



PART 1: FROTTAGE AND SfM IN FIELD

Guidance for the exercise: Practical demonstrations are given by the teacher, or teachers, of following two methods.

1) Paper rubbing (frottage) method:

- Paper rubbings are made using carbon paper and fixed with dry grass. For a video demonstrating the technique, please see: <https://www.facebook.com/RockArtScandinavia/videos/1268317443211445/>
- Each rubbing should have homogenous contrast in order for the objective qualities of the method to be maintained.
- The grip on the hand towel with carbon paper is important in allowing you to control the pressure on the paper. Grip with the thumb, 2nd and 3rd fingers allows most control. To see an example of the correct grip, refer again to the link provided above to the facebook page of Tanum Museum of Rock Carving and Rock Art Research Centre Underslös.

2) Image based model:

The process of taking photos for an image based model using the *Structure from Motion* (SfM) technique for both an object and a surface.

- It is key to emphasize the need for sharp focused images. The images dictate the quality of the model.
- 70% overlap between each photo will always result in accurate reconstruction.

- Photos, and therefore models taken closer to the target surface, contain more detail than those taken farther away. Optimal distance varies with your camera, but 50-80 cm is a good balance between detail and file sizes during processing.
- Even at the practical stage, the importance of the maintenance of file structure should be emphasised. If this is changed, subsequent processing steps are no longer possible.

Exercise:

- Students make 1 or more rubbings individually.
- Students take an SfM of both an object and a flat surface
- Students process and export their models using either a trial version of PhotoScan on their own computers, or using the teacher's computer with a licenced copy of PhotoScan.

