Academic Aim

In the past two centuries, there has been a dramatic change of the landscape within the district of Göttingen following different stages of economic land use. The change was accompanied by several transformations of biodiversity, human usage potential, and perceivable forms of appearance (e.g. landscape design) accordingly. The aims of this project are:

(1) to visually reconstruct the historic transformation of landscapes since the end of the eighteenth century (Visualization Stage), and
(2) to evaluate its aesthetic perception (reception) and evaluation today (Evaluation Stage).

We draw our data from multiple monographic and cartographic sources, as well as photographic content. To achieve an accurate and holistic visualization of the Göttingen landscape we base our analyses on different time intervals following the analyses of Korus (2009) Preutenborbeck (2009) (in process):

Methodology

DATA

Data Collection

DEM, Hist. Maps, Land use data, Hist. Aerial photos, GIS
3D-Objects, Textures, Old Photographs

Collection of historic data from various sources according to given time intervals (Figure 1)

Visualization will be created with Visual Nature Studio 3

DATA

Data Processing

Interpolation, Modification, ArcGIS 9.3: Global Mapper, Image Processing, Adobe Photoshop

Visualization will be created with Visual Nature Studio 3

Data Evaluation

Evaluation of Land use changes:
- Decrease of extension of arable lands and grasslands;
- Afforestation in the eastern part of Göttingen;
- Decreation of greenery areas;
- Increase of built-up areas and infrastructure development between villages and city;

Preliminary Results

Selection of viable case studies based on historic data

First 3D-Model Rendering

Expert Survey Construction and Evaluation

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References: