Quality Report

Generated with Postflight Terra 3D version 4.0.81

Important: Click on the different icons for:

Help to analyze the results in the Quality Report

Additional information about the sections

Click here for additional tips to analyze the Quality Report

Summary

Project	concrete_column
Processed	2015-09-28 23:32:39
Average Ground Sampling Distance (GSD)	0.1 cm / 0.03 in
Time for Initial Processing (without report)	02h:36m:33s

Quality Check

Images	median of 39660 keypoints per image	✓
Dataset	151 out of 151 images calibrated (100%), all images enabled	✓
Camera Optimization	0.05% relative difference between initial and optimized internal camera parameters	✓
Matching	median of 20427.4 matches per calibrated image	✓
Georeferencing	yes, no 3D GCP	⚠

Calibration Details

Number of Calibrated Images	151 out of 151
Number of Geolocated Images	151 out of 151

Initial Image Positions

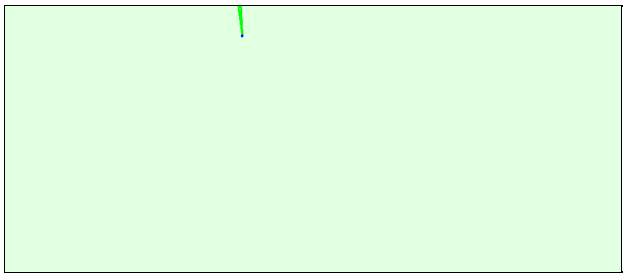
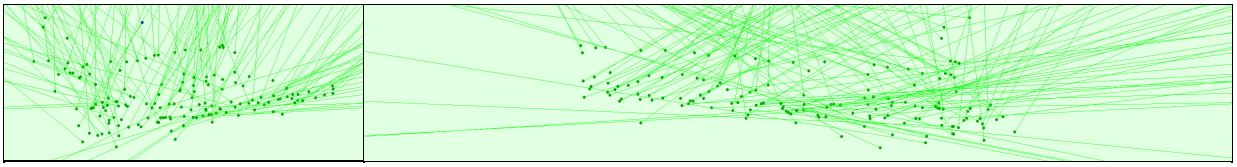


Figure 2: Top view of the initial image position. The green line follows the position of the images in time starting from the large blue dot.

Computed Image/GCPs/Manual Tie Points Positions



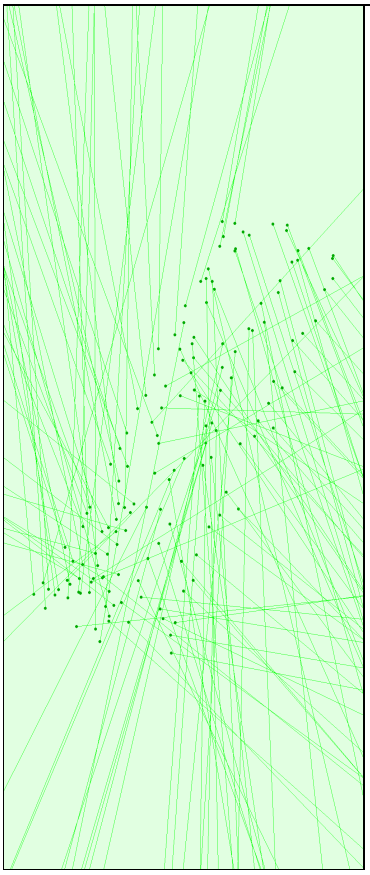


Figure 3: Offset between initial (blue dots) and computed (green dots) image positions as well as the offset between the GCPs initial positions (blue crosses) and their computed positions (green crosses) in the top-view (XY plane), front-view (XZ plane), and side-view (YZ plane).

Bundle Block Adjustment Details

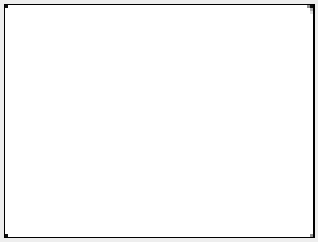
Number of 2D Keypoint Observations for Bundle Block Adjustment	2921880
Number of 3D Points for Bundle Block Adjustment	899000
Mean Reprojection Error [pixels]	0.179273

Internal Camera Parameters

eXom_8.0_7152x5368(EX-00-24144) (RGB). Sensor Dimensions: 10.013 [mm] x 7.515 [mm]

EXIF ID: eXom_8.0_7152x5368

	Focal Length	Principal Point x	Principal Point y	R1	R2	R3	T1	T2
Initial Values	5672.979 [pixel] 7.942 [mm]	3576.000 [pixel] 5.006 [mm]	2684.000 [pixel] 3.758 [mm]	0.242	-0.643	0.506	0.000	0.001
Optimized Values	5676.094 [pixel] 7.947 [mm]	3589.439 [pixel] 5.025 [mm]	2702.245 [pixel] 3.783 [mm]	0.247	-0.667	0.532	0.000	0.000



The number of Automatic Tie Points (ATPs) per pixel averaged over all images of the camera model is color coded between black and white. White indicates that, in average, more than 16 ATPs are extracted at this pixel location. Black indicates that, in average, 0 ATP has been extracted at this pixel location. Click on the image to the see the average direction and magnitude of the reprojection error for each pixel. Note that the vectors are scaled for better visualization.

2D Keypoints Table

	Number of 2D Keypoints per Image	Number of Matched 2D Keypoints per Image

Median	39660	20427
Min	20298	2252
Max	72678	33410
Mean	39183	19350

3D Points from 2D Keypoint Matches

	Number of 3D Points Observed
In 2 Images	514743
In 3 Images	163756
In 4 Images	79683
In 5 Images	45784
In 6 Images	28204
In 7 Images	18070
In 8 Images	11753
In 9 Images	8458
In 10 Images	6331
In 11 Images	4881
In 12 Images	3656
In 13 Images	2978
In 14 Images	2254
In 15 Images	1751
In 16 Images	1467
In 17 Images	1080
In 18 Images	857
In 19 Images	726
In 20 Images	558
In 21 Images	395
In 22 Images	367
In 23 Images	291
In 24 Images	259
In 25 Images	226
In 26 Images	152
In 27 Images	120
In 28 Images	75
In 29 Images	54
In 30 Images	31
In 31 Images	19
In 32 Images	7
In 33 Images	12
In 34 Images	1
In 35 Images	1

2D Keypoint Matches

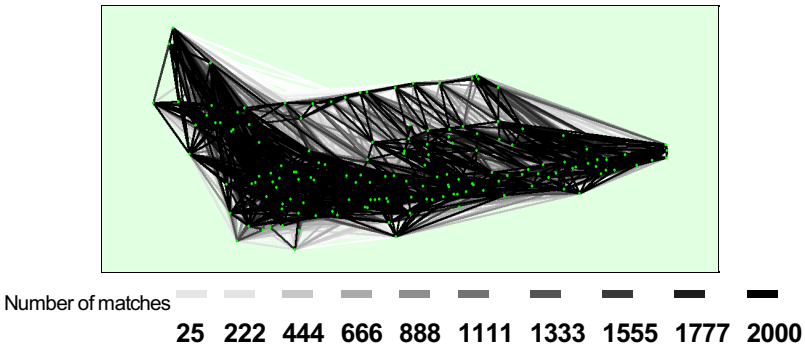


Figure 5: Top view of the image computed positions with a link between matching images. The darkness of the links indicates the number of matched 2D keypoints between the images. Bright links indicate weak links and require manual tie points or more images.

Geolocation Details

Absolute Geolocation Variance

151 out of 151 geolocated and calibrated images have been labeled as inaccurate.

Min Error [m]	Max Error [m]	Geolocation Error X [%]	Geolocation Error Y [%]	Geolocation Error Z [%]
-	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	-	0.00	0.00	0.00
Mean [m]		0.000000	0.000000	0.000000
Sigma [m]		0.000000	0.000000	0.000000
RMS Error [m]		0.000000	0.000000	0.000000

Min Error and Max Error represent geolocation error intervals between -1.5 and 1.5 times the maximum accuracy of all the images. Columns X, Y, Z show the percentage of images with geolocation errors within the predefined error intervals. The geolocation error is the difference between the intial and computed image positions. Note that the image geolocation errors do not correspond to the accuracy of the observed 3D points.

Relative Geolocation Variance

Relative Geolocation Error	Images X [%]	Images Y [%]	Images Z [%]
[-1.00, 1.00]	0.00	0.00	0.00
[-2.00, 2.00]	0.00	0.00	0.00
[-3.00, 3.00]	0.00	0.00	0.00
Mean of Geolocation Accuracy [m]	0.000000	0.000000	0.000000
Sigma of Geolocation Accuracy [m]	0.000000	0.000000	0.000000

Images X, Y, Z represent the percentage of images with a relative geolocation error in X, Y, Z.

Processing Options

Hardware	CPU: Intel(R) Core(TM) i7-4900MQ CPU @ 2.80GHz RAM: 32GB GPU: Intel(R) HD Graphics 4600 (Driver: 10.18.10.3907)
Operating System	Windows 8.1 Pro, 64-bit
Camera Model Name	eXom_8.0_7152x5368(EX-00-24144) (RGB)
Image Coordinate System	WGS84
Output Coordinate System	WGS84 / UTM zone 32N (egm96)
Keypoints Image Scale	Full, Image Scale: 1
Advanced: Matching Image Pairs	Free Flight or Terrestrial
Advanced: Matching Strategy	Use Geometrically Verified Matching: no
Advanced: Keypoint Extraction	Targeted Number of Keypoints: Automatic
Advanced: Calibration	Calibration Method: Standard, Internal Parameters Optimization: All, External Parameters Optimization: All, Rematch: yes

Point Cloud Densification details

Processing Options

Image Scale	multiscale, 1/2 (Half image size, Default)
Point Density	Low (Fast)
Minimum Number of Matches	3
3D Textured Mesh Generation	yes, Maximum Number of Triangles: 1000000, Texture Size: 8192x8192
Advanced: Matching Window Size	9x9 pixels
Advanced: Image Groups	group1
Advanced: Use Densification Area	yes
Advanced: Use Annotations	yes
Advanced: Limit Camera Depth Automatically	yes
Time for Point Cloud Densification	57m:53s
Time for 3D Textured Mesh Generation	09m:31s

Results

Number of Generated Tiles	1
Number of 3D Densified Points	9920214
Average Density (per m^3)	-2.14748e+07