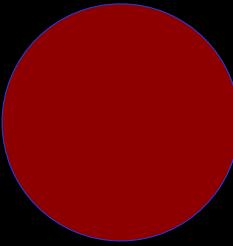


IAN FLEMING'S

Dr.  
Null

starring **OpenDroneMap**





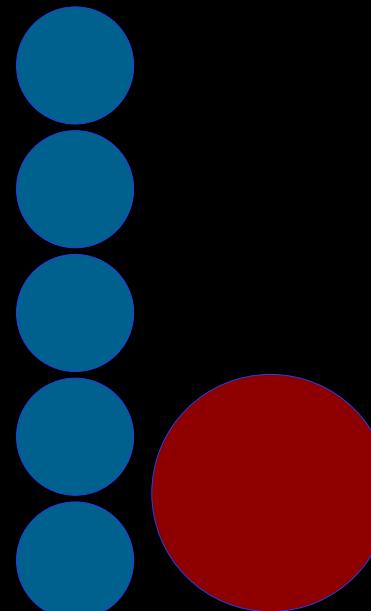
members

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DMITRY KOROLEV  
ERAGONE2007  
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FRANCOIS GOULET  
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WILDINTELLECT  
PETRASOVAA



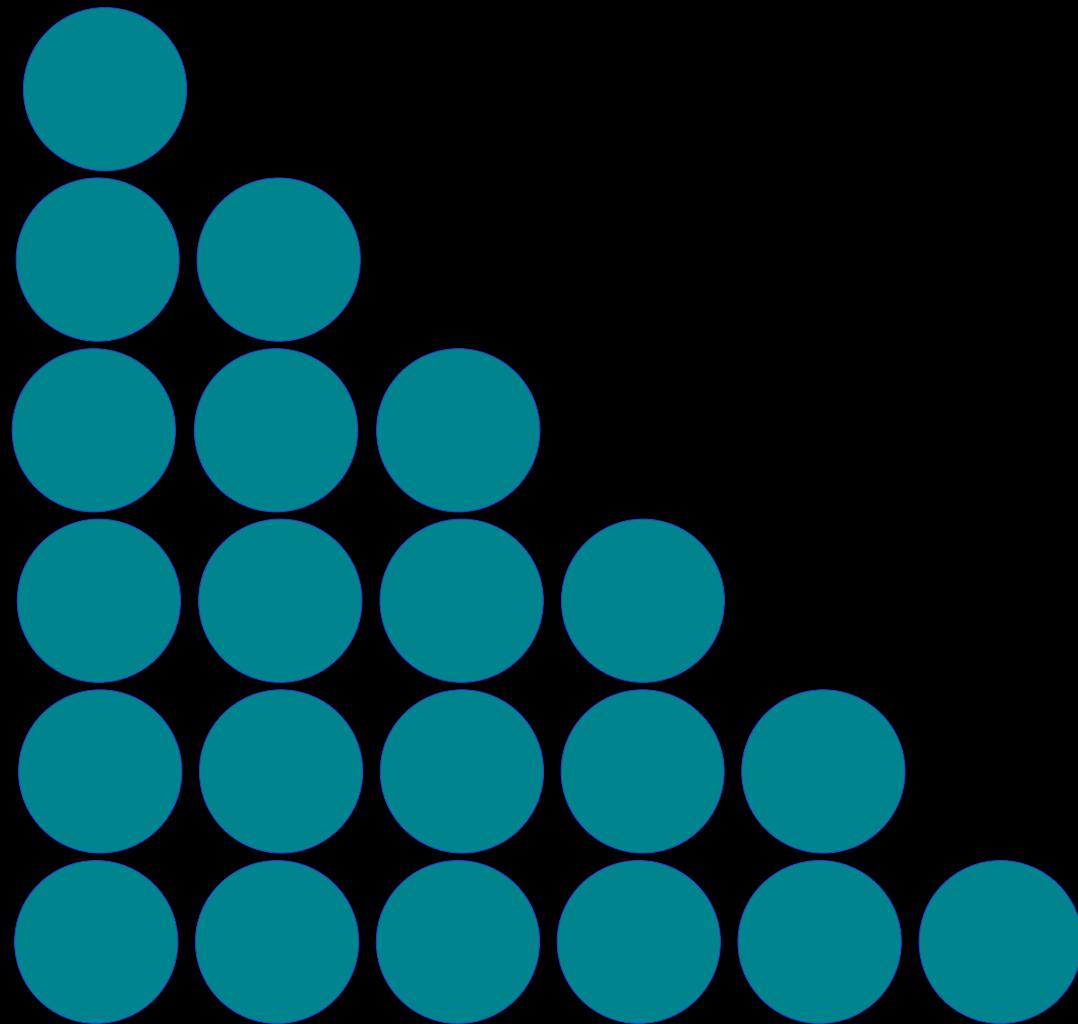
data AARONR

MICHELETOBIAS

@FREDJUDSON

MERKATO

GOWANUS LOW ALTITUDE MAPPING PROJECT



Original Project

**qwesda** bundlertools

2004

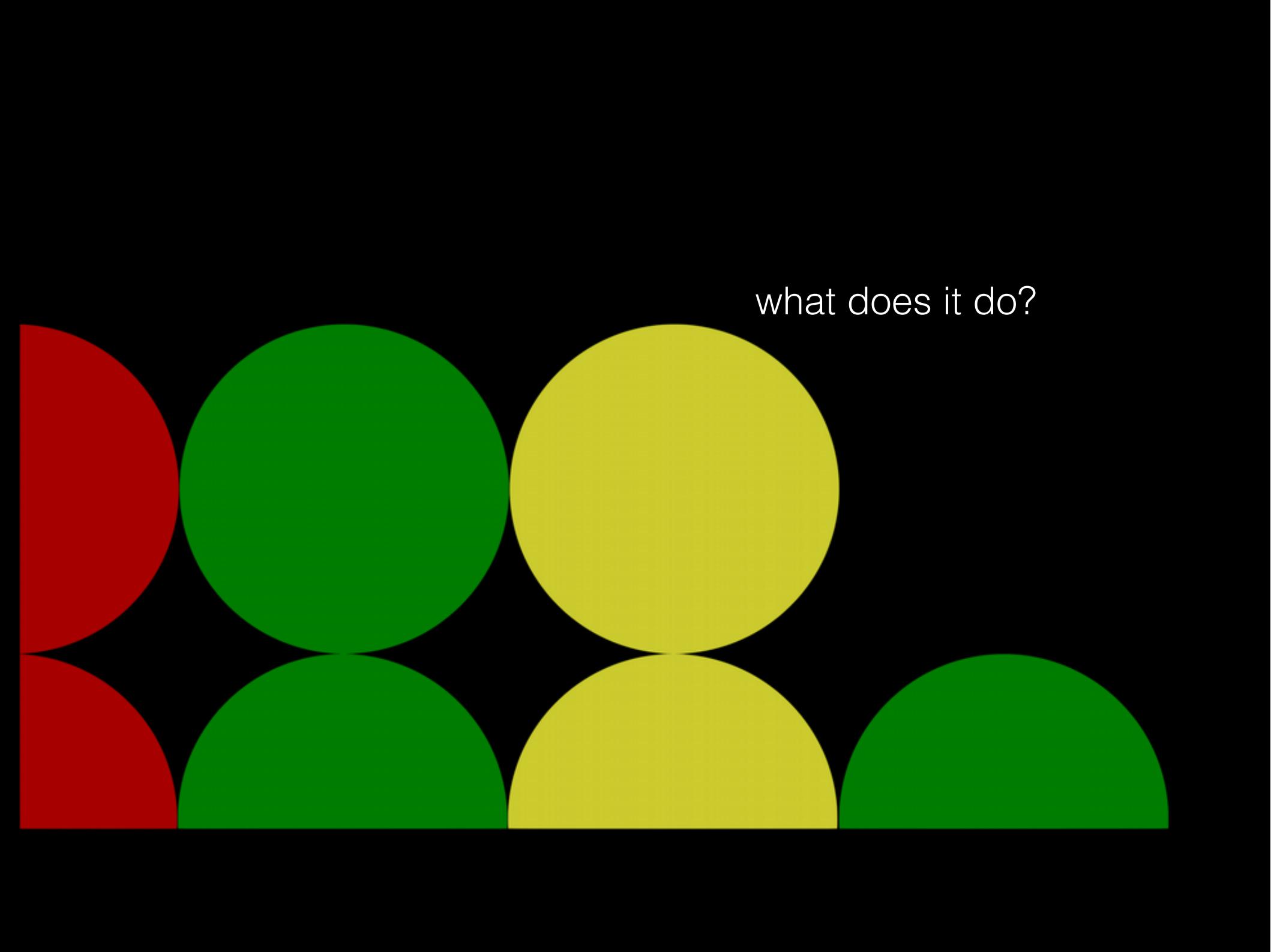


Winter, 2013

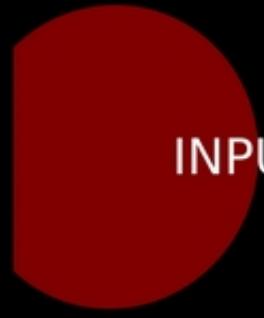
Spring, 2014

Fall, 2014

Winter, 2015



what does it do?



INPUT IMAGES



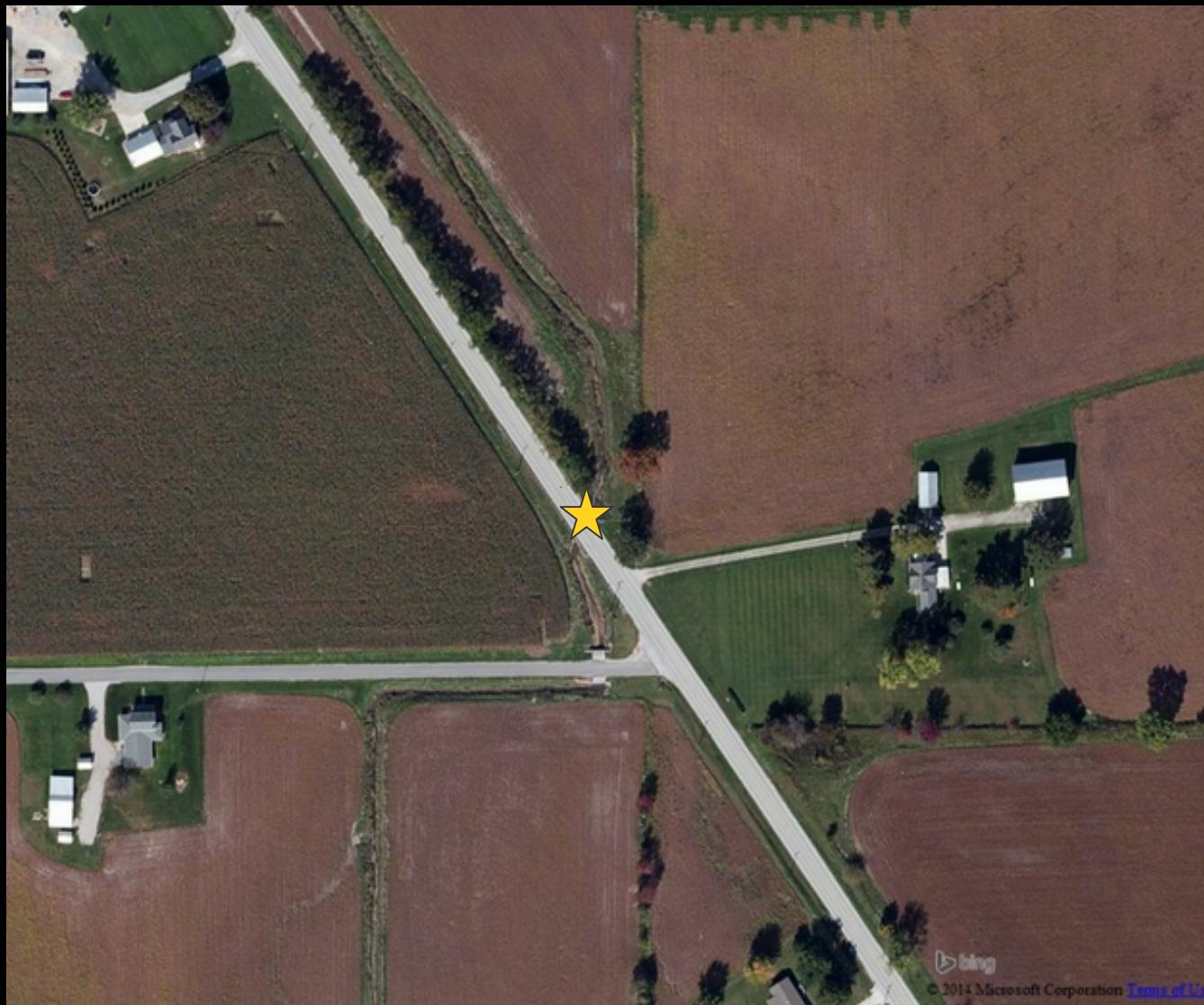
POINT CLOUD

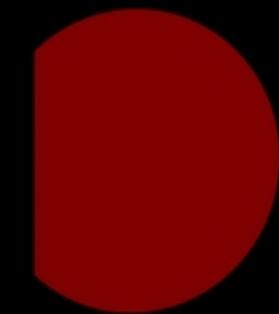
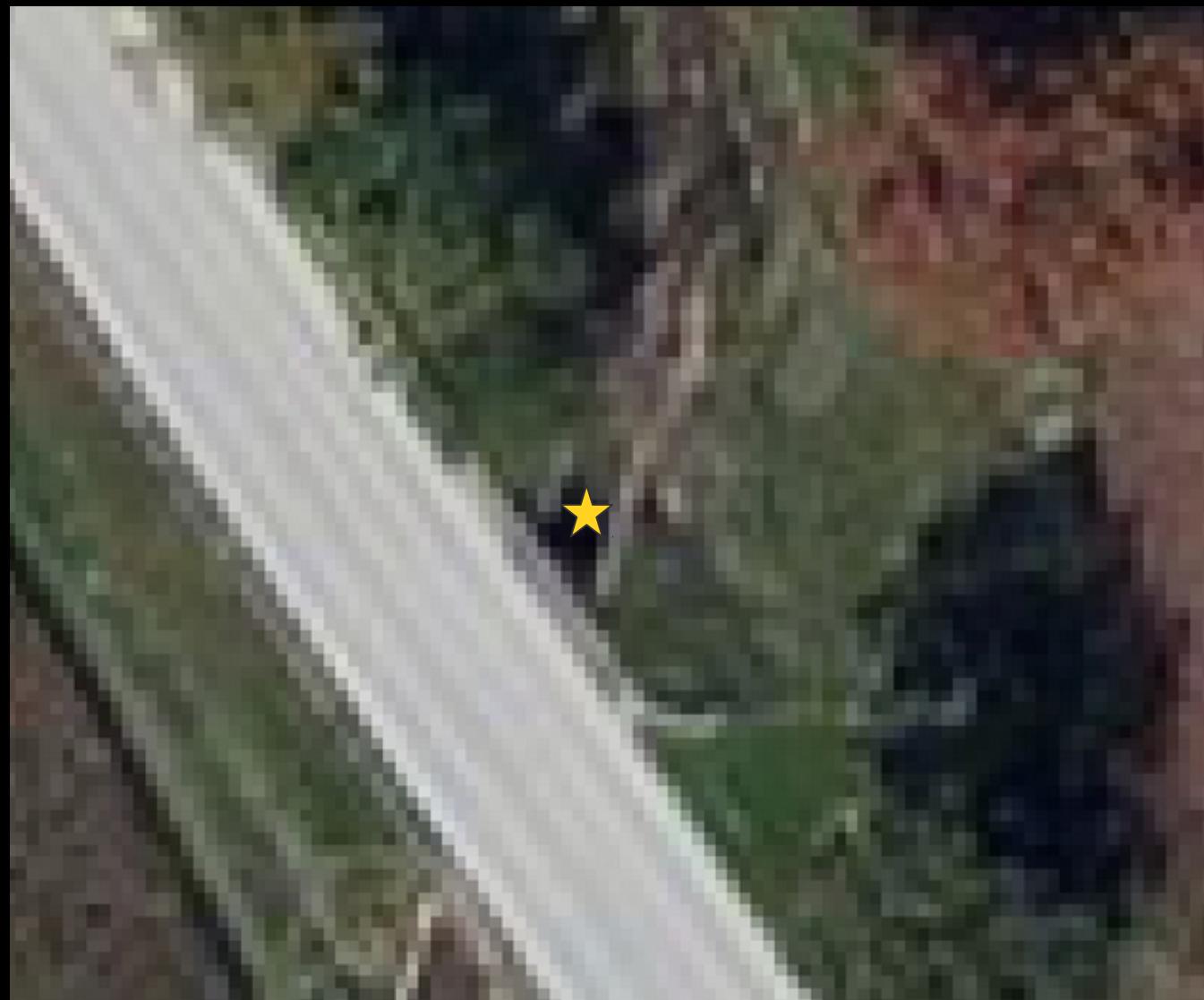
DIGITAL SURFACE MODEL

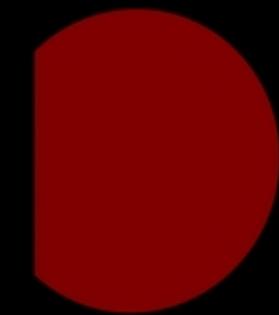
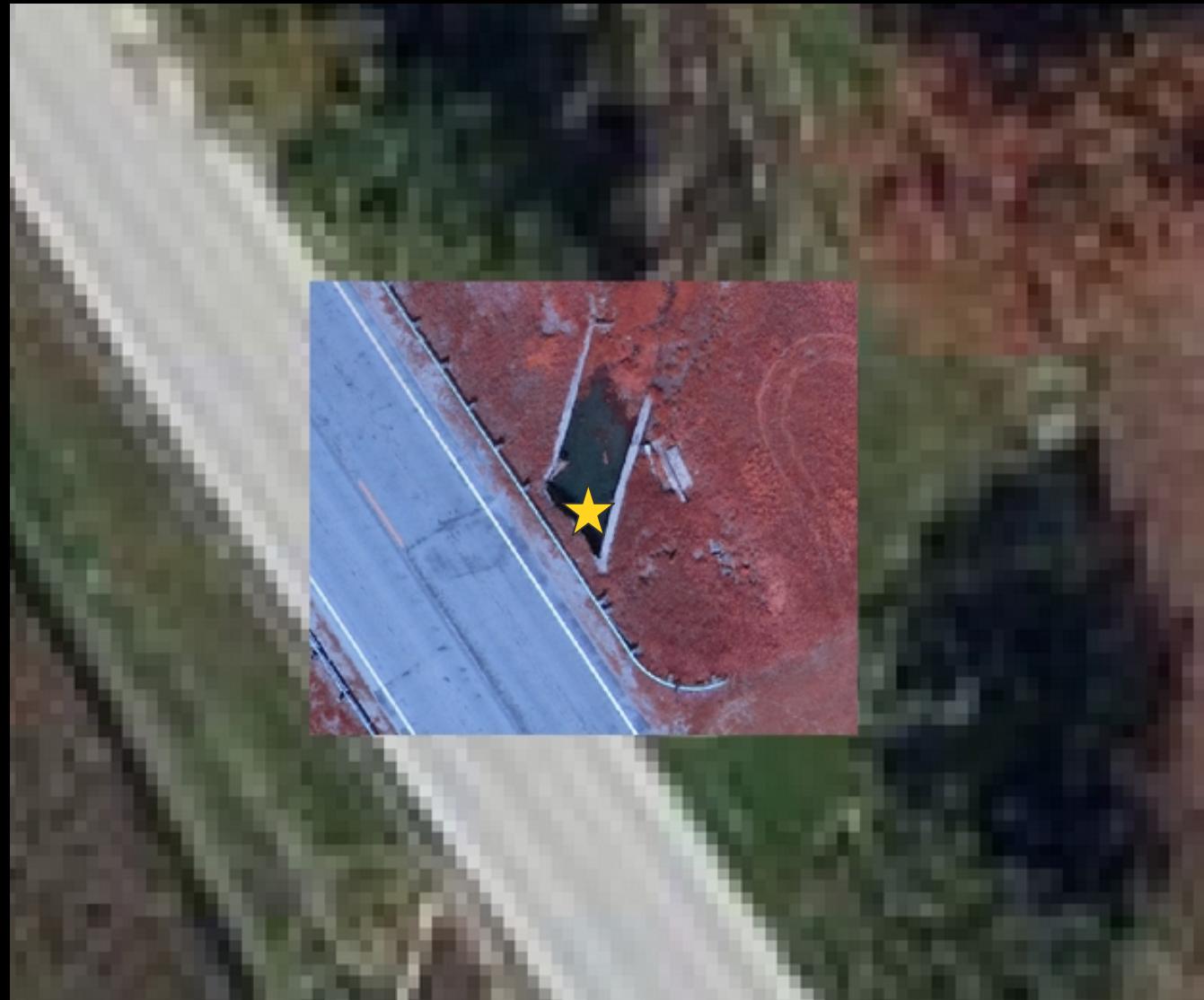
TEXTURED DSM

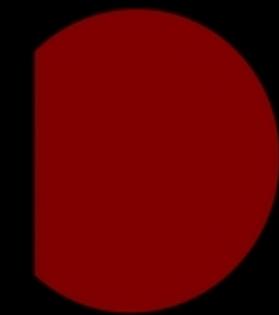
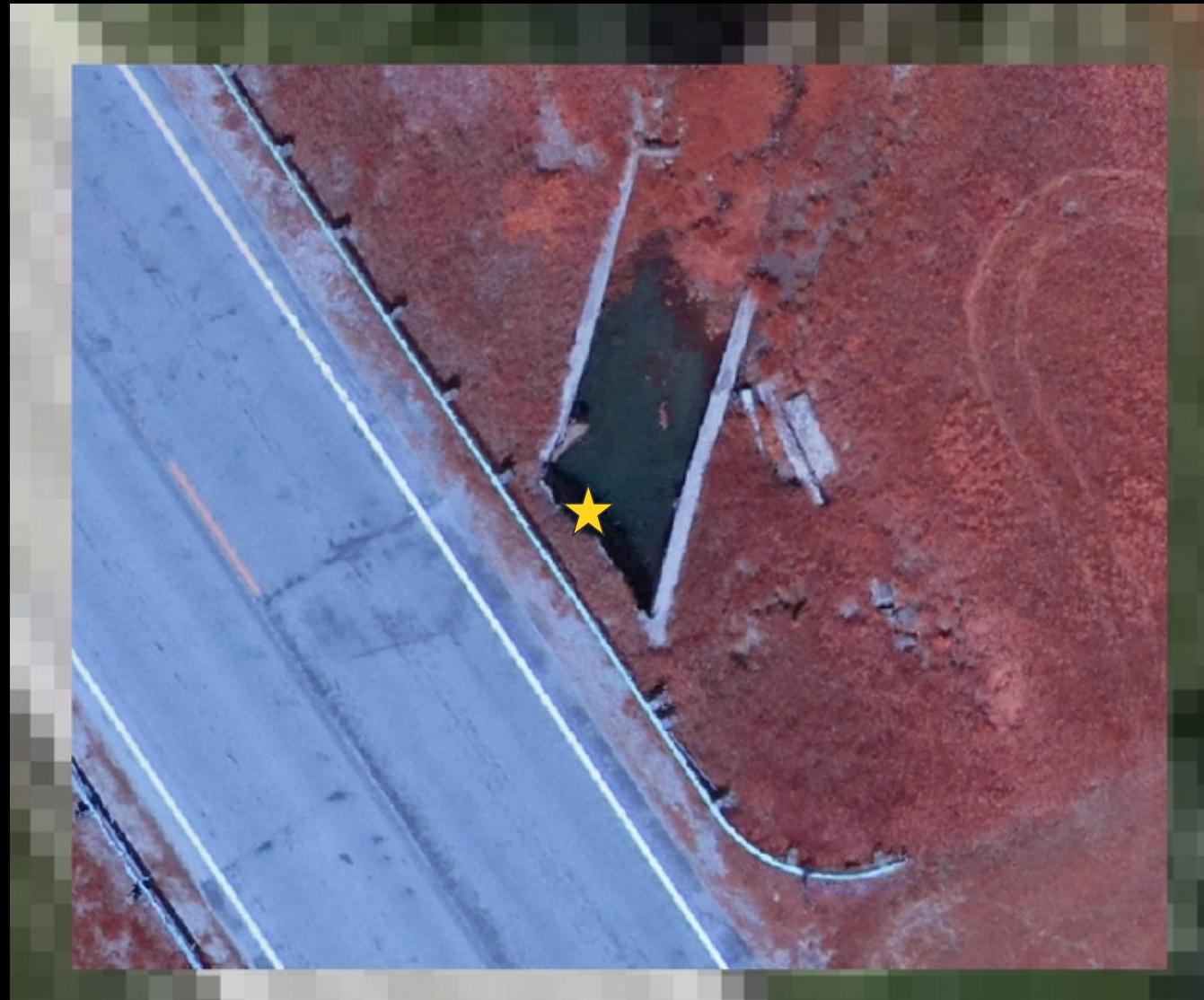
ORTHOPHOTOGRAPHY

# Why?











Bing

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how does it do what it does when it does it?





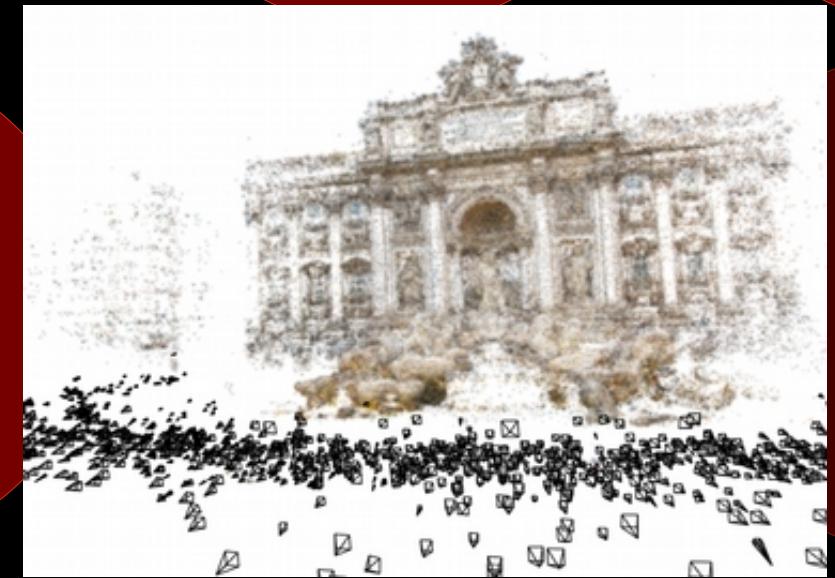
computer vision slides KAVITA BALA

<http://www.cs.cornell.edu/courses/cs4670/2013fa/lectures/lectures.html>



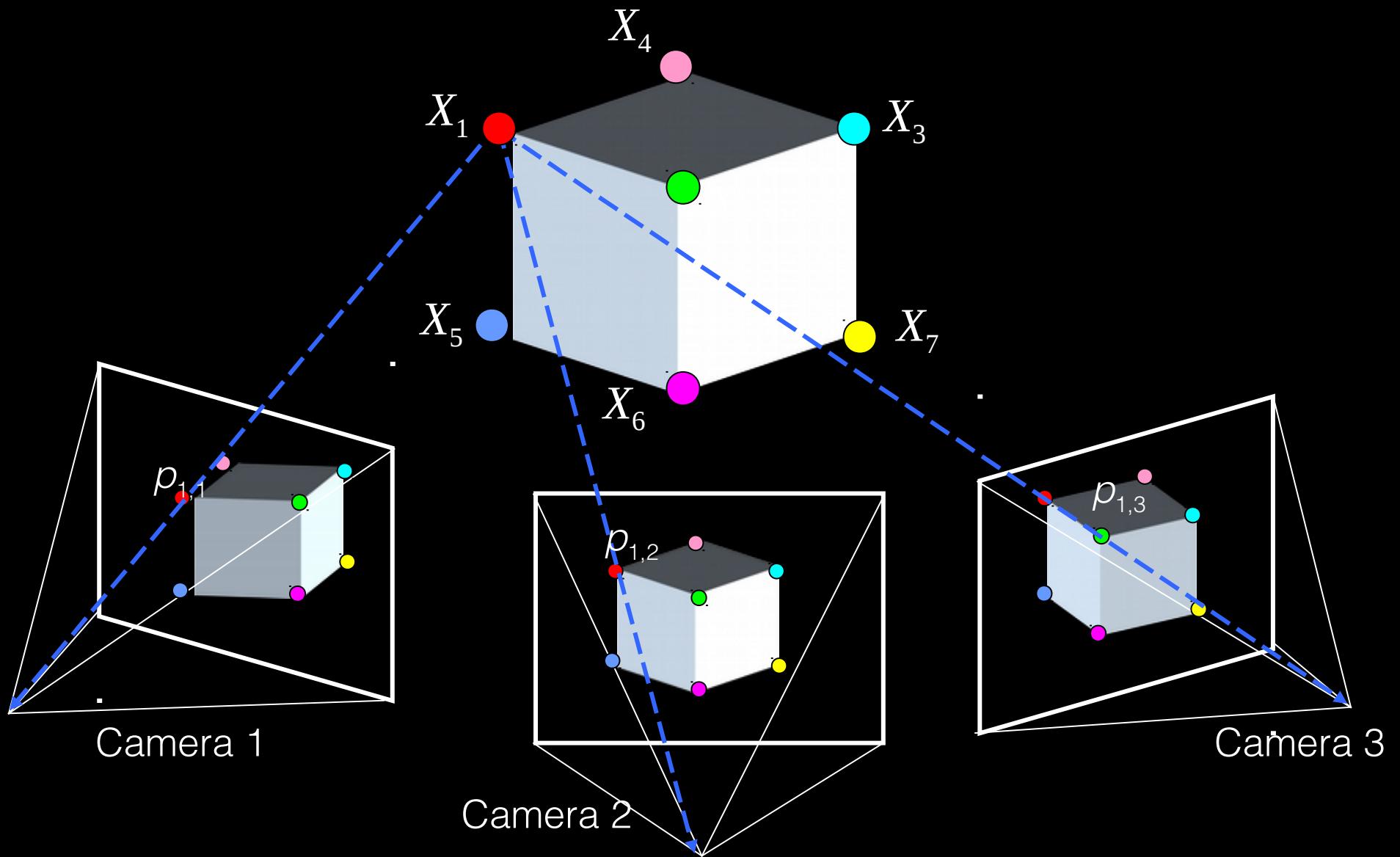
Stereo

Multi-view stereo

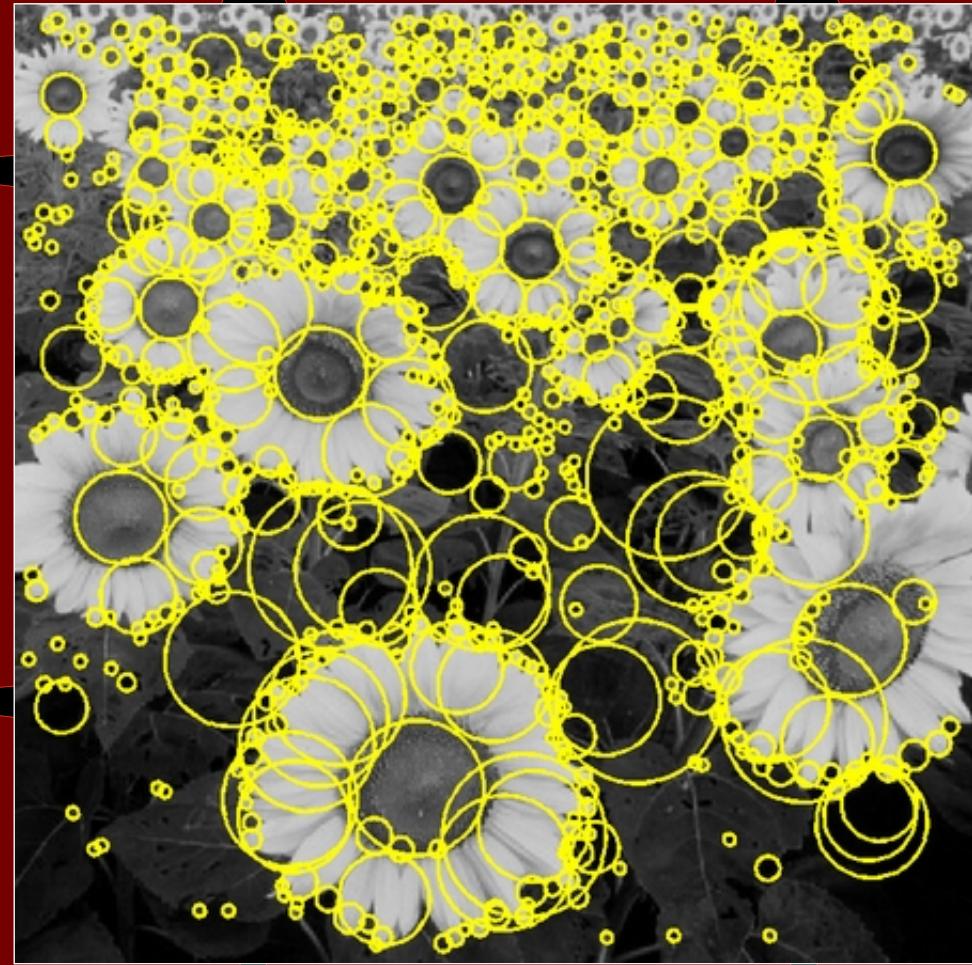


Multi-view stereo

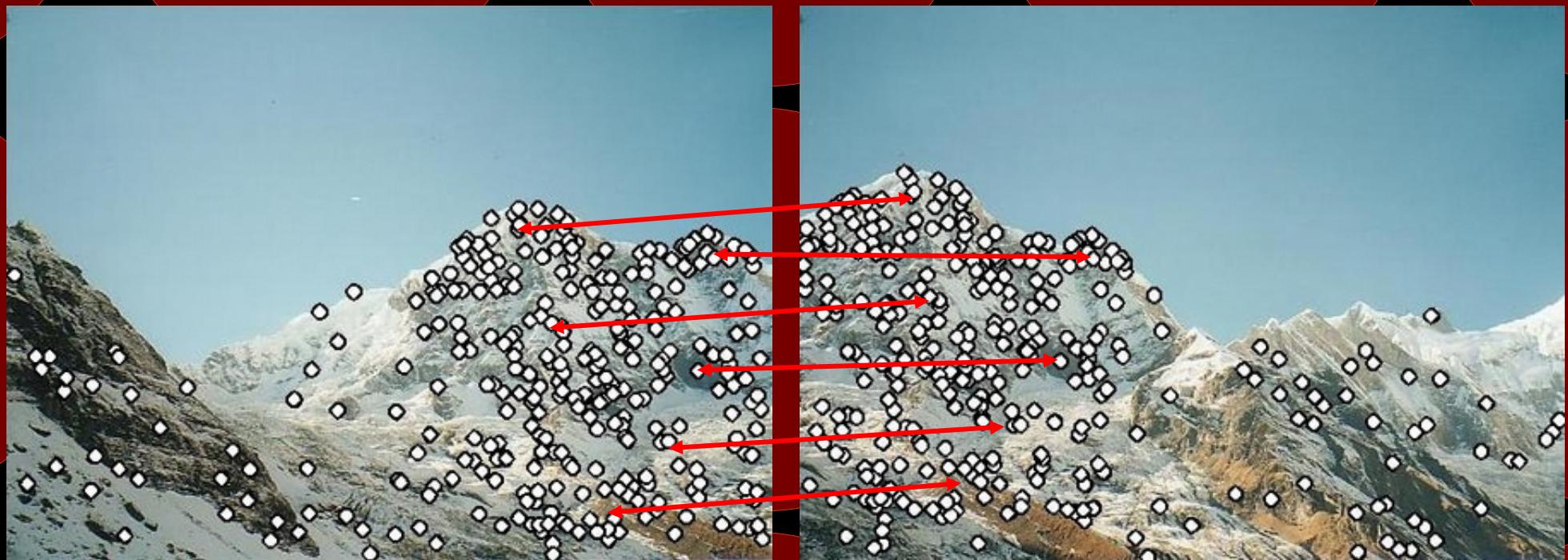
# Structure from motion



# Feature extraction: Corners and blobs



# Feature extraction and Matching



Step 1: extract features  
Step 2: match features

# Image matching can be complicated...

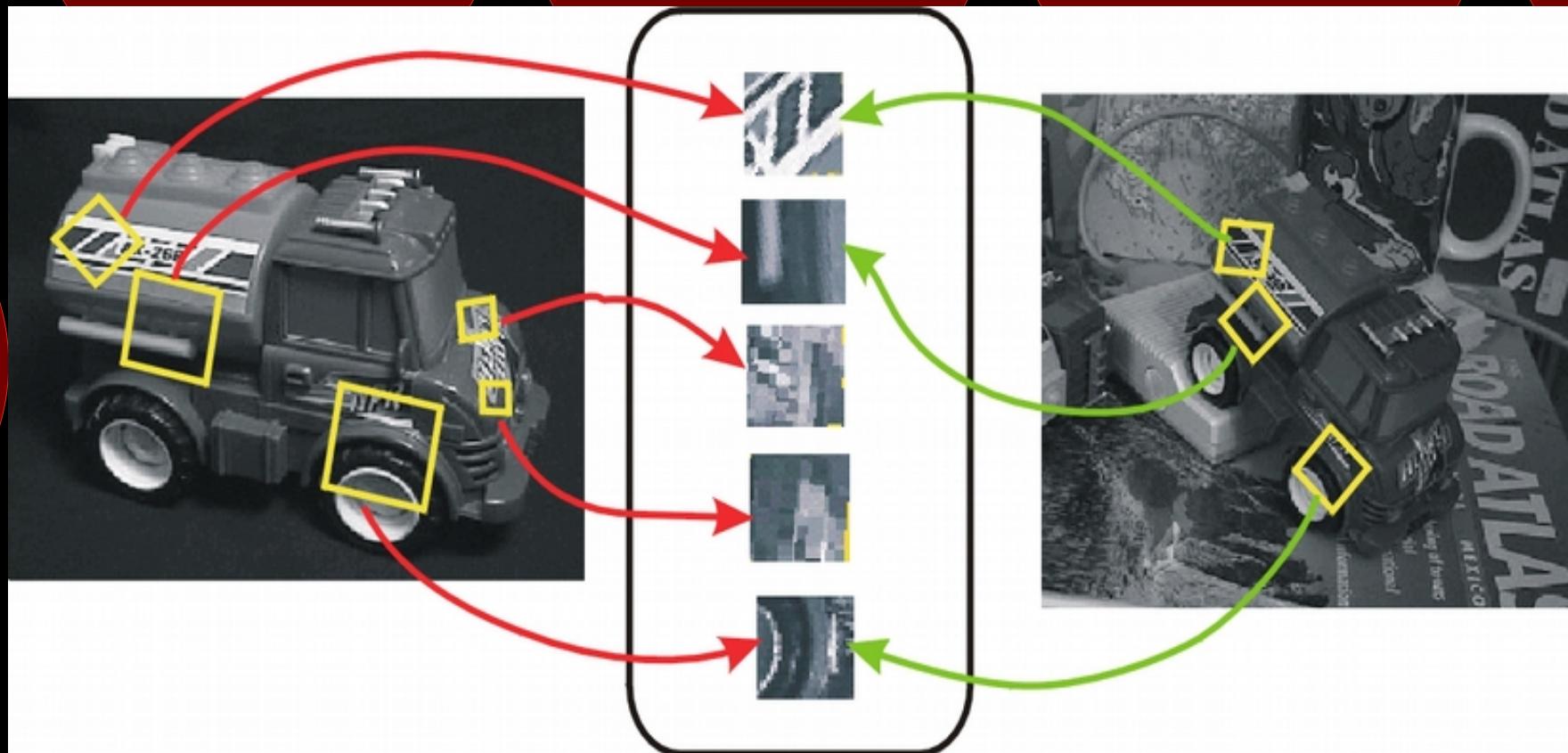


by Diva Sian

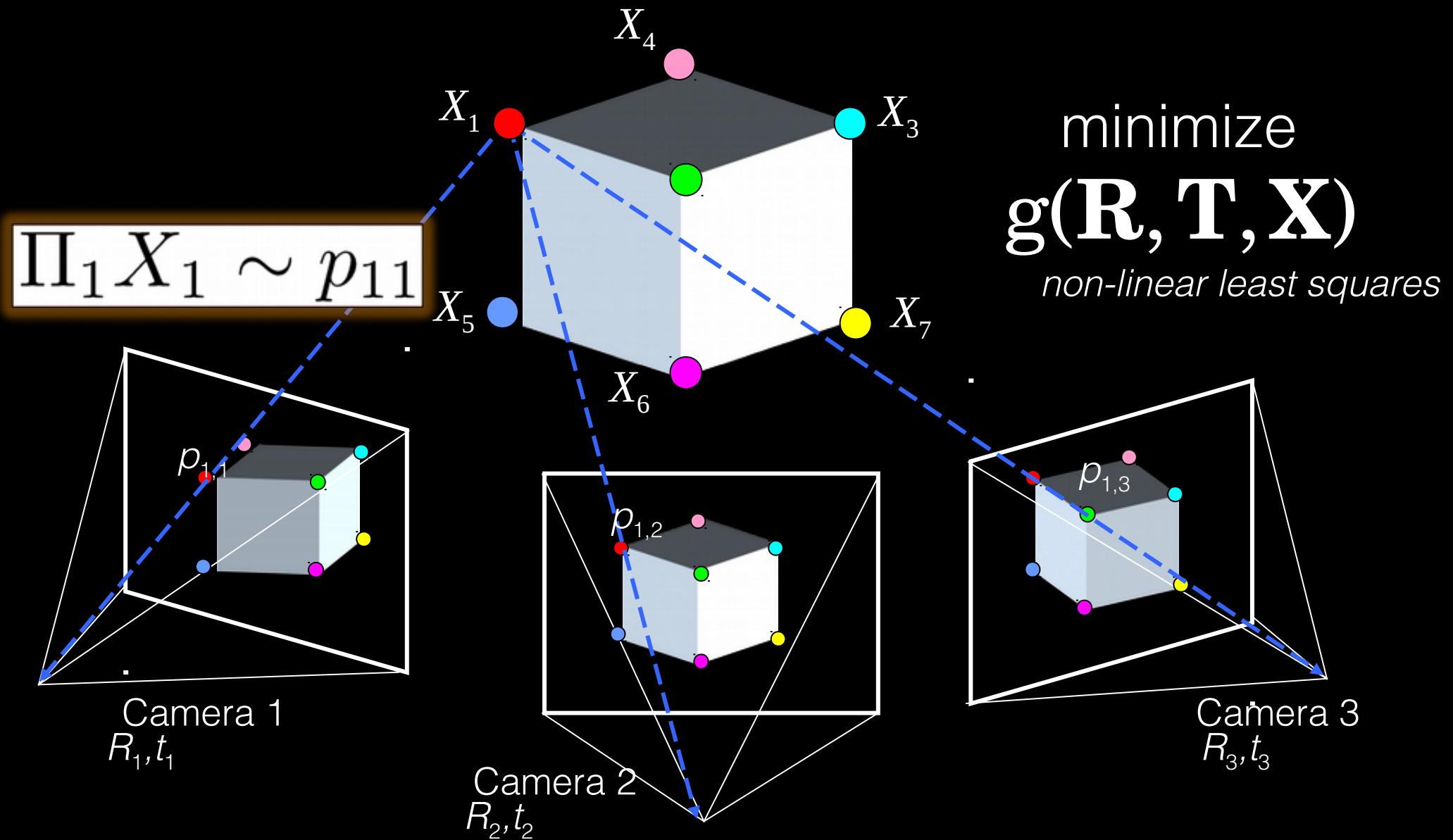


by swashford

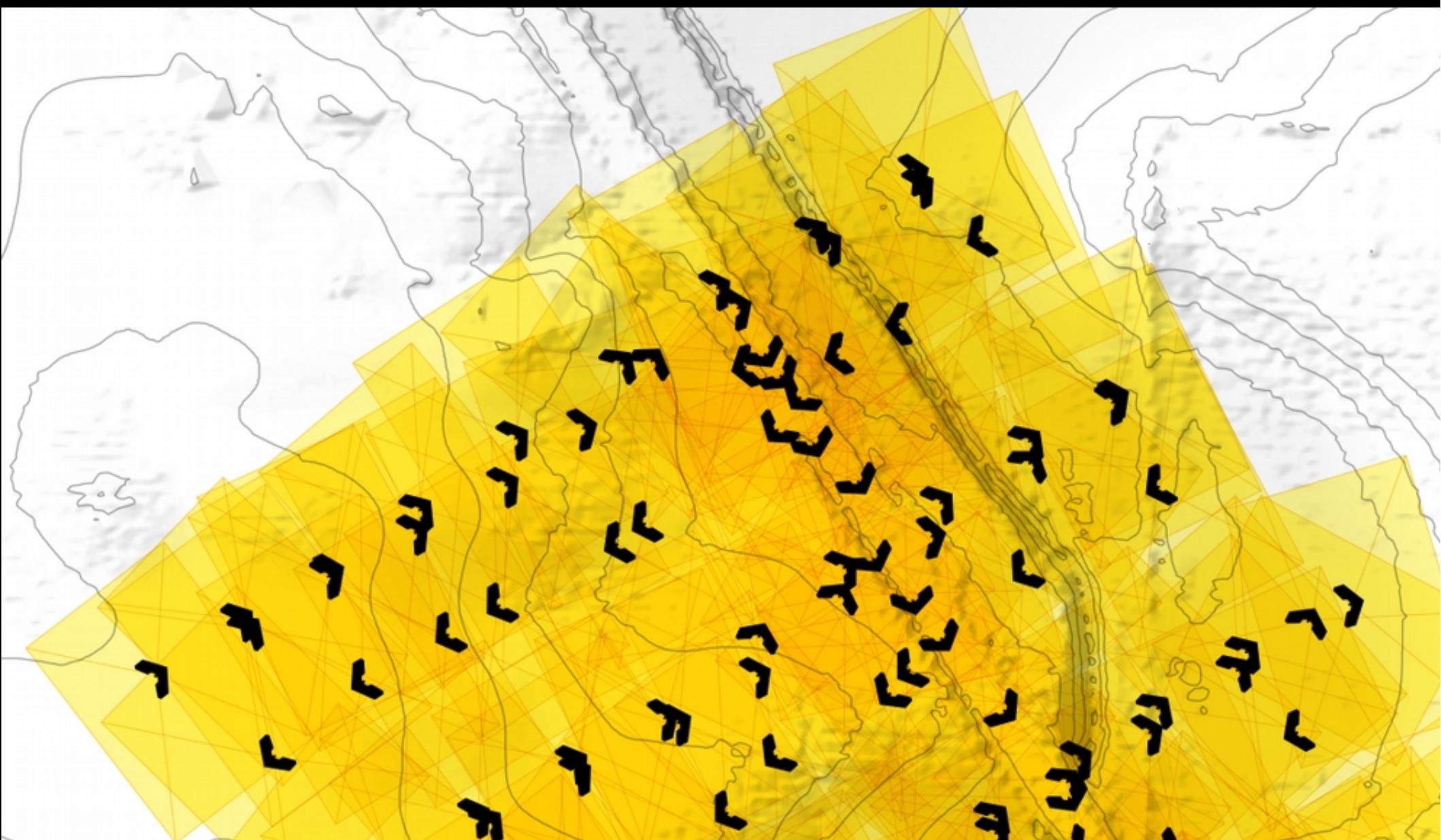
# Find features that are invariant to transformations

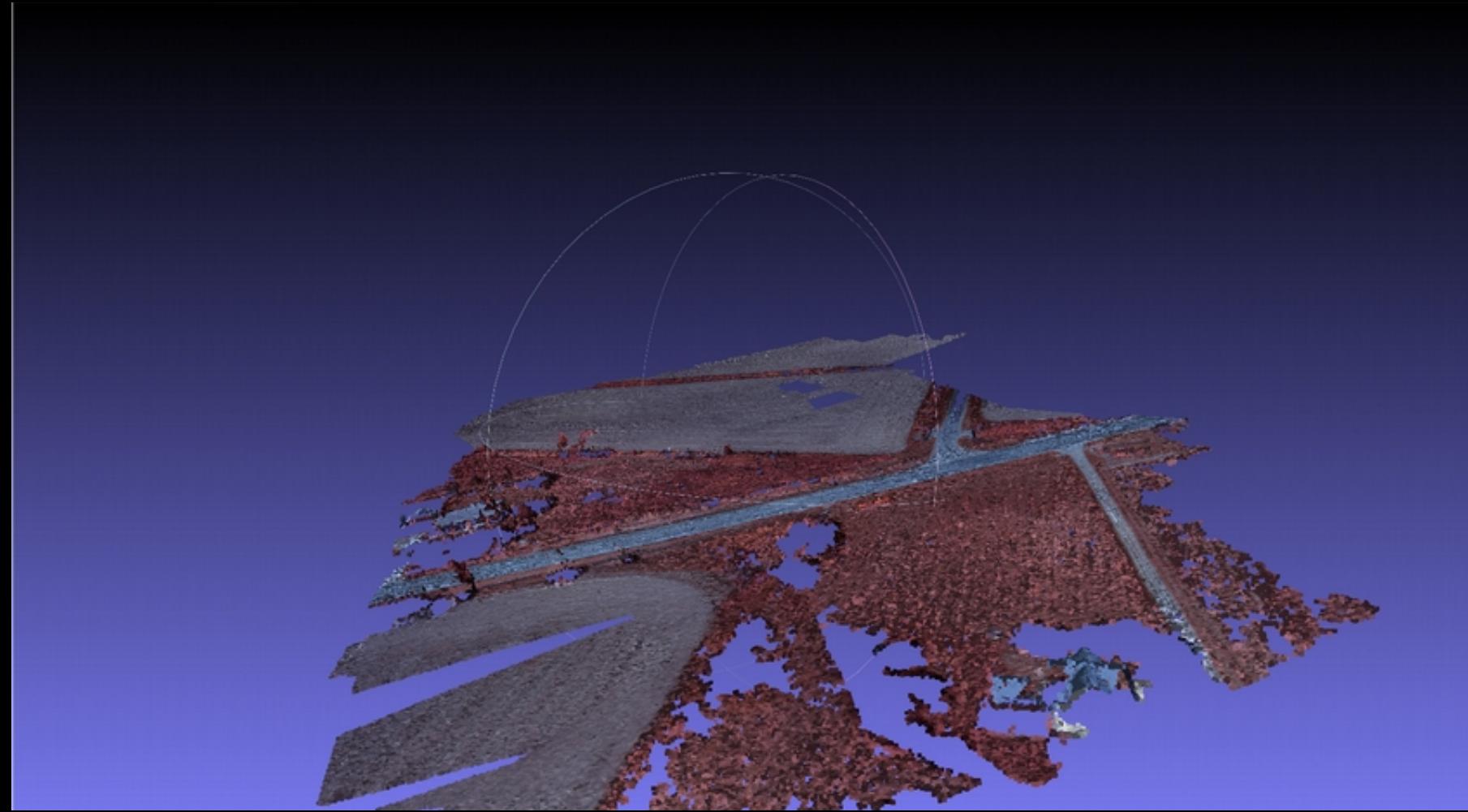


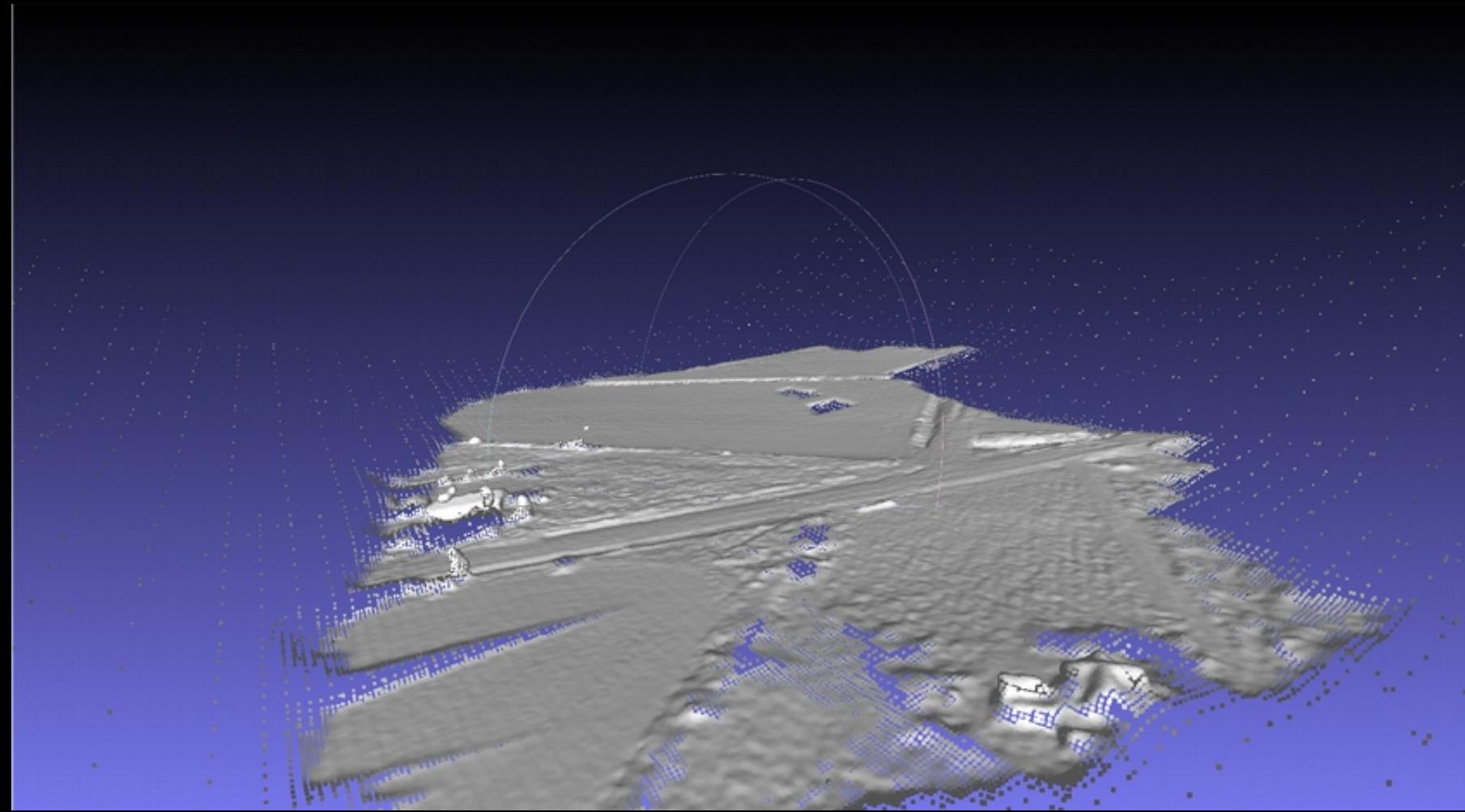
# Structure from motion

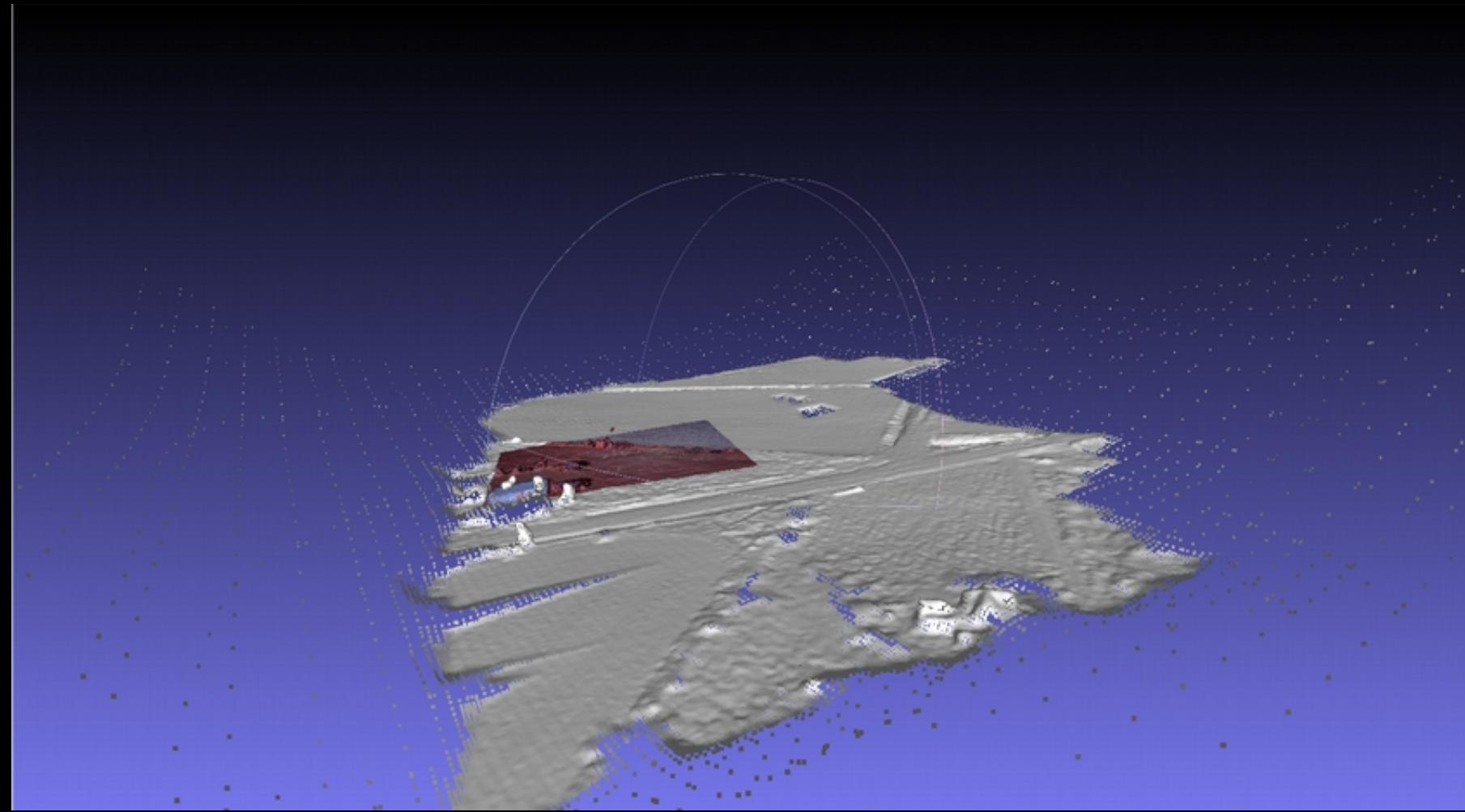


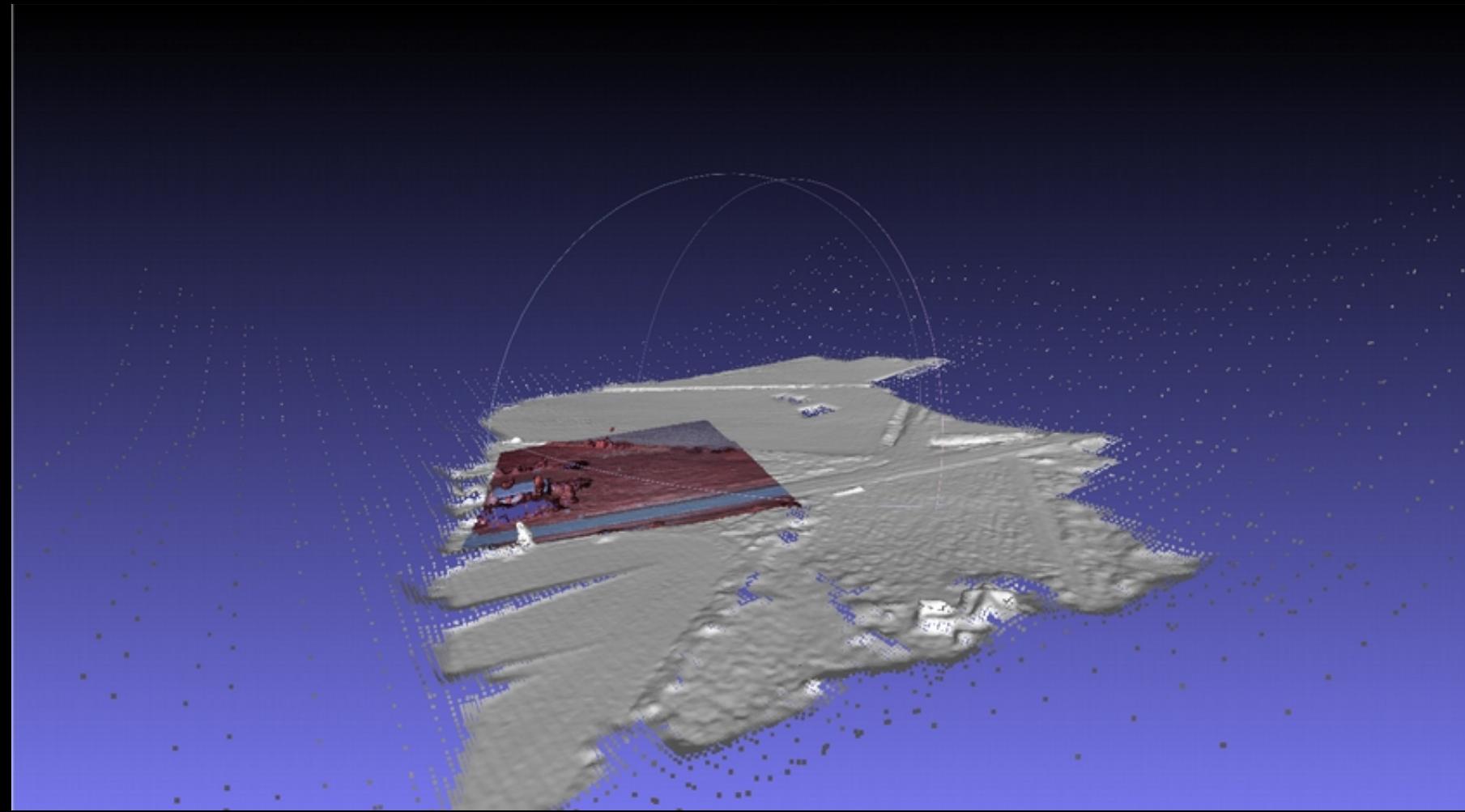


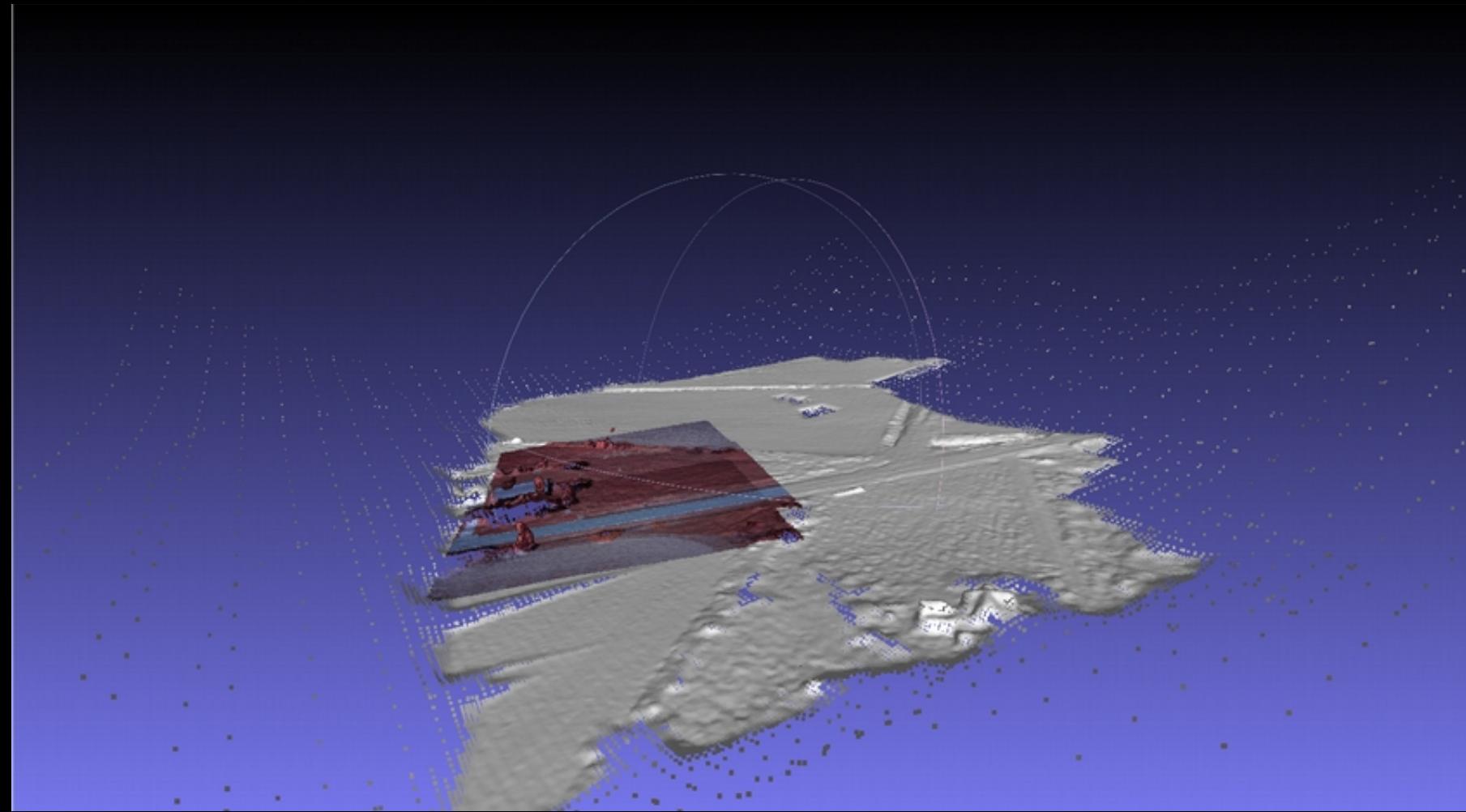


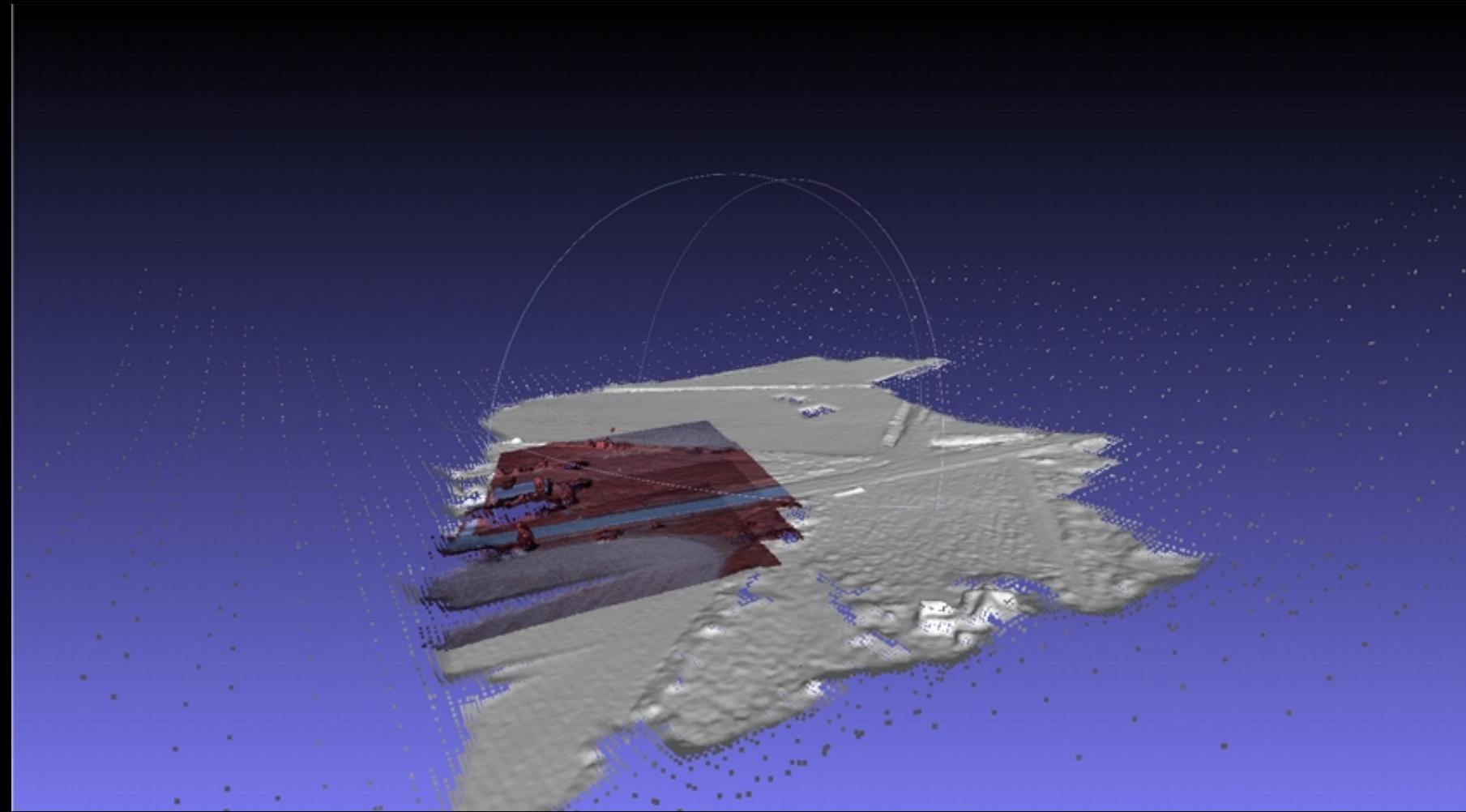


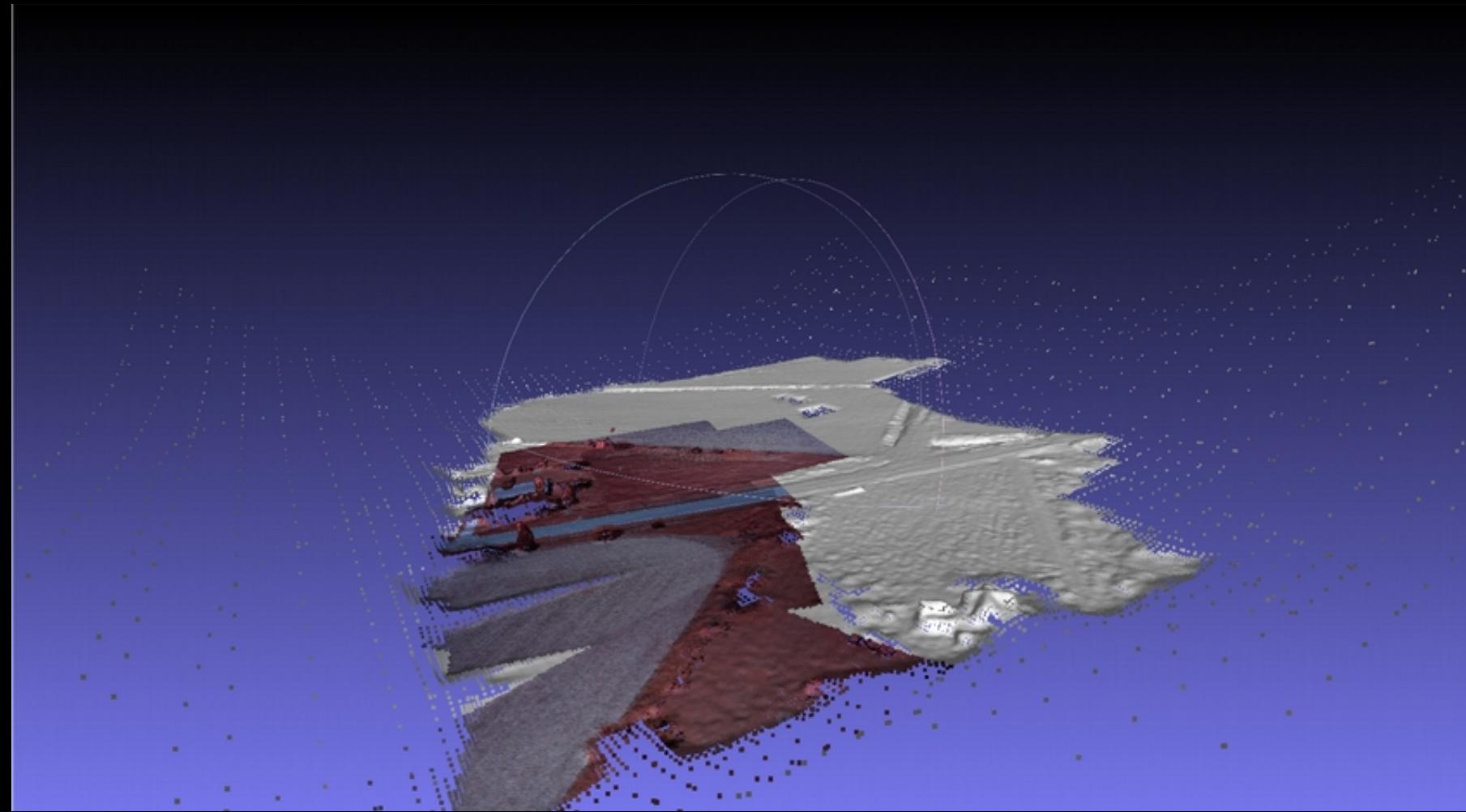


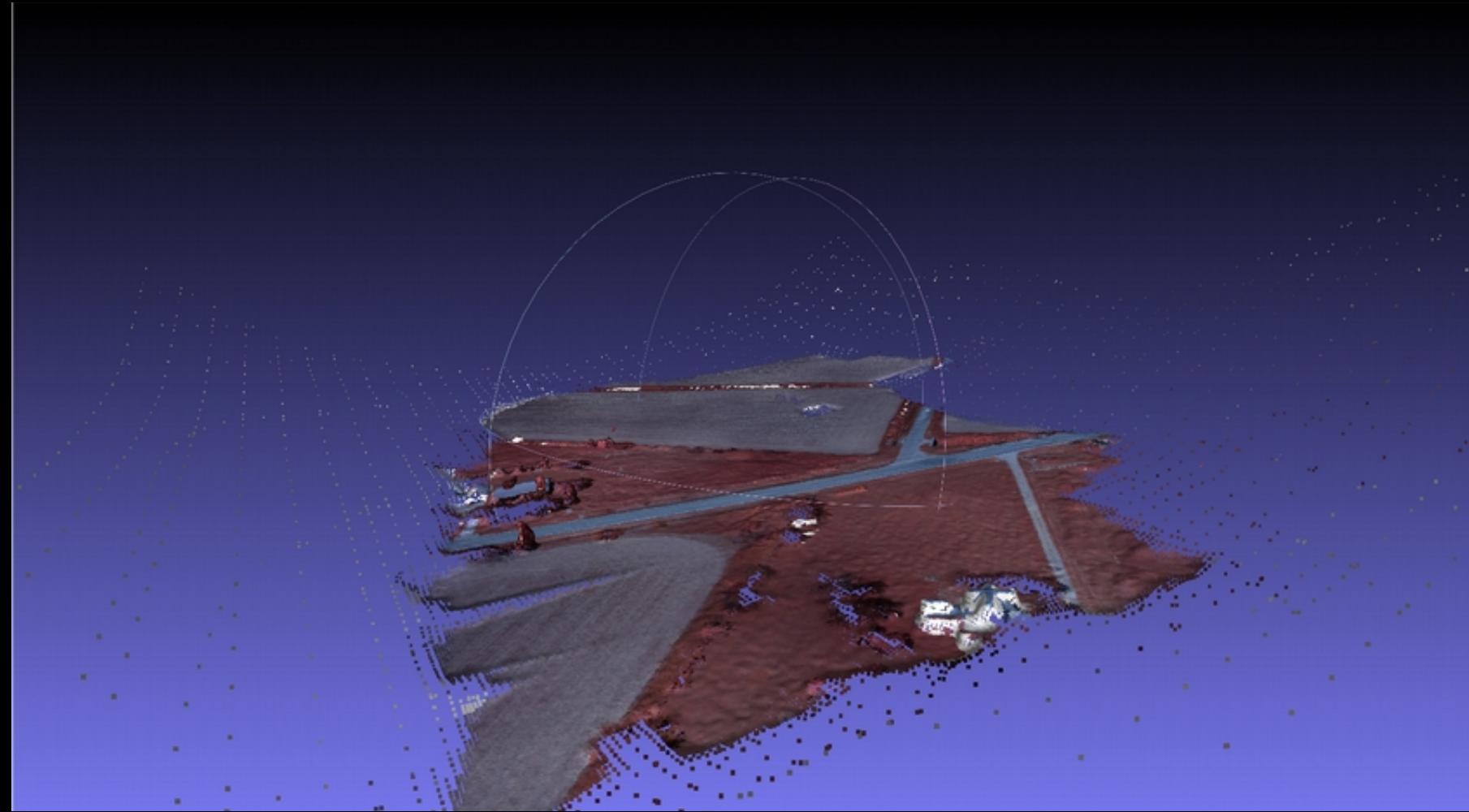










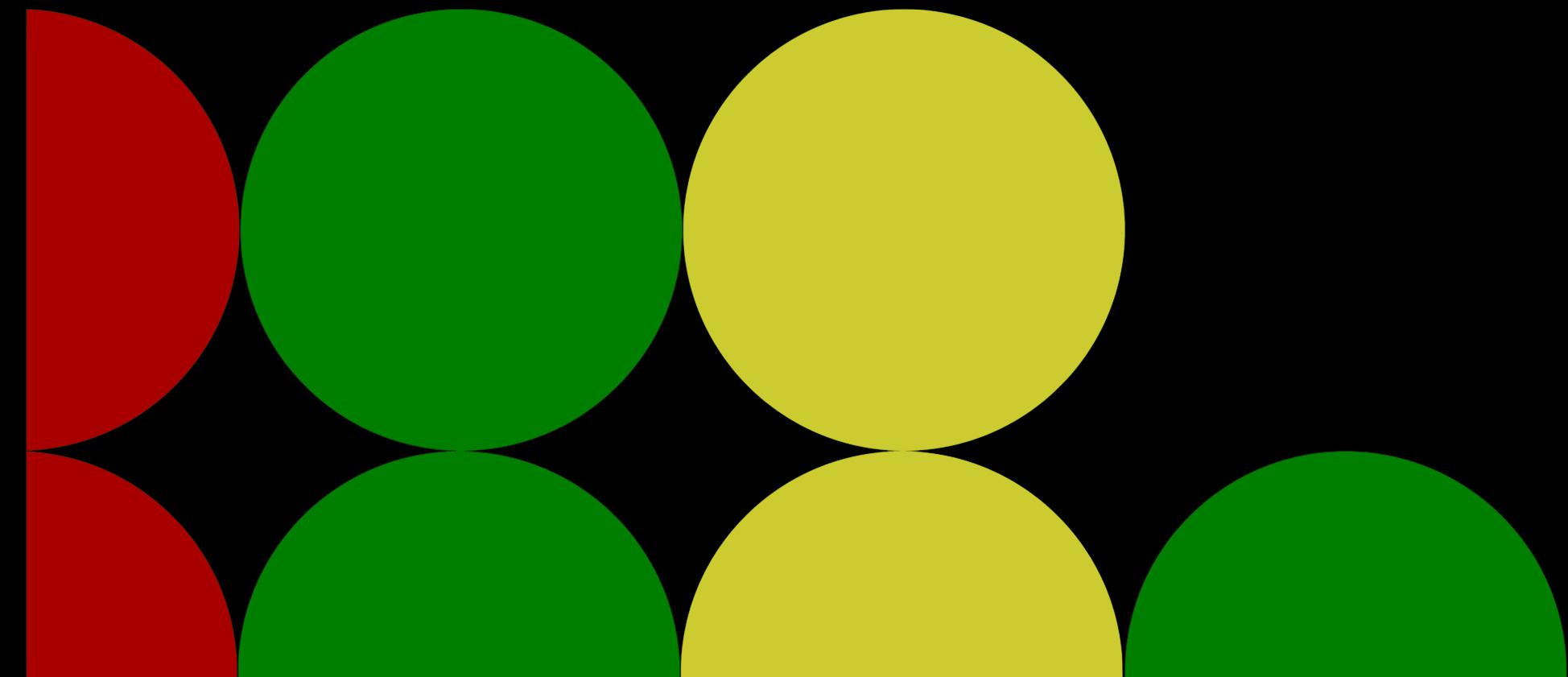






where do I begin?





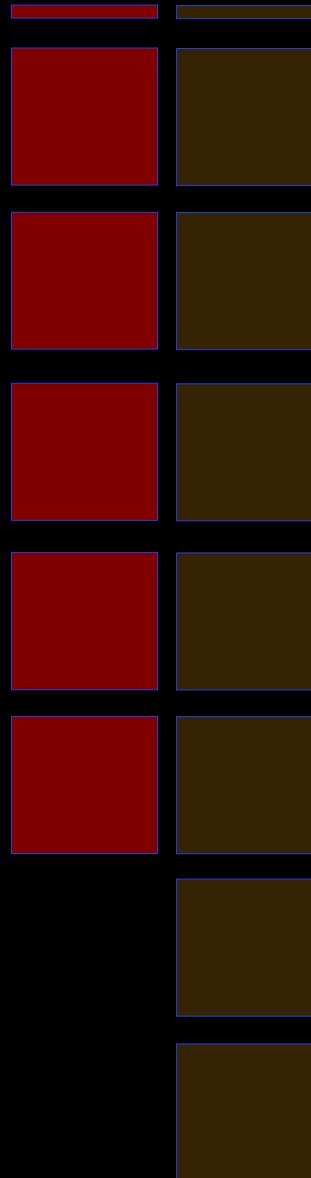
website <http://opendronemap.github.io/odm/>  
github repo <https://github.com/OpenDroneMap/OpenDroneMap>  
data repo [https://github.com/OpenDroneMap/odm\\_data](https://github.com/OpenDroneMap/odm_data)  
wiki <https://github.com/OpenDroneMap/OpenDroneMap/wiki>  
youtube videos <https://www.youtube.com/watch?v=e2qp3o8caPs>  
<https://www.youtube.com/watch?v=7ZTufQkODLs>

```
sudo apt-get install git-core
```

```
git clone  
https://github.com/OpenDroneMap/O  
penDroneMap.git
```

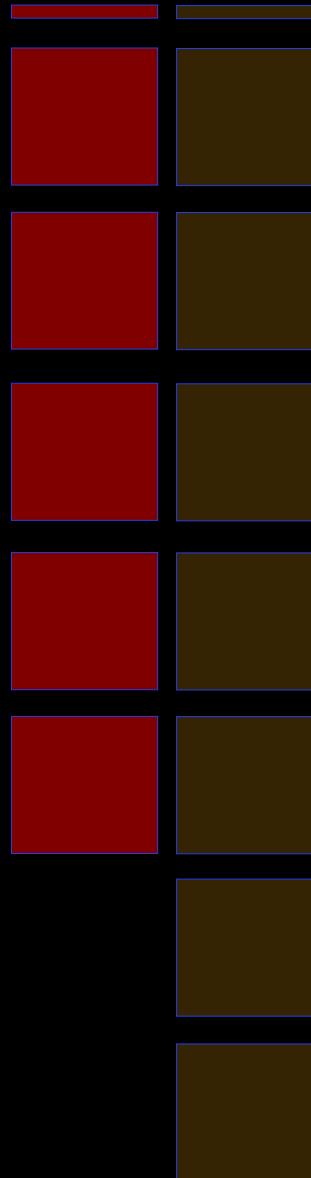
```
cd OpenDroneMap
```

```
./install.sh
```



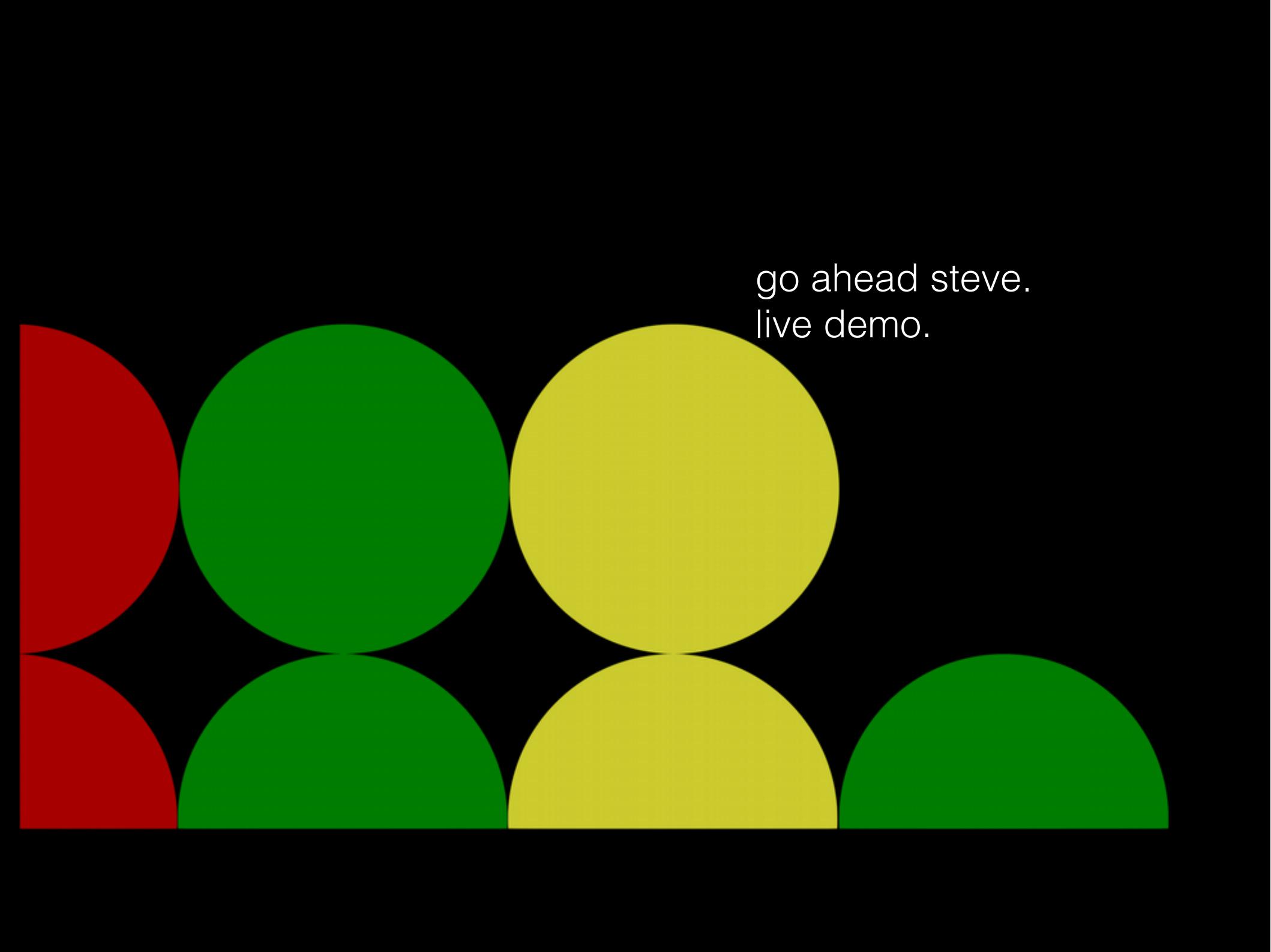
**~/OpenDroneMap/run.pl**

Sit back, grab a coffee and wait

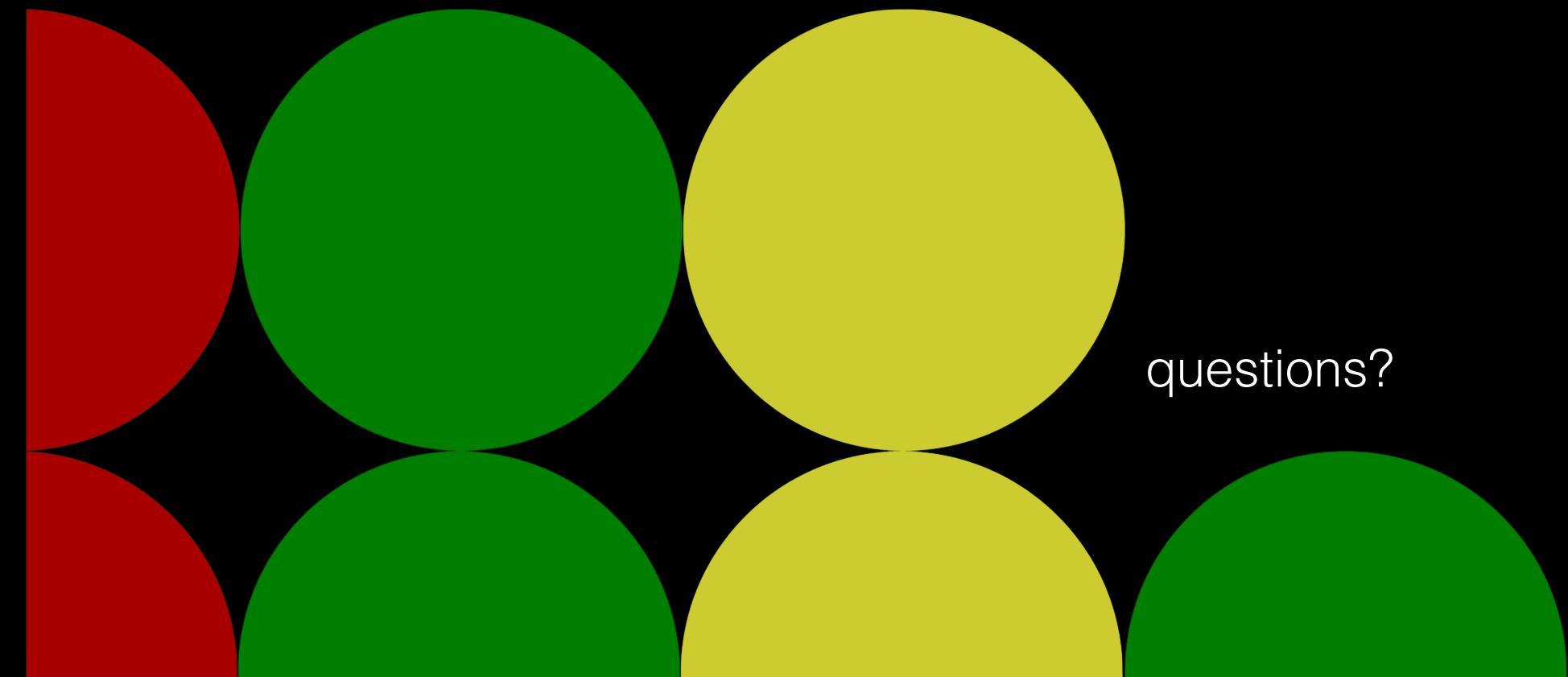


reconstruction-with-image-size-  
2400-results



The background of the slide is black. Overlaid on it are several large, semi-transparent circles in red, green, and yellow. There are two red circles, one green circle at the top left, one yellow circle at the top right, one green circle at the bottom left, one yellow circle at the bottom center, and one green circle at the bottom right.

go ahead steve.  
live demo.



website <http://opendronemap.github.io/odm/>  
github repo <https://github.com/OpenDroneMap/OpenDroneMap>  
data repo [https://github.com/OpenDroneMap/odm\\_data](https://github.com/OpenDroneMap/odm_data)  
wiki <https://github.com/OpenDroneMap/OpenDroneMap/wiki>  
youtube videos <https://www.youtube.com/watch?v=e2qp3o8caPs>  
<https://www.youtube.com/watch?v=7ZTufQkODLs>

questions?

IAN FLEMING'S

Dr.  
Null