJUBA POWER STATION, SOUTH AFRICA Measuring and checking alignment of newly built silo platforms; surveying at heights of 75 metres and over.



DURBAN TO JOHANNESBURG, SOUTH AFRICA New Multi-Purpose Pipeline, Topographical surveys and underground detection to assist construction.





LESOTHO

INDIA
Mobile Laser Scanning survey of 2,500km of existing road corridors across 33 cities. Raw data was processed to produce a dense streetscape pointcloud to assist construction of proposed Optical Fibre Cable routes.



KUALA LUMPUR, MALAYSIA 3D Mesh Model from Unmanned Aerial Vehicle (UAV) Survey for MRT train station upgrade designs.



NEW ZEALAND

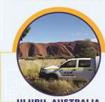
Mobile Laser Scanning Survey of entire 5,500km road network for Singapore Smart Nation Initiative.



PAPUA NEW GUINEA
Using a combination of physical field surveys,
Airborne LiDAR and high resolution satellite
RaDAR data, AAM compiled a comprehensive
database of aeronautical information for
Papua New Guinea's 29 major airports.



WELLINGTON AIRPORT,
NEW ZEALAND
Developed a cloud-based, web
mapping platform to enable maintenance
work processes, improving safety and
reducing operational risks.



ULURU, AUSTRALIA
Survey of boundary definitions
for Mutitjulu, Community
traditional land owners.



MELBOURNE, AUSTRALIA Scanning and 3D Modelling of Flinders Street Station for rejuvenation project.

CONSTRUCTION – UNCHANGED SINCE... A



Spatial appreciation permeating all facets of life



TESTING FIXED LOCATION CAMERAS AMAIN



TLS in brown field construction is common and produces great value.

BIM – digital design, but limited uptake, yet, of scanning during construction.

What about remote imagery instead. The Value Proposition is there.

6 Cameras – remotely controlled, fixed focal length, static locations.

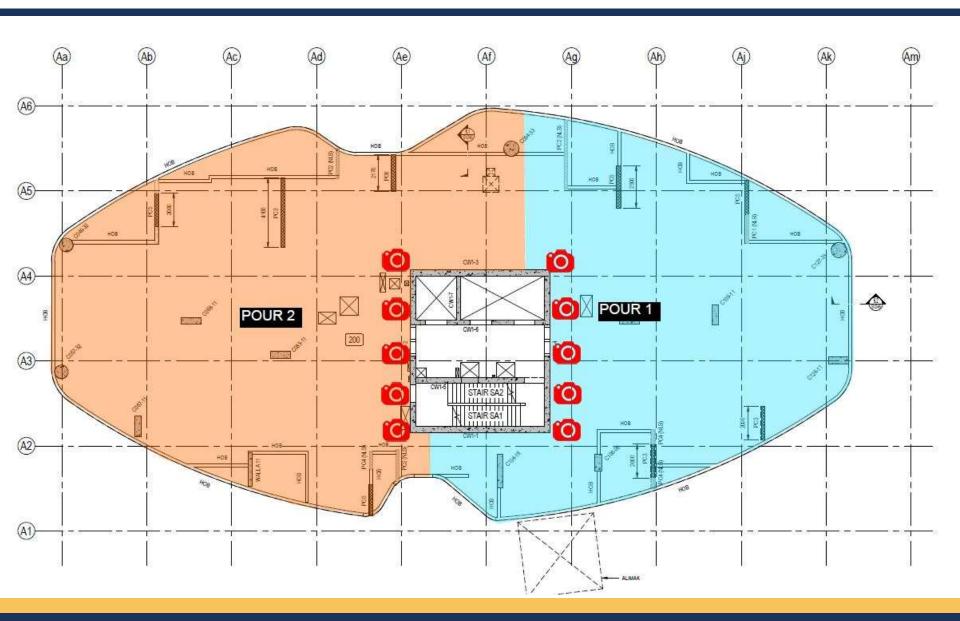




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NOT IDEAL GEOMETRY

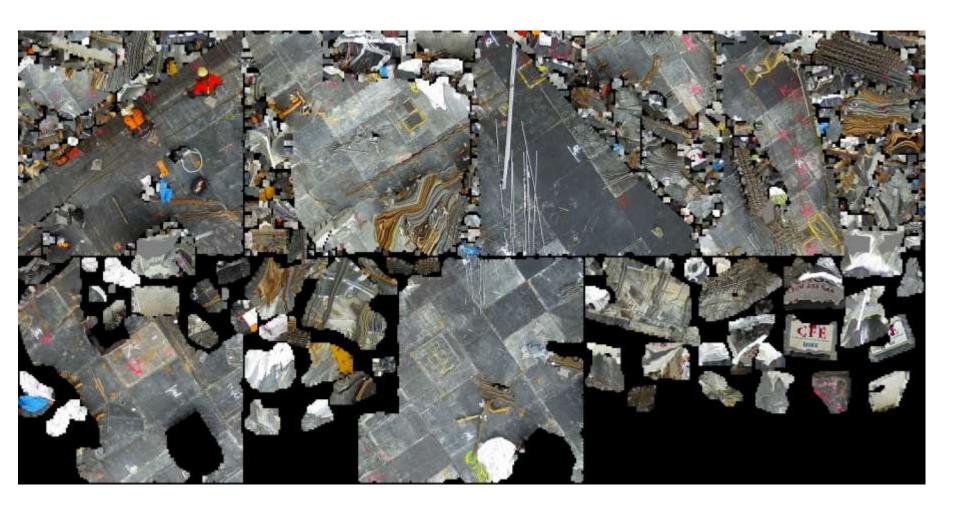




FIRST PASS AT MESHES



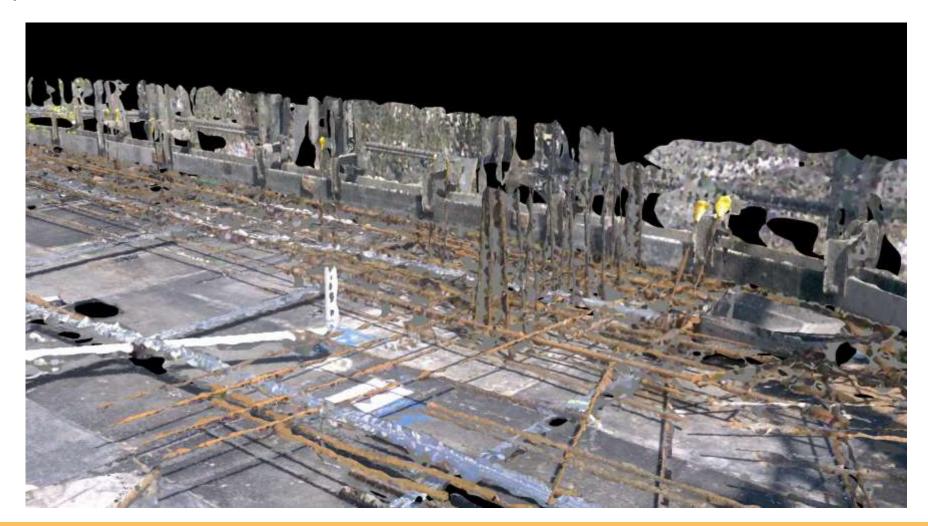
Poor Geometry for mesh creation



MESH PRODUCT



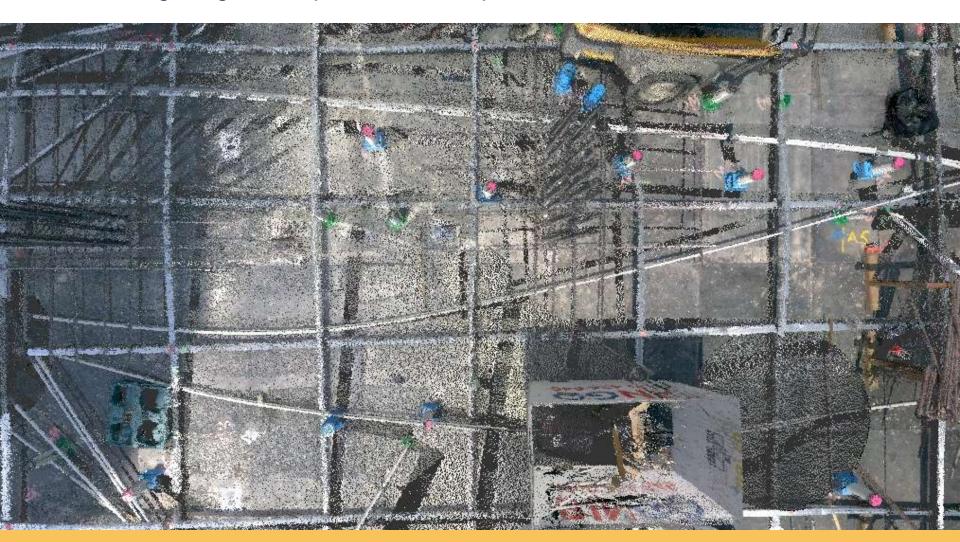
Mesh output – not sufficient parallax from imagery solution. Added DSLR. Added point cloud data.



SCAN DATA

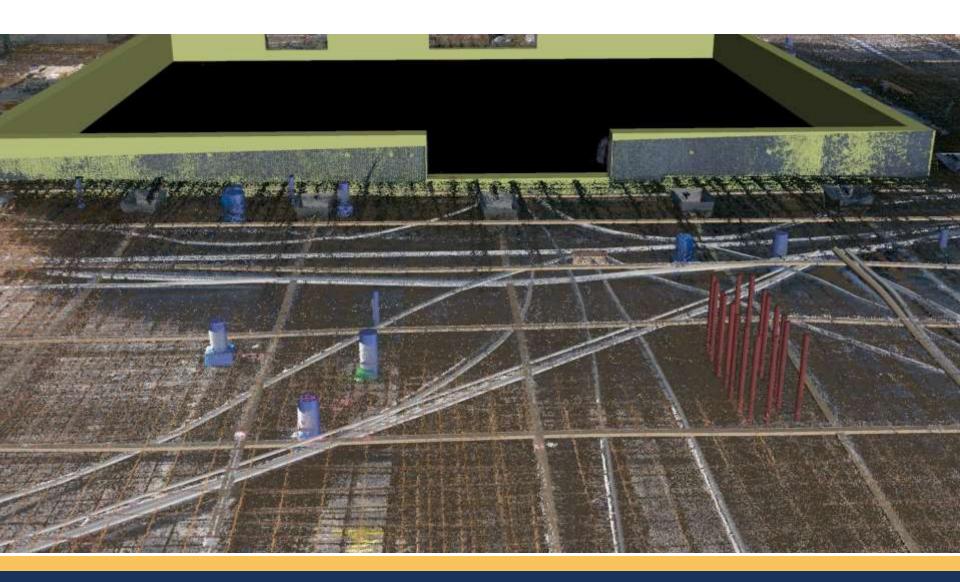


Dense coverage, high detail point cloud. Requires site attendance. Needs colour.



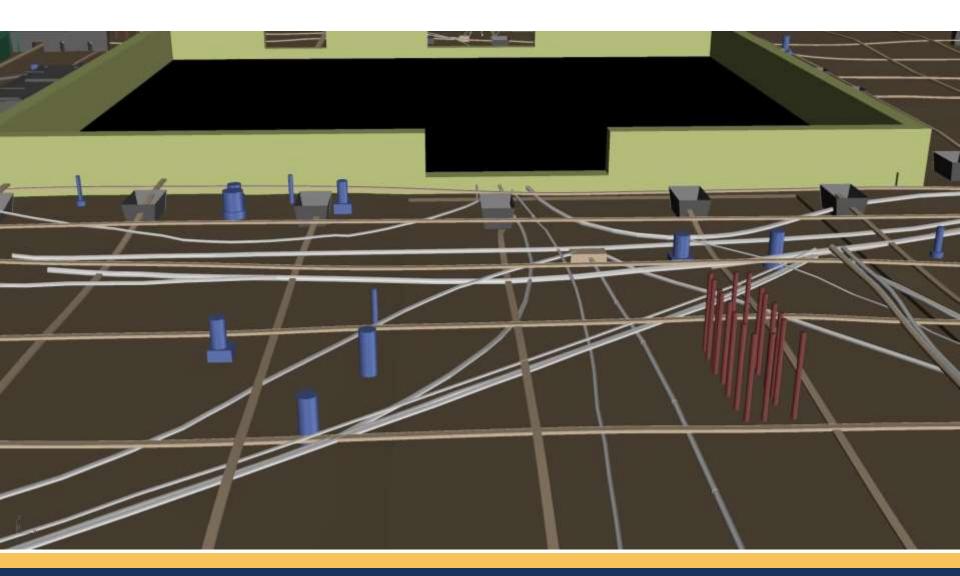
CLOUD AND MODELLED ELEMENTS AM





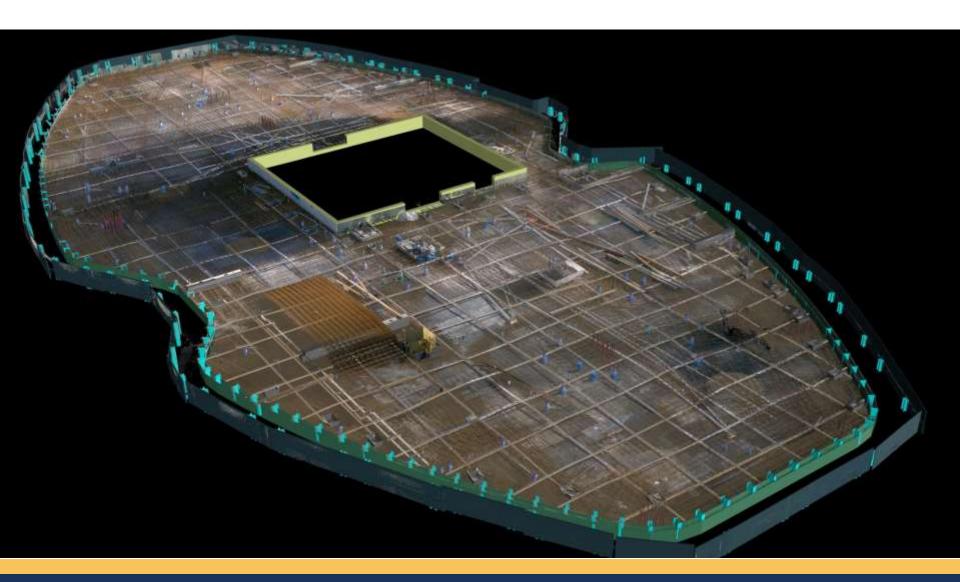
MODELLED ELEMENTS





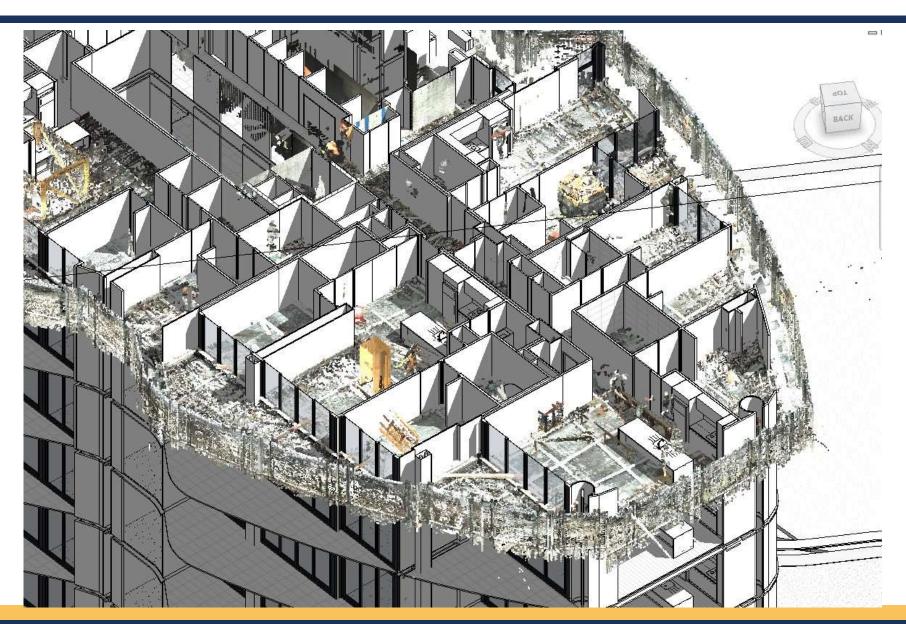
MODELLED ELEMENTS





CONCLUSION





CONCLUSION



Mesh from imagery

- Camera locations need to be mobile. Need a baseline, not sufficient parallax with static locations.
- Semiautomatic production. 1 hour to mesh, same day delivery.
- Initial set up effort, but little ongoing time on site required.
- Value in hosting, serving, interpreting the data.

Scanning

- Attendance on site for each effort.
- Fast data collection (<30 mins per pour).
- Manual data reduction, labour intensive modelling.
- Risk of missing critical features during modelling however cloud available.
- Model output more acceptable at present

Hybrid will be tested. UAV – desirable and used in other countries.

SPIDERCAM is an option. Some success with camera mounted to crane jib.

FLINDERS STREET



