

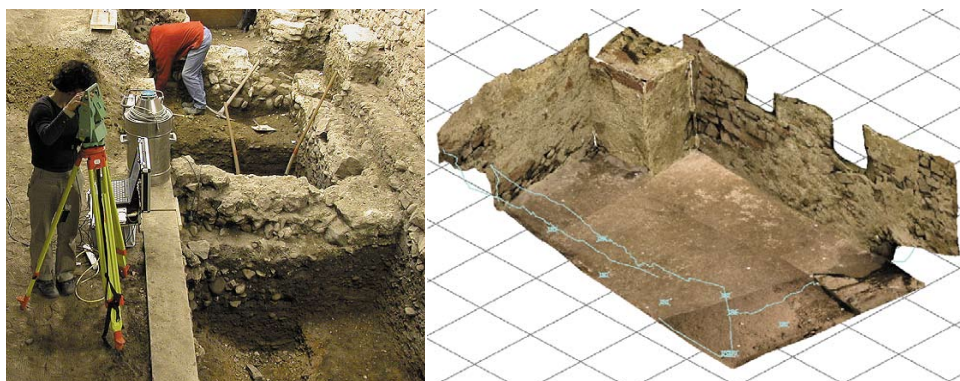
Surveying with TachyCAD and PhoToPlan at the Archaeological Soil Research Agency, Basle, Switzerland

St. Johanns chapel

During the recent archaeological survey of the large and well-preserved structure of the late gothic St. Johanns chapel on top of the Basle minster hill, a previously unknown Romanesque precursor building, built around 1100, was discovered. Various finds and traces of wooden construction proved to be from the Celtic and early Roman era. Parts of a stone building and numerous items from the late Roman era were also found.

The major horizons, profiles and mural views were documented on site with TachyCAD and a Leica tachymeter. This eliminated the need for the complex task of constructing an orthogonal network over the archaeological excavation. From now on the tedious spanning of surveying grids across the excavation area belongs to the past. The levelling is also done directly by the tachymeter.

Using measurements made with TachyCAD, a wireframe model was generated containing information about extension, position and 3D functionality. PhoToPlan was used to rectify digital photographs that were then assigned to the single layers of the tachymeter survey. Using this combination of programmes resulted in 640 CAD files and about 2,500 digital rectifications.



Task

Archaeological documentation of the late gothic St. Johann chapel and of the roman building in Basle (Switzerland)

Customer

Archaeological Soil Research Agency and the Monuments and Historical Buildings Agency, Basle City (Switzerland), www.archaeobasel.ch

Timeframe

2002/2003

Results

Complete documentation of the archaeological excavation with about 640 CAD files and 2,500 digital rectifications

Advantages

- Time saving compared with drawing by hand
- Higher accuracy and quality of plans
- Plans are easier to verify since they are generated on-site

We initially tested the use of TachyCAD and PhoToPlan at our excavation site for two months. The advantages against the conventional documentation mode proved to be so convincing, that from that time on we only used the new documentation system during the complete excavation.

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