

Street Factory™ 3D Urban Database

Airbus DS – GISTDA Roadshow

10 March 2015, Bangkok, Thailand

StreetFactory™

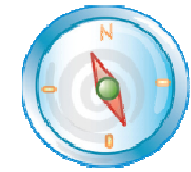
- Complete solution for 3D photogrammetric mapping
- Software / Hardware
- Parallel license for 8/16/24 GPUs
- Support of multiple cameras
- Open source solution SDK
- Professional services
- Training and production assistance
- 3 years maintenance
- Optional processing service in Europe
- Fast manufacturing of 3DMosaic™
- Along with additional products
- 3h / km² (8GPU, 60% overlap, 8cm)
- Proven solution already in use in governmental mapping institute



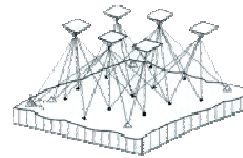
Import / Export



Oblique Airborne Camera



GPS / IMU Management



Multi-view Geometry



3D Digital City



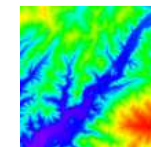
3D Viewer



Color Management



Automation Workflow



3D Measurements



Interfacing

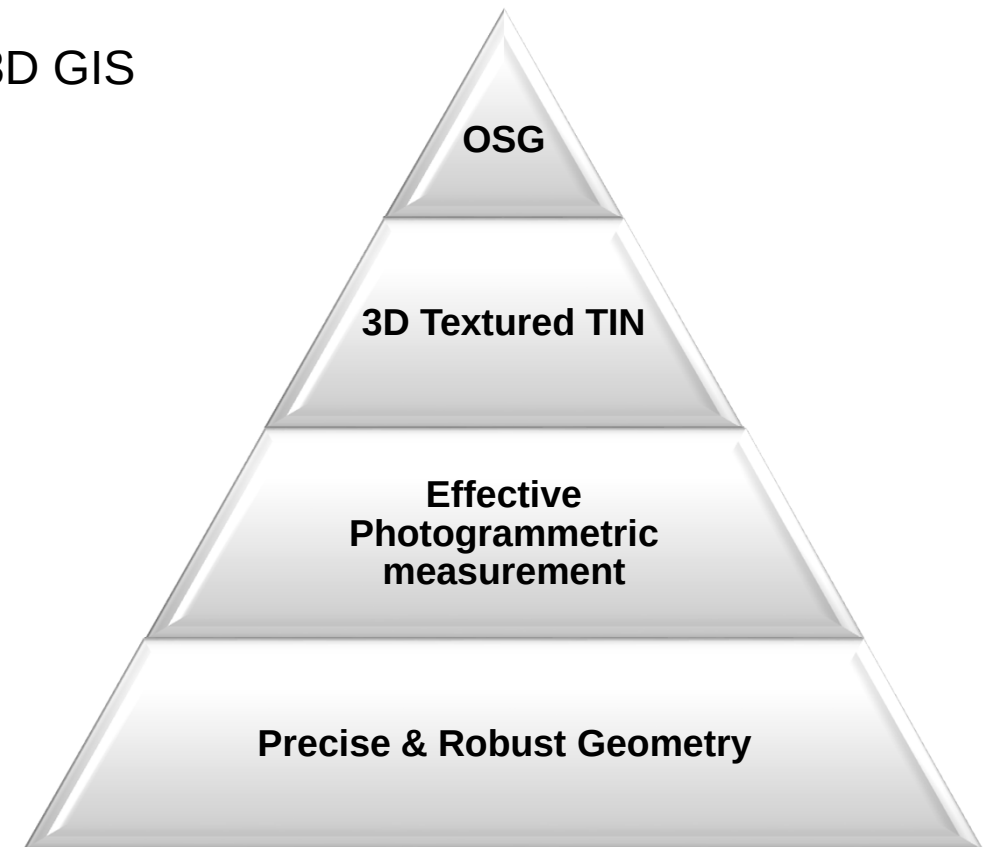


AIRBUS
DEFENCE & SPACE

Main features

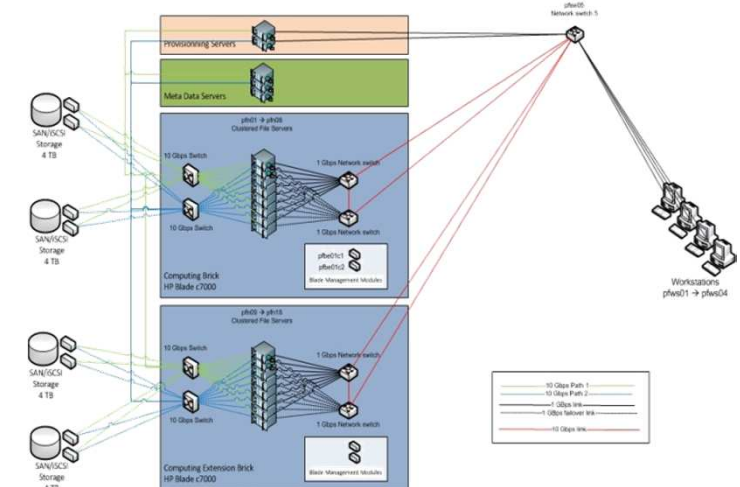


- Advanced camera geometric model
- Photogrammetric 3D bundle adjustment & measurement
- Export of stereoscopic models for DPW and 3D GIS
- Export for editing in 3D authoring software
- 3DMosaic™ automated generation
- Classic mapping products production*
- OpenSceneGraph™ SDK solution
- Workflow & data management system
- Viewer with support of GIS format

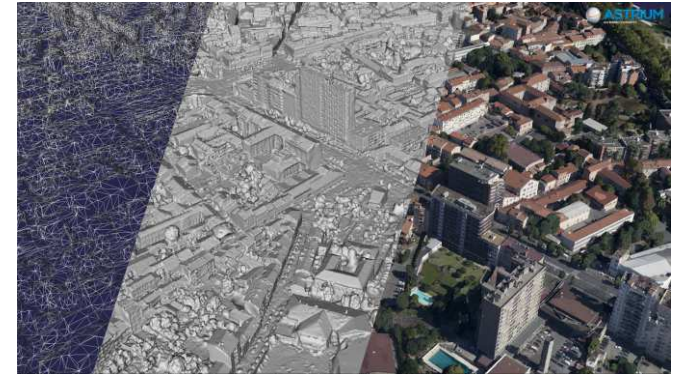
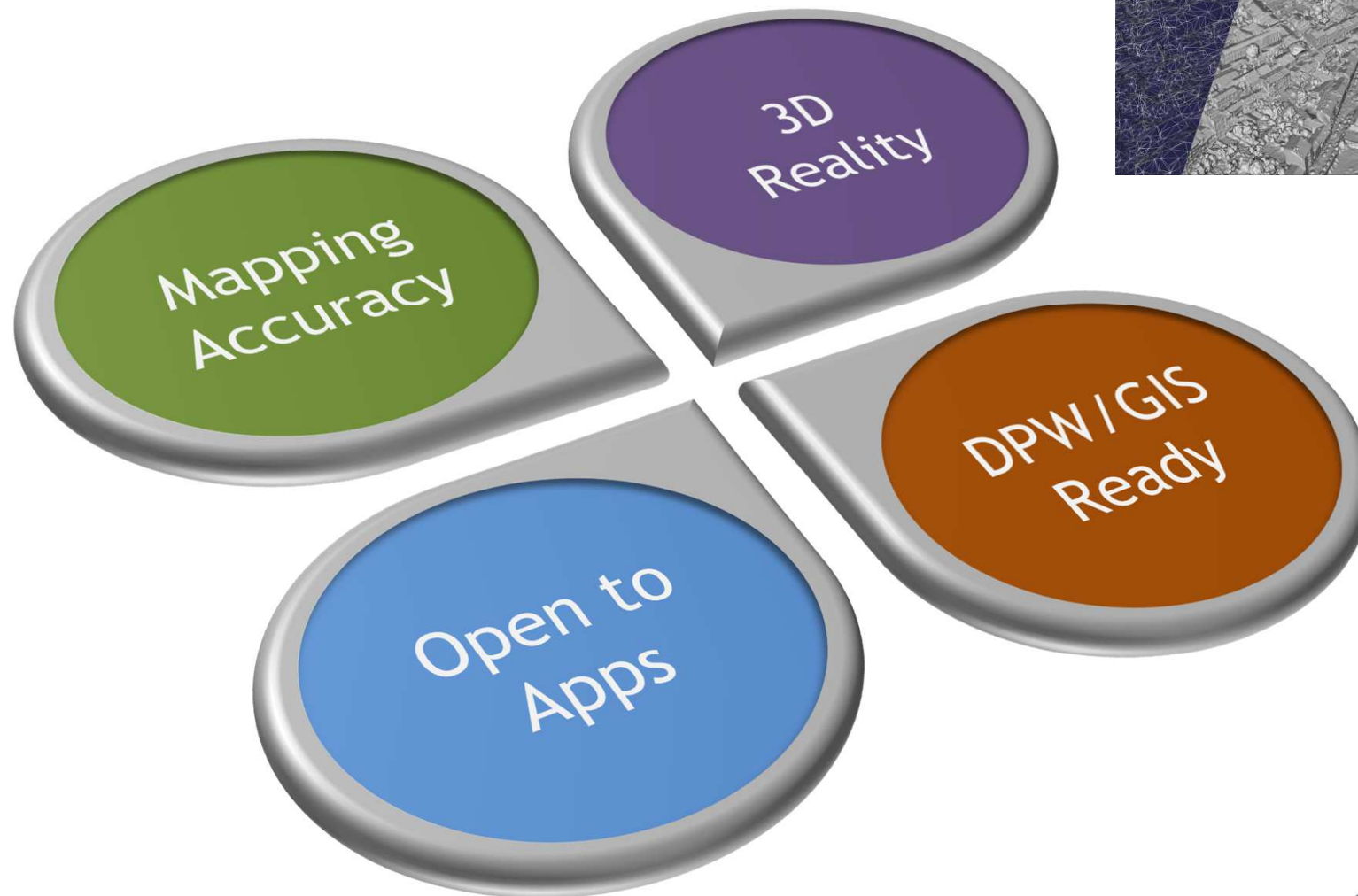


Typical infrastructure

- Cluster system
- Based on parallel computing GPU / CPU blade servers
- Direct access to disk storage
- Easy to upgrade
- For more storage capabilities
- For higher speed and productivity
- No limit on projects, images, users...
- Hardware resource management done through StreetFactory™



Major Features



Versatility

Satellite



UAV



Sweeping



Oblique



Ground & Oblique

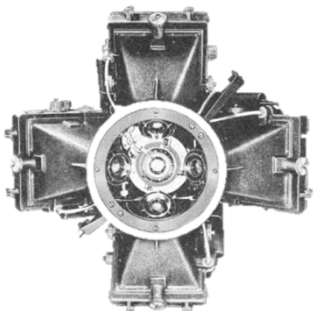


Any sensors

- Any multiple camera platforms
- Pictometry
- TrackAir Midas
- IGI-DigiCam
- GeoVision SWDC-5
- Leica RCD30 Oblique
- TopRS Oblique
- Vexcel Oblique...
- Already processed more than a dozen different systems



TRACK'AIR
Aerial Survey Systems

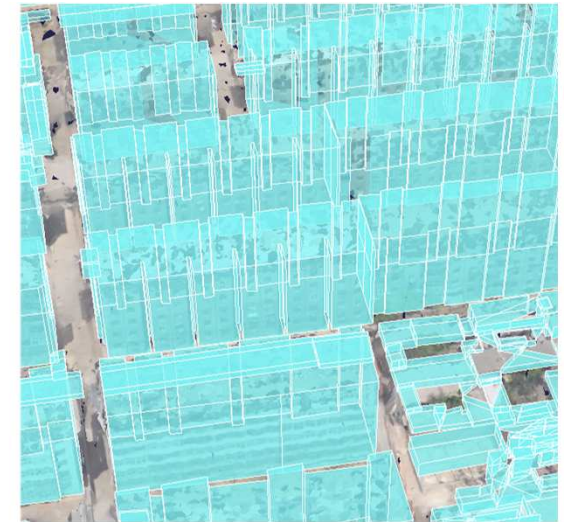


LOD-3 database

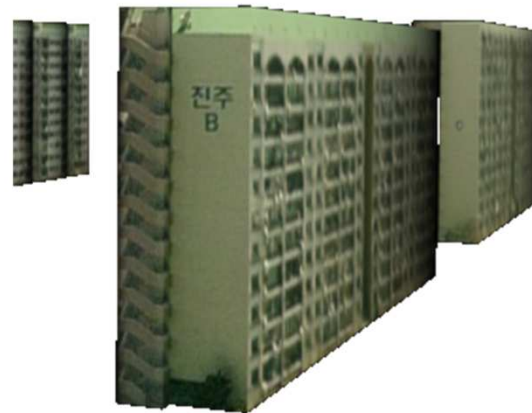
- LOD-0
- Classic 2D mapping
- LOD-1
- Block building information
- Average height accuracy
- LOD-2
- Block building with complex roof top structure
- Texture for object (generic or real)
- LOD-3
- Information for all urban features
- No generalization
- Real accurate 3D structure
- Real texture information
- LOD-4
- Indoor mapping



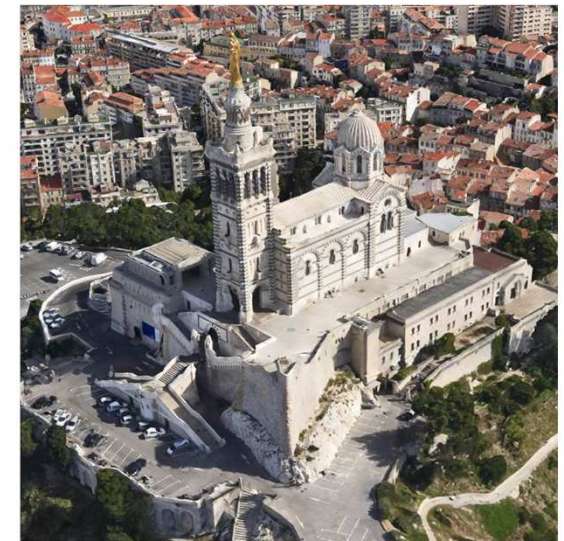
LOD-0



LOD-1

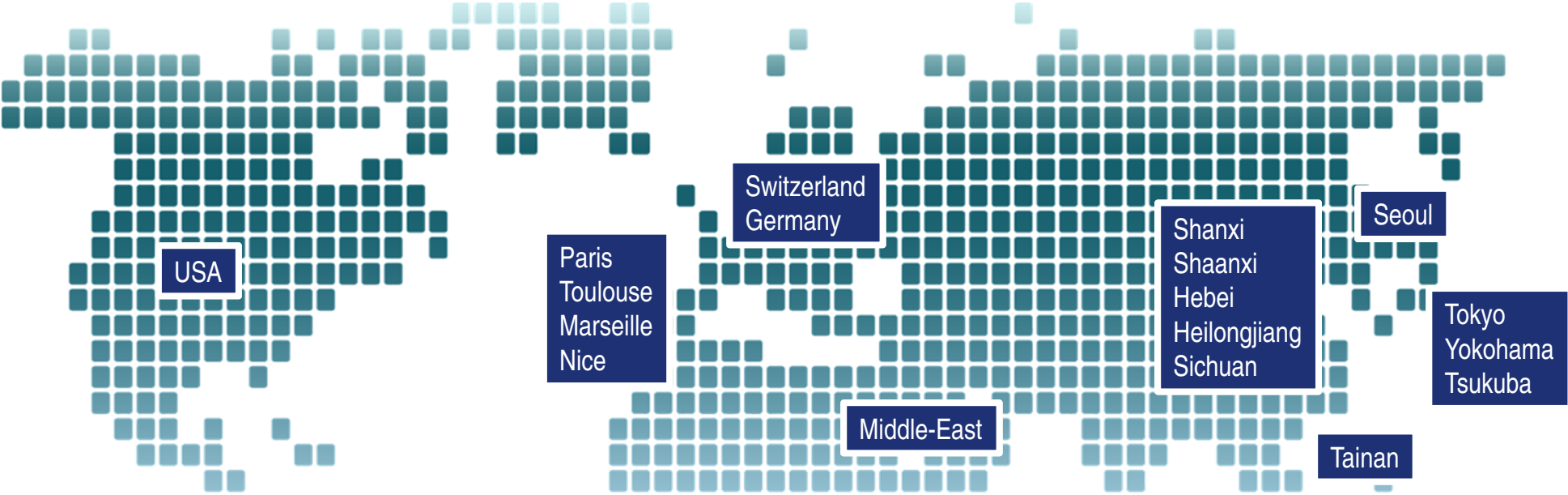


LOD-2



LOD-3

Validated worldwide

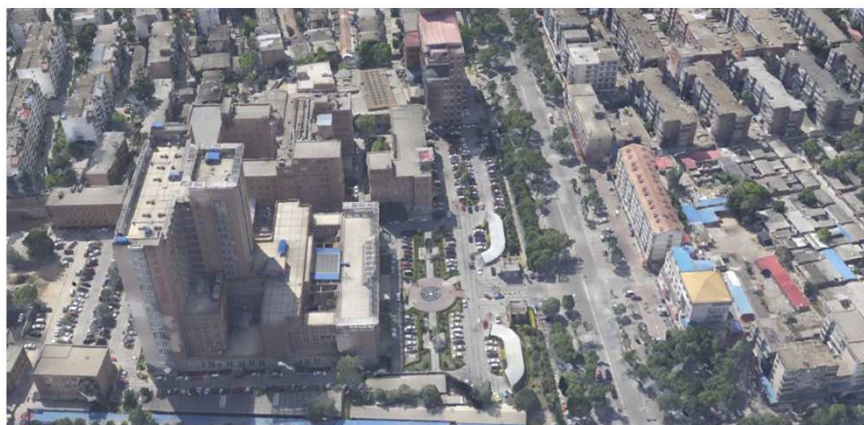
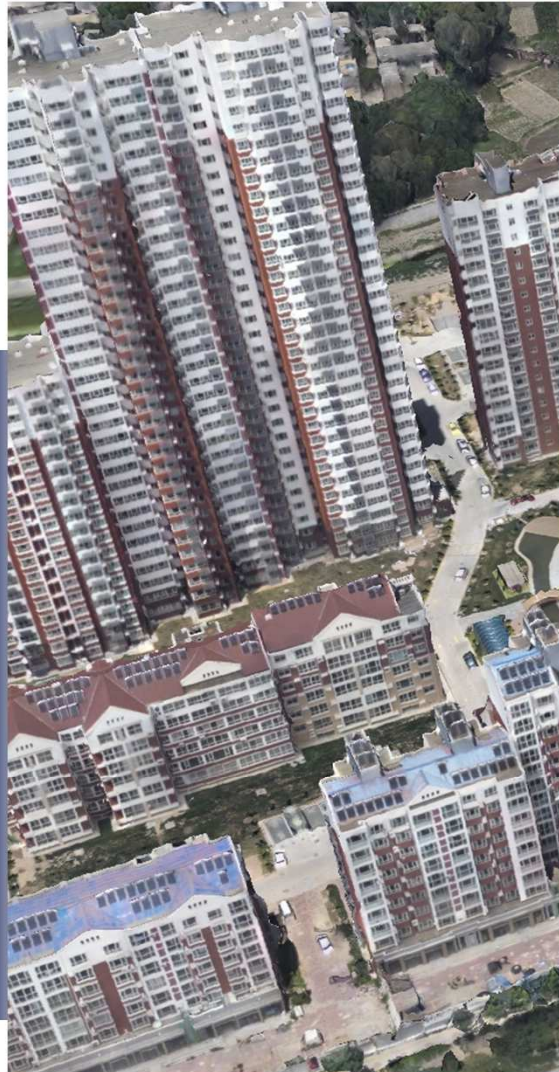


Baoding City (China)

35.000 SWDC Images

GSD 8cm / 11cm

Courtesy Hebei Mapping
Institute



Tokyo (Japan)

Part around Shibuya station

GSD 8cm / 14cm

Courtesy Pasco

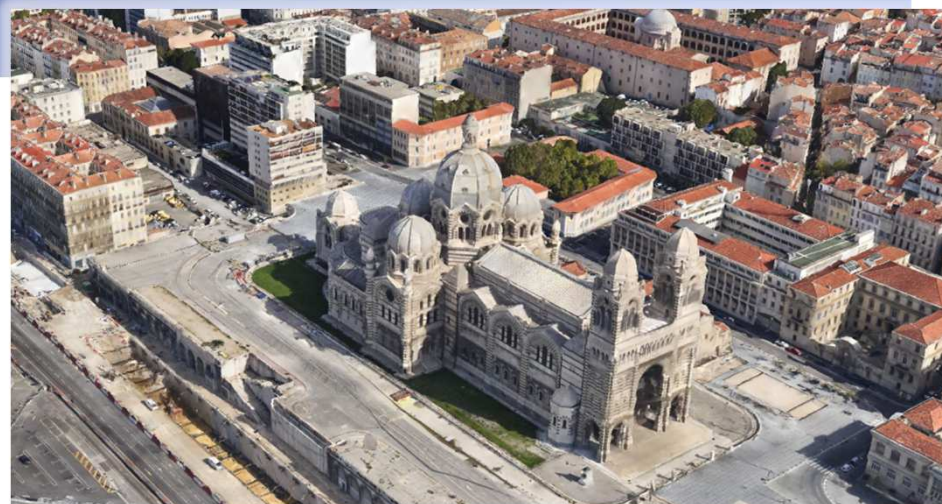


Marseille (France)

Up to 6600 images for 28km²

GSD 10cm / 15cm

TrackAir Midas system

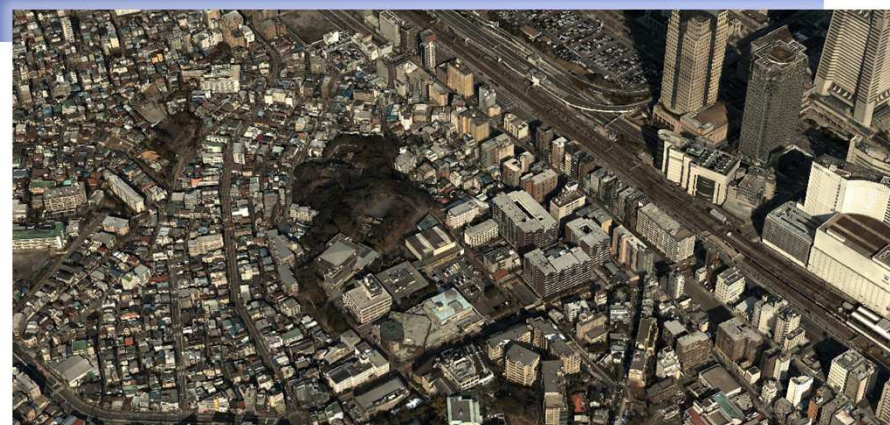
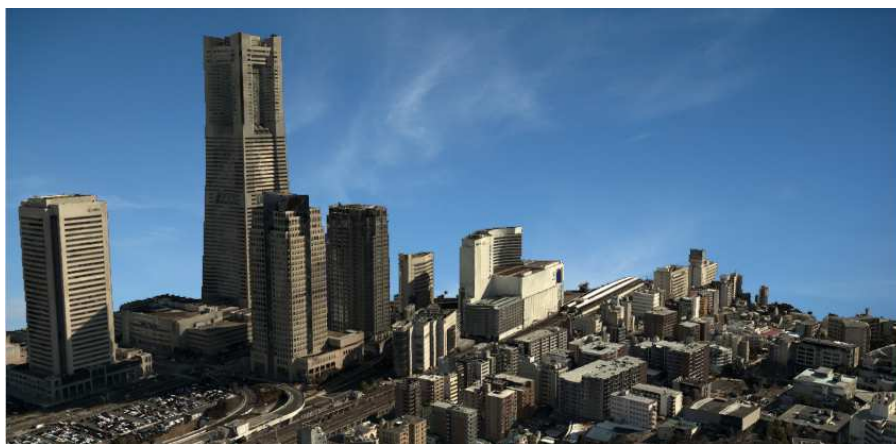
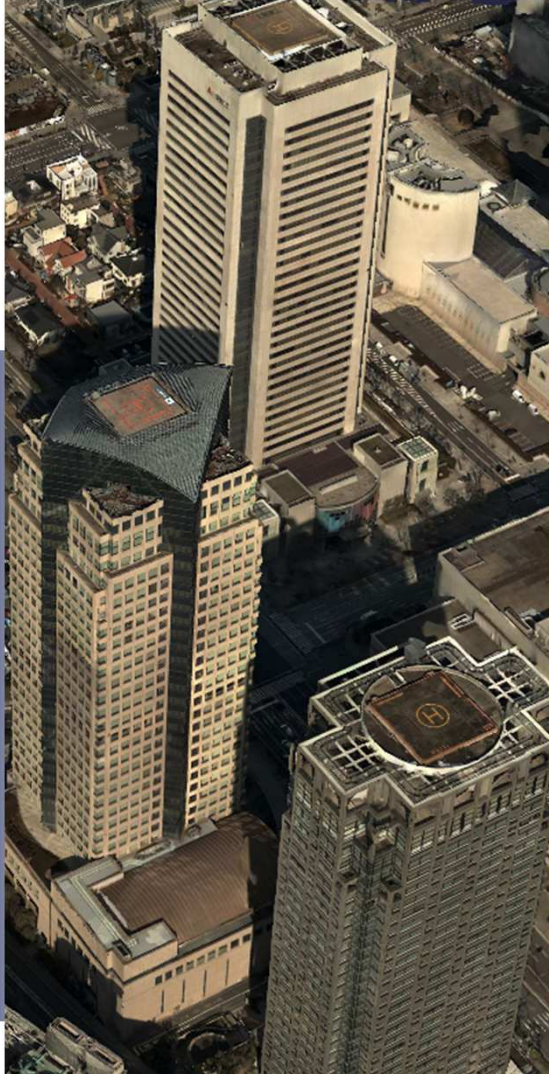


Yokohama (Japan)

Up to 10.000 images

GSD 8cm / 14cm

Courtesy Pasco

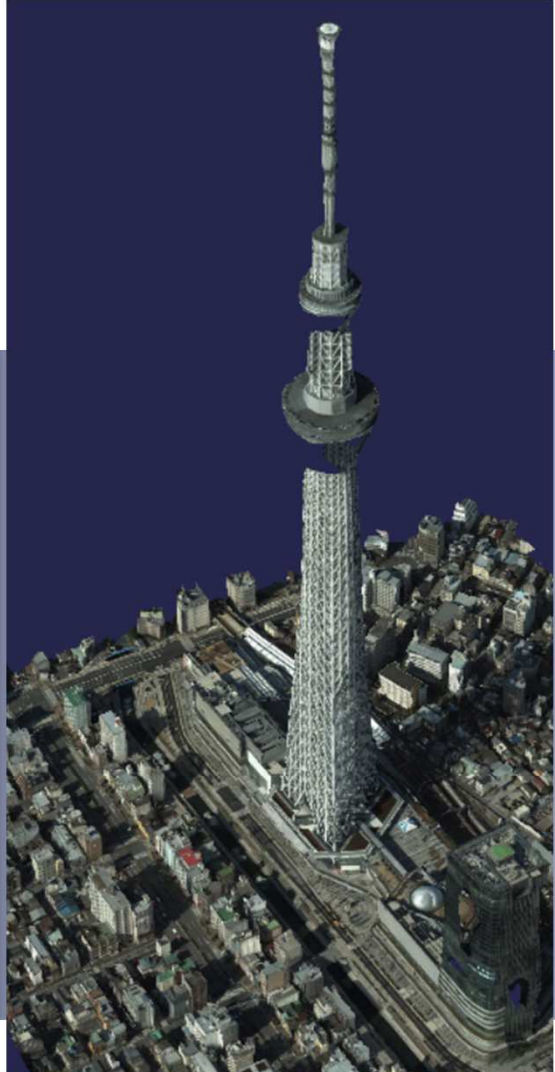


Sky Tree (Japan)

Computed from A3 sensor

GSD 20cm / 30cm

Courtesy Pasco Corporation



R & D

Pleaides 3D product from tri-stereo data (2013)

Professional Applications

- Mapping / Asset Management
- High accurate database
- Direct 3D measurement
- Realistic free point of view
- Consistent with any mapping data (cadaster, mosaic...)
- Extension of core maps (4D)
- CAD / GIS / DPW ready
- Usable in any kind of applications
 - Security
 - Entertainment
 - Simulation...
- Soon to be standardized



3D Geospatial Platform



City/Urban Management



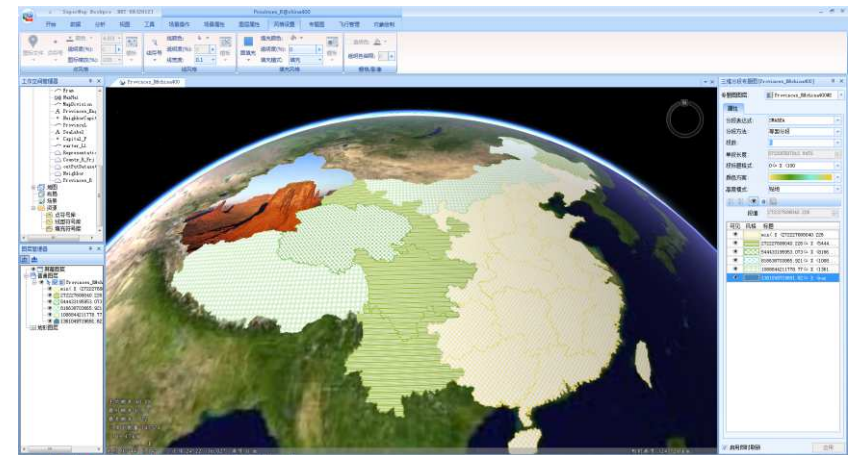
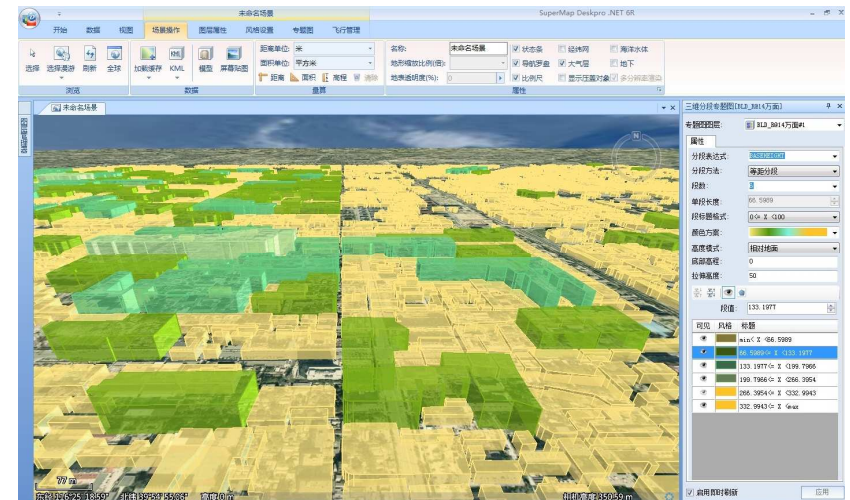
Security



Simulation

3D GIS Platforms

- Supporting 3rd party GIS solutions
- SuperMap 3D GIS
- AutoNavi AnGeo
- MyVR
- SkyLine
- ESRI CityEngine (under validation)...
- SuperMap 3D GIS allowing
- Complete 2D / 3D GIS functions 3D GIS
- GIS Database management of 3D
- 3D Symbol and themes
- 3D Spatial Analysis
- Possible to store 3DMosaic™ in GIS database (SuperMap...)



SuperMap

my:vr

Skyline

AutoNavi



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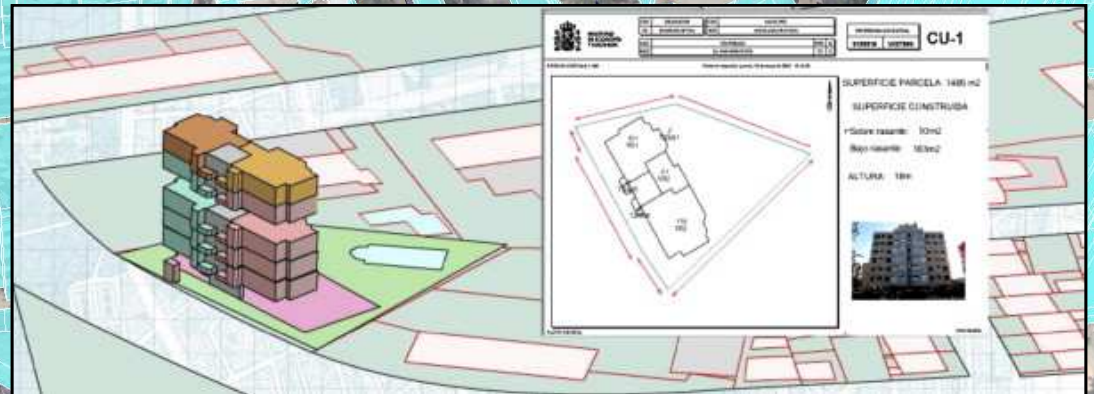
3DMosaic™ / GIS – CAD Integration

Extension of 2D GIS with 3D

3DMosaic™ embedding GIS

3DPad™ for CAD connectivity

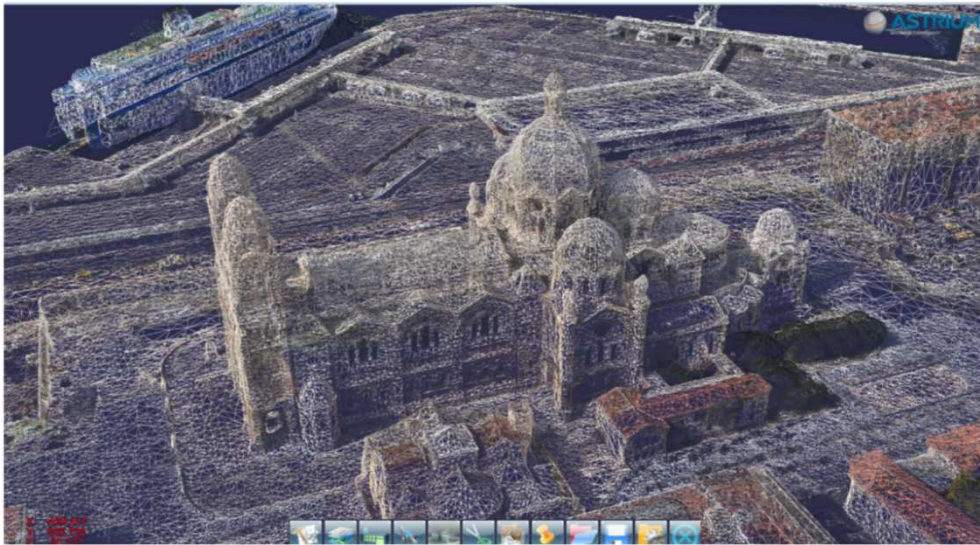
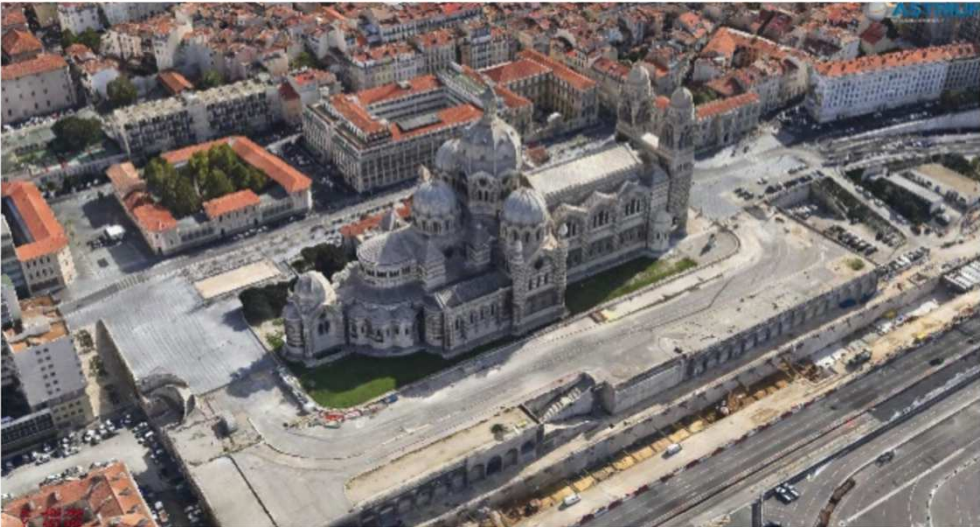
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4 PLANE_NAME	New_Shapel



X: 652323.489
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Z: 779.591

Site analysis in 3D

GIS / CAD update



Imagery ©2012 Aerodata International Surveys, DigitalGlobe, GeoEye, IGN-France, Map data ©2012 Google

Security Applications

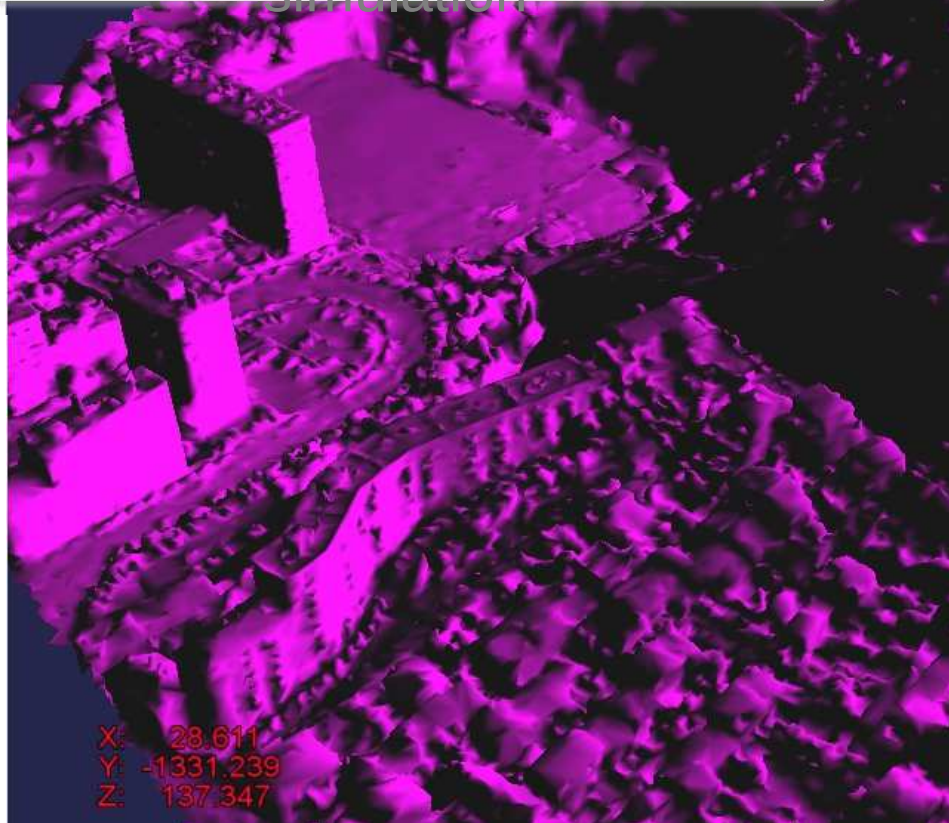


Security / Defense

Line of sight analysis

Area of sight / Area impact

Target / Urban warfare
simulation



Risk Management

PREPARE

RESPONSE

RECOVERY

Plan & Simulation

Drafting security plan
Risk scenarii simulation



Risk Management

PREPARE

RESPONSE

RECOVERY



Rapid Mapping & Response mgt

Quick impact evaluation

Access to 3D mapping for all actors



Risk Management

PREPARE

RESPONSE

RECOVERY



Reconstruction management

Full impact analysis
Reconstruction support
Support for new security rules

Thank you!

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