

OMApp – Cloud Application for Automatic Image Mosaicking and Georeferencing

FAIR implementation for NI4OS-Europe
service providers

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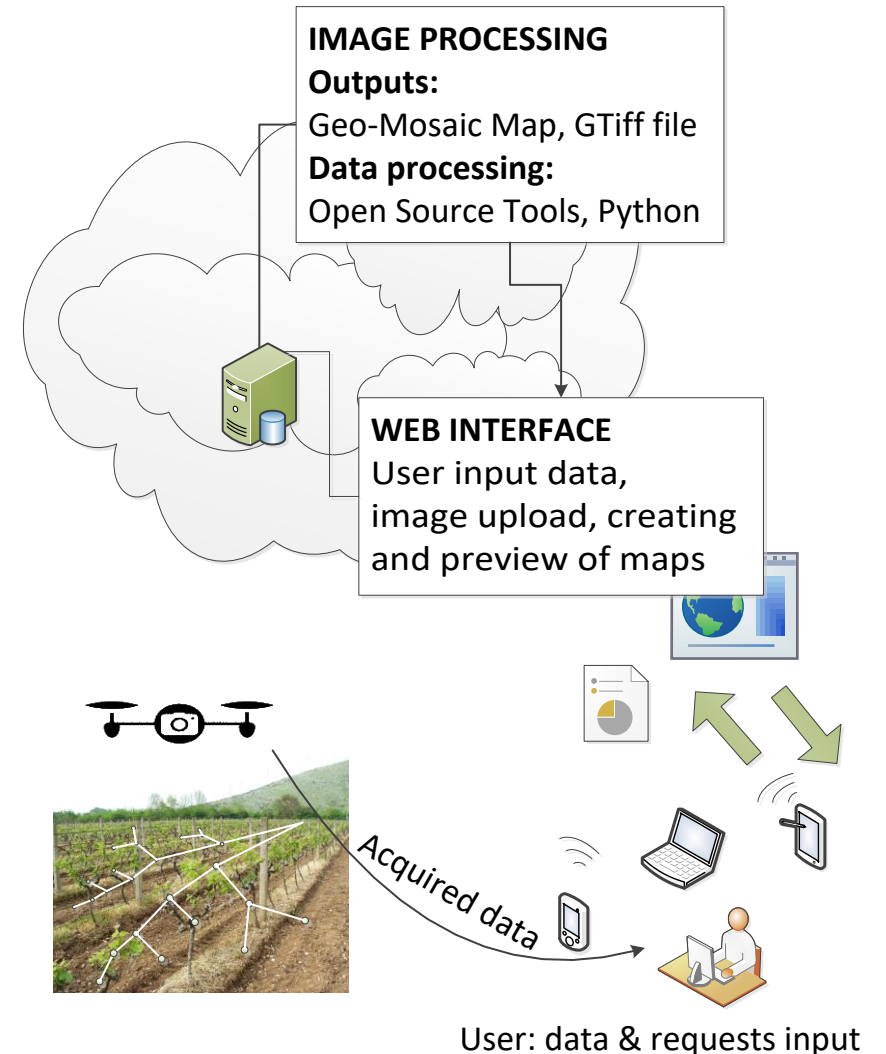


OMApp – Open Mapping Application

- ❑ Designed for precision agriculture applications
- ❑ Cloud application for automatic mosaicking and georeferencing in aerial mapping applications
 - <http://www.omapp.ucg.ac.me/>
- ❑ Application support several users, upload a set of captured images via a web interface, begin processing and preview already created maps.
- ❑ After processing, users receive an e-mail notification.
- ❑ Combines many opensource libraries :
 - ❑ server side : OpenDroneMap, gdal libraries, python

OMApp – Open Mapping Application

- ❑ Node configuration:
 - ❑ 20MB RAM
 - ❑ 12 cores x 2.9 GHz
 - ❑ 500 GB storage
- ❑ Currently the user interface and image processing are hosted on the same machine
- ❑ Image processing projects are sent to queue
- ❑ The most demanding processing tools use multiple cores to accelerate computations



OMApp – Outputs

```
<iframe src="www.omapp.ucg.ac.me/GetPMap/e7a4d300d2362b33df658d5dd06ff5e5" height="495" width="1140" frameborder="0" style="margin-top:5px;"> </iframe>
```

Imagery:

- ❑ GeoTIFF High quality image
- ❑ Georeferenced Digital Elevation (DEM)

3D Outputs

- ❑ Textured 3D Model (OBJ, MTL)
- ❑ Point Cloud and LAS outputs for compatibility with CAD and GIS software

Compatible with open source software:

- ❑ QGIS (.GeoTIFF), CloudCompare (.las), MeshLab (.obj, .ply)

OMApp - example



DJI_0036.JPG



DJI_0037.JPG



DJI_0038.JPG



DJI_0039.JPG



DJI_0040.JPG



DJI_0041.JPG



DJI_0042.JPG



DJI_0043.JPG



DJI_0044.JPG



DJI_0045.JPG



DJI_0046.JPG



DJI_0047.JPG



DJI_0048.JPG



DJI_0049.JPG



DJI_0050.JPG



DJI_0051.JPG



DJI_0052.JPG



DJI_0053.JPG



DJI_0054.JPG



DJI_0055.JPG



DJI_0056.JPG



DJI_0057.JPG



DJI_0058.JPG



DJI_0059.JPG



DJI_0060.JPG



DJI_0061.JPG



DJI_0062.JPG



DJI_0063.JPG



DJI_0064.JPG



DJI_0065.JPG



DJI_0066.JPG



DJI_0067.JPG



DJI_0068.JPG



DJI_0069.JPG



DJI_0070.JPG



DJI_0071.JPG



DJI_0072.JPG



DJI_0073.JPG

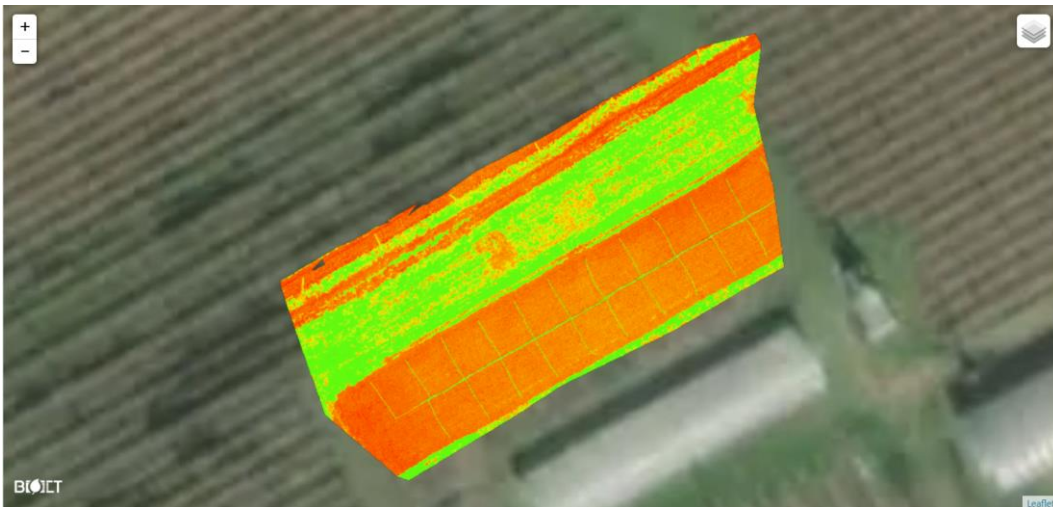
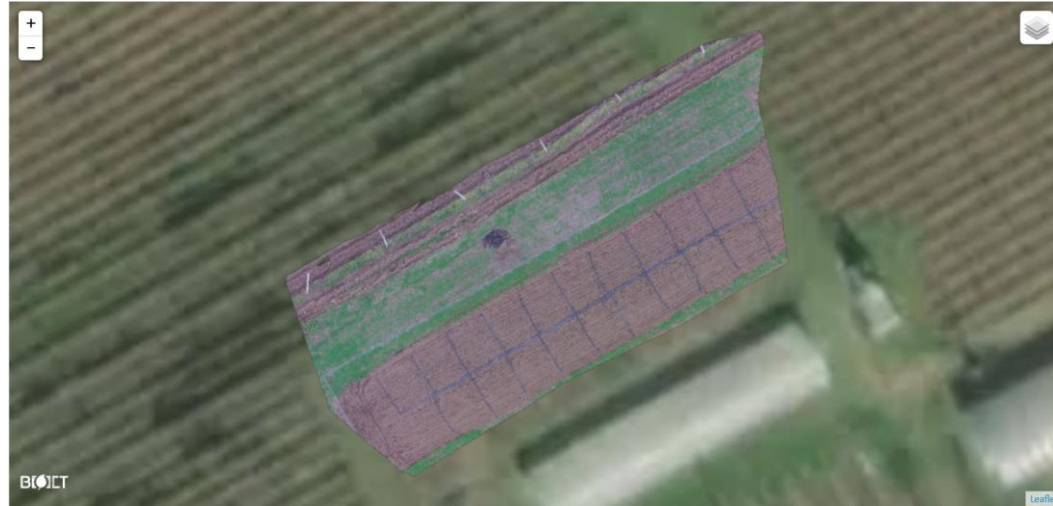


DJI_0074.JPG

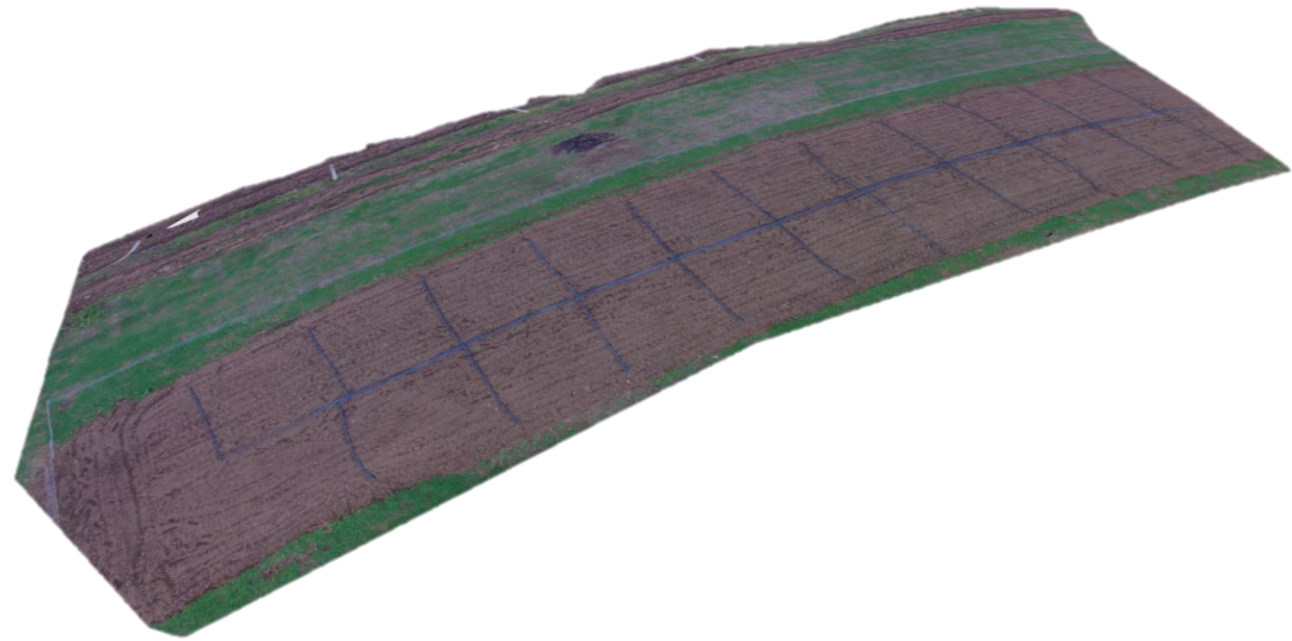


DJI_0075.JPG

OMApp - example



Podgorica, Montenegro
70 images
DJI Phantom 4, 12.6Mpx camera,
Altitude 50m



Thanks for your attention!