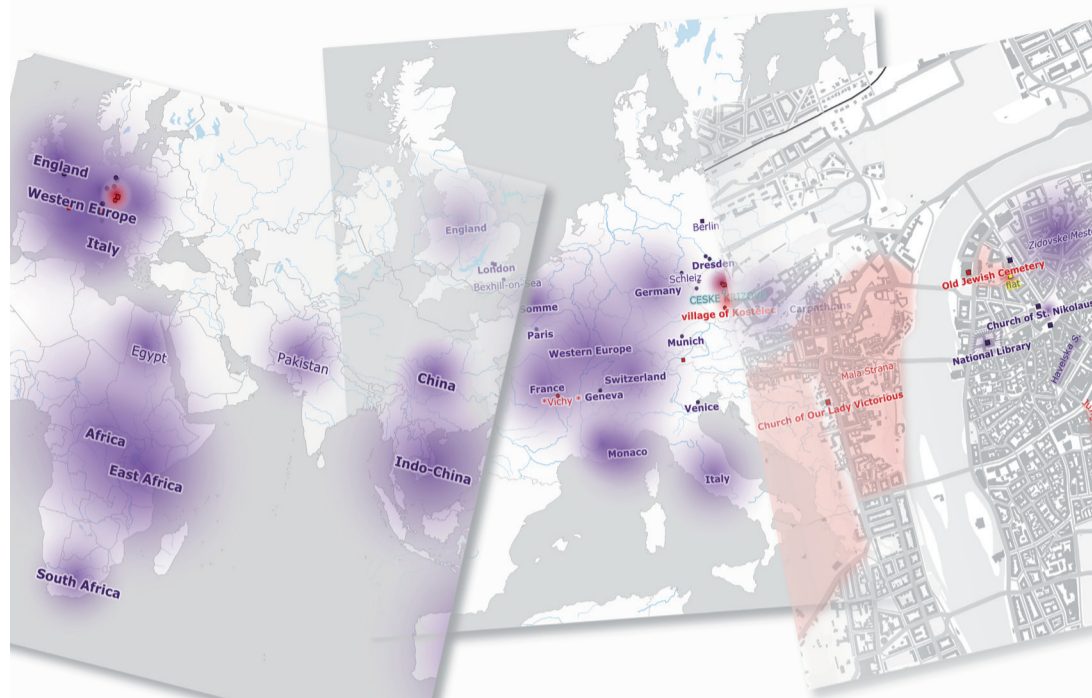# A LITERARY ATLAS OF EUROPE

Mapping and Analysing the Geography of Fiction with interactive Tools

TOWARDS A GEOGRAPHY OF FICTION

It all starts with the supposedly simple questions: Where is literature set and why there? The nascent research area of literary geography aims at visibly rendering overlays of real and fictional geographies to perform complex spatial analyses.

This includes fictionalisation processes over time (of a region, a city); interactions between fiction and reality; and last but not least coherences between natural phenomena, historical or political events on the one side and the quality or quantity of fictional spaces on the other side. What has been lacking up to now is a common ground in form of a consistent methodology in order to break down the geography of fiction and a data model which is able to reproduce inherent rules of fictional spaces.

The «Literary Atlas of Europe» aims to provide the technical workaround for literary scholars. It allows – in one system – the combinations and comparisons of all analysed data along with adequate, automated, interactive visualisations of individual spatial objects, calculation of statistical surfaces and more complex GIS analyses.

Figure left: The map example of the «Literary Altas of Europe» shows the geography of one fictional text in three scale levels: Model region Prague, european and global horizon

FICTIONAL SPACE

The narratologically generic term «fictional space» combines functions of all spatial objects of fictional texts. A distinction is made between five spatial entities:

Settings are places of action where the fictional characters are present and acting.

Projected Place are places, where characters are not present, but they dream of, remember, or long for this place.

Zones of Action are several settings or projected places combined to form a zone.

Marker is a place that is just mentioned, but not part of the categories above. Markers indicate the geographical range and horizon of a fictional space.

Routes are pathes along which characters move through the fictional space; connections between waypoints with features of a setting or of a projected place.

DATA ACQUISITION

The extensive data acquisition is carried out by literary scholars, who read and analyse the spatial dimension of fictions. For this purpose an online data submission form had to be developed, specially tailored to the needs of literary studies. This submission form is connected directly to the database. It controls how the data are read and recorded into the specific data model. It is designed to allow intermediate storage, data modification and manages redundant entries. The submission form provides scholars with an overview through 'action – reaction' buttons: particular entry fields only appear when a specific button is pressed. To ensure an error-free entry, fields expecting numbers are marked and tested before sending the information to the database. Similar precautions have been made regarding coordinate fields – they are directly constructed through the geocoding tool. Any data entered into the form are automatically evaluated and transferred into the database.
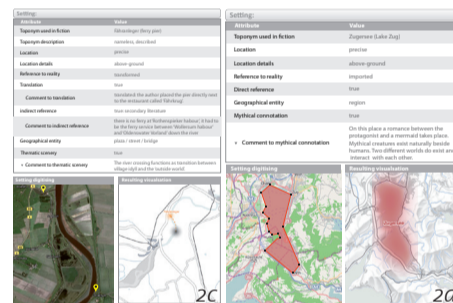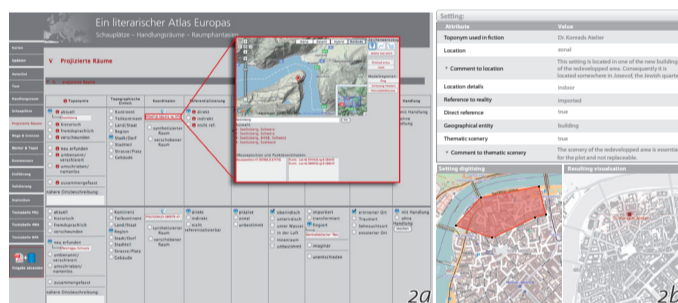

Figure 2a: Data acquisition via an online submission form and digitising tools.

Figure 2b,c,d: Examples of recorded settings and resulting visualisati-

DATA MODEL

A data model was developed to realise and organise a coherent data pool for the «Literary Atlas of Europe». The database can be structured into four parts: general text information, data about the author, the temporal structure of the storyline, and the spatial objects (*Figure 1*). Particular emphasis was put on the modelling of the spatial structure of the text – the modelling of spatial objects. The data model is implemented within a relational database management system (PostgreSQL + PostGIS) and connected to an online submission form in order to receive scholars' analyses of the data.

Figure 1: Data model of the «Literary Atlas of Europe». The complex spatial data model tries to picture the fictional space in a way, that allows extensive, comparative spatial analysis and an appropriate automatically visualisation of the data.
Marked in green is the data model implementation of some of the special inherent rules of fictional space (listed on the right side).

INHERENT RULES OF SETTINGS

The ways settings are described are quite different from fiction to fiction, since settings do have their own, inherent rules that make fictional space difficult to capture and visualise. Appropriate visualisation methods which match the inherent rules of individual literary places had to be developed. For this purpose, the data model necessitate additional attributes and composed geo- metries. Visualisation methods for several specific properties are suggested and implemented to allow automatic map generation.

Inherent rules of settings

① Settings have uncertain, vague boundaries, neither physical / natural, nor administra- tive, man-made boundaries. ①

② Settings are sometimes difficult to localise, their very nature is an indeterminate location. ②

③ Settings are fragmentary, fictional space is completed and developed by the imagination of the reader. ③

④ Settings can be transformed or remodelled by the author. ④

⑤ The extent of a setting can vary from a room inside a building to an international or global level. ⑤

⑥ The 'real-world counterpart' of a setting can be situated in any time epoch; in the meantime the real-world topography may have altered. ⑥

SINGLE OBJECT MAPS

diagrammatical view without background map

fuzzy shapes

comparision of current and historical maps

spreading texture means «somewhere»

on several map scales
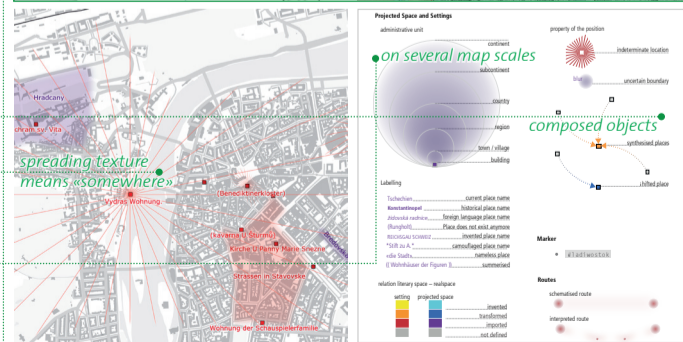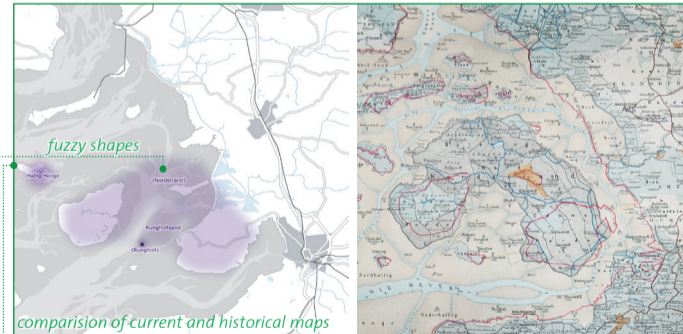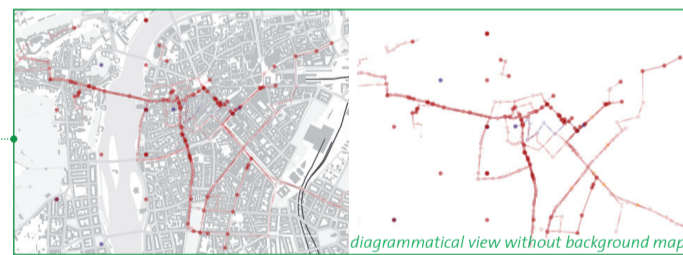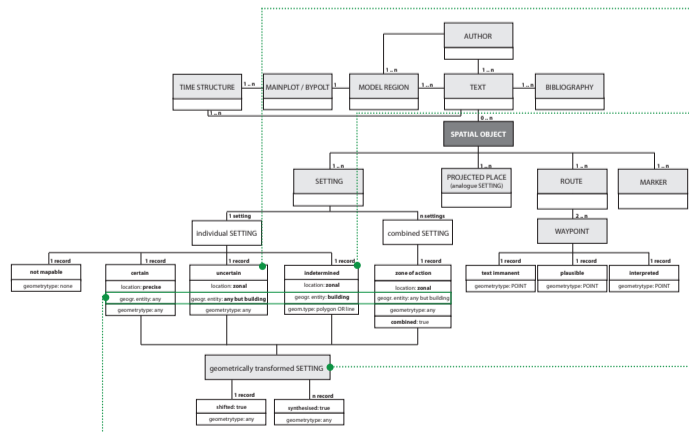
composed objects

Figure 3: Automatically generated interactive maps from the database of the «Literary Atlas of Europe». Each of them shows an ex- tract of a fictional space (a novel, a novella etc.) from text analyses of model regions Prague and Northern Frisia.

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