LSGI522 Spatial Data Acquisition

Practical 2 – Aerial Photogrammetry

Aims

1. Learn and understand the process of interior and exterior orientation of a stereopair of aerial photographs.
2. Extract 3D data from a stereopair and create a DTM model.

Arrangement

1. The report will be prepared and submitted by the individuals.
2. Location: Online Access to ZN603a computers via TeamViewer Id and password.
3. Data: 18:30 - 21:20, 8th October, Fall 2020.

Materials

1. Tutorials
   a. Practical 2 photogrammetry tutorial.
2. Images
   a. A34207_14.jpg/ A34209_14.jpg (Available on the following link: https://connectpolyu-my.sharepoint.com/:f:/g/personal/18045096r_connect_polyu_hk/EmOT2Bslz71BvbL4oHlgSB8BB96GetemthW9Yf_ZBUKBGg?e=zNqmkH)

Software

1. ERDAS Imagine software on PCs in each of the LSGI labs.

Report

1. Present, analyze and compare the two (4 control points and control plus auto-tie points) bundle adjustment results.
2. Present at least two screen captures of 3D model that best illustrate the work you have done. Explain the positive and negative features of your photogrammetric products.

3. Discuss the advantages and disadvantages of this method (stereo photogrammetry) compared to other methods you know of for generating data.

Submission

1. Zip your report and all the data files you have created (**DO NOT INCLUDE ANY OF THE IMAGE OR PYRAMID DATA**) into a single file and give it the name of your student number (e.g., 1800xxx1g.zip).

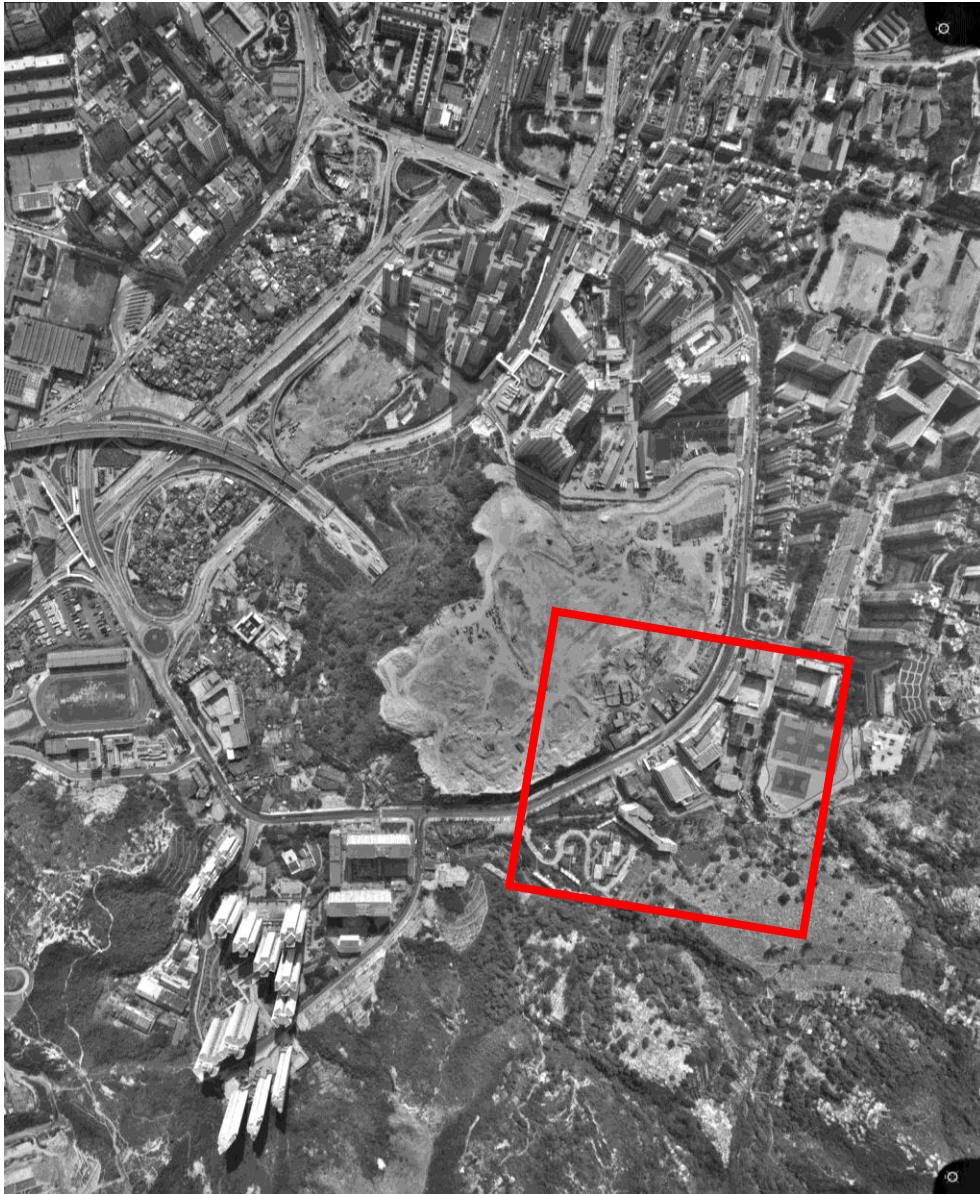2. Submit your zip file to myuan.meng@connect.polyu.hk before 23th Oct, 2020

Figure 1. Example area to be modelled.