Release of all data captured within the ISPRS Scientific Initiative "Multiplatform Very High Resolution Photogrammetry", and co-funded by the EuroSDR (2014 + 2015)

Dear Participant,

You are welcome to use the data in any activity where it might be helpful. If you intend to use it in a publication please acknowledge the data provision by ISPRS and EuroSDR. Please also refer to the paper
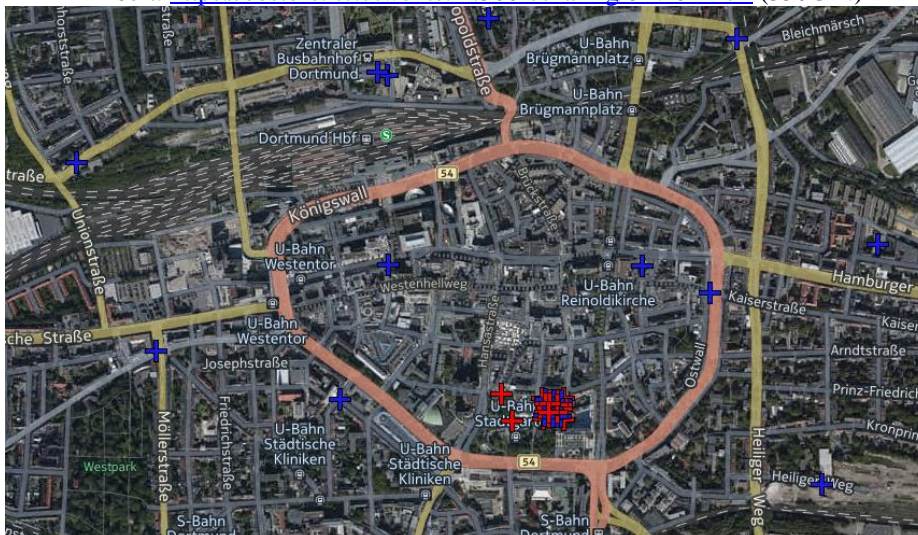
Nex, F., Gerke, M., Remondino, F., Przybilla H.-J., Bäumker, M., Zurhorst, A., 2015. ISPRS Benchmark for Multi-Platform Photogrammetry. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. II-3/W4, pp.135-142.

For details about the used cameras and systems please refer to the project homepage @ISPRS. All images taken captured with the drone or from the ground come with geotags encoded in the Exif header.

In the following a description (for each dataset) of what can be found in the folder, where this document is located, but also download links to additional data are provided. In those download links (eostore.itc.utwente.nl...), a website opens and you can either download the entire folder as a zip file or individual files.
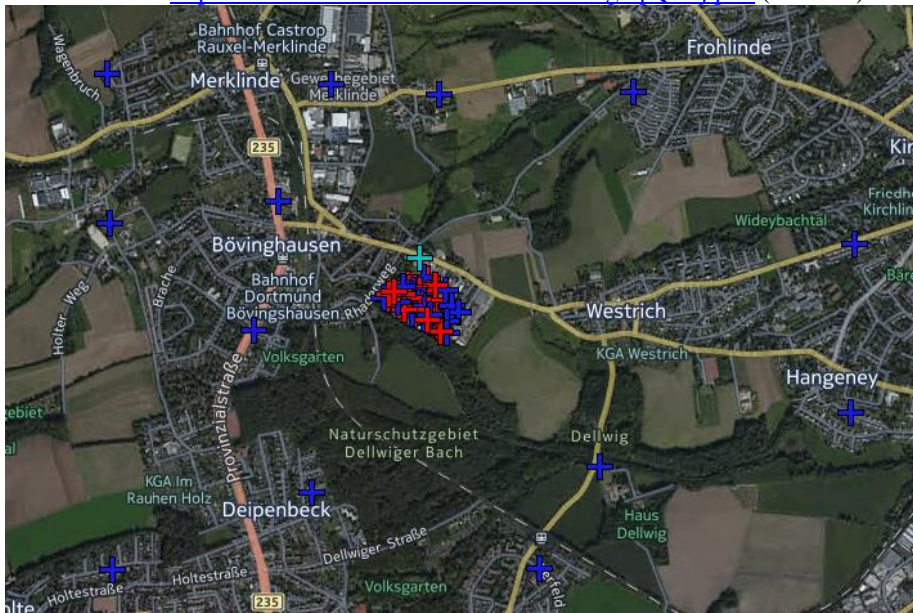
Penta-Cam-Centre:
- Calibration protocols and GNSS/INS data from the data provider
- 3D ground points and corresponding image measurements
     City center: https://eostore.itc.utwente.nl:5001/sharing/dne3koZZ5
     Zeche Zollern: https://eostore.itc.utwente.nl:5001/sharing/pg4iLZnqr
- The actual data is available through the following links, attention with the file size!:
     8bit: https://eostore.itc.utwente.nl:5001/sharing/MoMXtLz0P (175GB!)
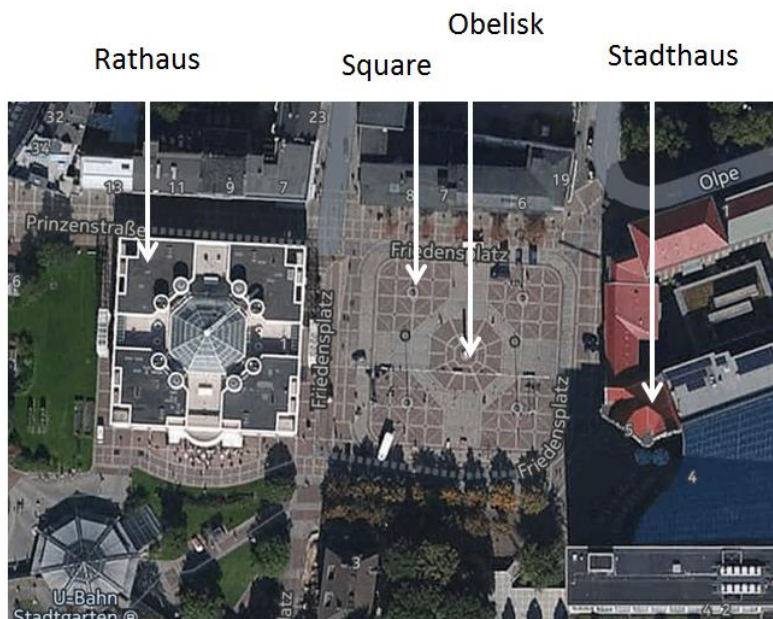   16bit: https://eostore.itc.utwente.nl:5001/sharing/8xvi0DDtX (350GB!)

Penta-Cam-Zeche (including surrounding village):
- Calibration protocols and GNSS/INS data from the data provider
- 3D ground points and corresponding image measurements
- The actual data is available through the following links:
     8bit: https://eostore.itc.utwente.nl:5001/sharing/c9V2UCYsM (125GB!)

16bit: https://eostore.itc.utwente.nl:5001/sharing/6pQmljqoN (250GB!)

UAV-Centre (Friedensplatz only)

- Contains one csv file with some image measurements of some points (see folder Ground_Truth-Centre for 3D ground coordinates).
  https://eostore.itc.utwente.nl:5001/sharing/Uw1BxPryc
- Download links for images (all images **Sony Nex7 from octocopter**):
  Rathaus (city hall): https://eostore.itc.utwente.nl:5001/sharing/3Jhp6O628
  Square place (nadir view): https://eostore.itc.utwente.nl:5001/sharing/1GUIcFapI
  Obelisk: https://eostore.itc.utwente.nl:5001/sharing/eXxoD65Cw
  Stadthaus: https://eostore.itc.utwente.nl:5001/sharing/K6xUIRSm2

UAV-Zeche

- Contains zecheSirius_ALLIMAGES_im_measurements.csv: image measurements of GCP in the Sirius images, see folder Ground_Truth-Centre for 3D coordinates
- Contains verwaltung_some_image_marks.csv: some image marks in the UAV and terrestrial images showing the "Verwaltung" , see folder Ground_Truth-Centre for 3D coordinates
  https://eostore.itc.utwente.nl:5001/sharing/VCRHFgbfJ
- Download links for images (all images **Sony Nex7 from octocopter**):
  Pferdestall: https://eostore.itc.utwente.nl:5001/sharing/f49J04Pjc
  Lohnhalle: https://eostore.itc.utwente.nl:5001/sharing/8HAxVae7W
  Verwaltung: https://eostore.itc.utwente.nl:5001/sharing/eCERFMl8r

- Download links for images (all images **Mavinci Sirius with Panasonic_GX1**), this nadir image flight covers the entire Zeche-Area: https://eostore.itc.utwente.nl:5001/sharing/G3YiE31fl [1]

Terrestrial_Images-Centre
- Download links for images (**Sony Nex7**):
  Rathaus (city hall): https://eostore.itc.utwente.nl:5001/sharing/RF4U3LQLU
  Square place: https://eostore.itc.utwente.nl:5001/sharing/h3kijReKT
  Obelisk: https://eostore.itc.utwente.nl:5001/sharing/OQzbPyqke
  Stadthaus: https://eostore.itc.utwente.nl:5001/sharing/LooWEpab0

- Download links for images (**Canon D600 Voigtländer 20mm**):
  Rathaus (city hall): https://eostore.itc.utwente.nl:5001/sharing/OMi4NCExW
  Square place: https://eostore.itc.utwente.nl:5001/sharing/EWYFuMbXc
  Obelisk: https://eostore.itc.utwente.nl:5001/sharing/fJwtmmvRm
  Stadthaus: https://eostore.itc.utwente.nl:5001/sharing/LL1Wz2Fqv

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[1] This dataset is also described and analysed in the following paper:
https://www.researchgate.net/publication/299369565_Accuracy_Analysis_of_Photogrammetric_UAV_Image_Blocks_Influence_of_Onboard_RTK-GNSS_and_Cross_Flight_Patterns

Terrestrial_Images-Zeche

- Download links for images (all images **Sony Nex7**):
  Pferdestall: https://eostore.itc.utwente.nl:5001/sharing/Hh0KOo5A1
  Lohnhalle: https://eostore.itc.utwente.nl:5001/sharing/4mmlYsgCh
  Verwaltung: https://eostore.itc.utwente.nl:5001/sharing/t2tMwwDHr

- Download links for images (**Canon D600 Voigtländer 20mm**):
  Pferdestall: https://eostore.itc.utwente.nl:5001/sharing/7LL8yOCjE
  Lohnhalle: https://eostore.itc.utwente.nl:5001/sharing/T9S6qDC6C
  Verwaltung: https://eostore.itc.utwente.nl:5001/sharing/rgvQXerQW

Ground_Truth-Centre

- contains 3D-coordinates of ground points and targets along the buildings in two different versions: with ellipsoidal heights and with German ortho heights (DHDN). The projection is always UTM32N. Attention: some of the targets put on the façade moved during acquisition (heavy wind), hence not all of them are physically stable!
  https://eostore.itc.utwente.nl:5001/sharing/TyZlDqHiQ

Ground_Truth-Zeche

- contains 3D-coordinates of ground points and targets along the buildings in two different versions: with ellipsoidal heights and with German ortho heights (DHDN). The projection is always UTM32N. Attention: some of the targets put on the façade moved during acquisition (heavy wind), hence not all of them are physically stable!
  https://eostore.itc.utwente.nl:5001/sharing/gNjmMep1b

Laserscanning Data

The laserscanning data comes in simple zipped .pts files encoding XYZ (XY: UTM 32N, Z: ellipsoidal height) and intensity values.
City centre: https://eostore.itc.utwente.nl:5001/sharing/XBb2Kpymr
Zeche Zollern: https://eostore.itc.utwente.nl:5001/sharing/bA7Frq0k6