Maa-57.1010 Fundamentals of Photography, Photogrammetry and Remote Sensing (4 cr)

Examination 7th of May, 2011, 10-13 o'clock

1. Explain spatial, spectral and radiometric resolution of passive imaging instruments and how they are related to each other?

2. Explain, how image is formed in optical across-track (whisk broom/opto-mechanical scanner) and along-track (push broom/ opto-electronic scanner) scanning imaging devices.

3. Explain shortly what do the following terms mean:
   a) CCD-detector.
   b) Supervised classification.
   c) Longitudinal overlap in aerial photography.

4. Describe the components and functions of typical photogrammetric stereo work station. (6 p)

5.

   a) Explain the difference between "images at the normal case of stereo imaging" and "convergent images". (2 p)
   b) Photogrammetric methods make it possible to do mapping from photographs. Two main categories for photogrammetric mapping are the stereo image measurements and mapping from ortho images. Describe how these processes and their end products differ from each other. (3 p)
   c) Why a regular (XY)-grid (at object space) can look like irregular at the aerial image plane? (1 p)