

Spacialist : A Virtual Research Environment for the Spatial Humanities

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Many archaeological research projects generate data and tools that are unusable or abandoned after the funding period ends. To counter this unsustainable practice, the Spacialist project was tasked to create a virtual research environment that offers an integrated, web-based user interface to record, browse, analyze, and visualize all spatial, graphical, textual and statistical data from archaeological or cultural heritage research projects. Spacialist is developed as **an open-source software platform** composed of modules providing the required functionality to end-users. It builds on **controlled multi-language vocabularies** and an **abstract, extensible data model** to facilitate data recording and analysis, as well as interoperability with other projects and infrastructures. Development of Spacialist is driven by an interdisciplinary team in collaboration with various pilot projects in different areas of archaeology. To support the complete research lifecycle, the platform is being integrated with the research-data archive of Eberhard Karls University Tübingen, guaranteeing long-term availability of project data.



Web-based, open-source tools

Data Manipulation Structured Data Organization User-definable User-definable form sheets with multiple data types data model

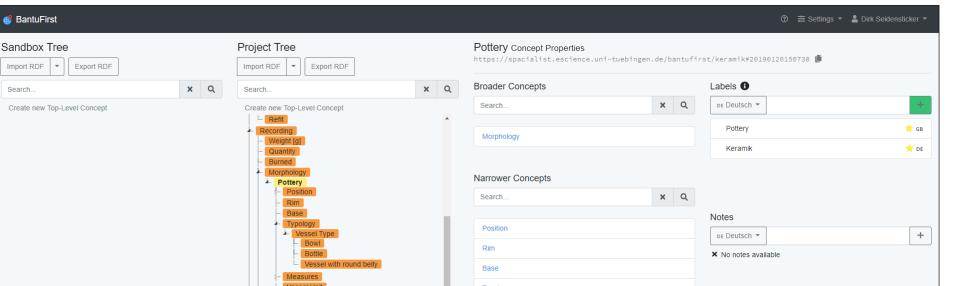
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🌐 BantuFirst

Ontology based Knowledge graph

- Multilingual poly-hierarchical ontology according to W3C-standard SKOS
- Editing via special tool ThesauRex





Extensions (Plug-Ins)

Geographical

Information System

Linked Geometries

- <u>Data Analysis</u>
- Filtering, aggregating and
- browsing of project data
- Generating tables and maps
- Export to Excel, GeoJSON, etc.
- File Manager
- Upload files
- Link to entities
- Integrated viewer for images, text, PDF, 3D-models, etc.
- Geographic Information System
- Additional overlays and basemaps
- Styling based on attribute values
- Export & import of geodata

Powered by:





The modular, virtual research environment



the central hub for data storage and analysis

within V/OUr project.



Use case: The BantuFirst project (ERC Consolidator's Grant N° 724275))

BantuFirst is a cross-disciplinary research project aiming at transforming our thinking on the Bantu Expansion by collecting new empirical evidence to gain a better understanding of the interconnections between human migration, language spread, climate change and early farming in Late Holocene Central Africa.

Spacialist is used as **central hub for data recording and analysis**. Use of the platform offers:

Statistical analysis through direct access to project data using statistical programming language R

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98 g.id = e.geodata_id AND 99 root_entity_id = 2523")		(m) → P Zoom → Export → ○		😏 Publish 👻
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105 - ```{r}			5.01578°S -	
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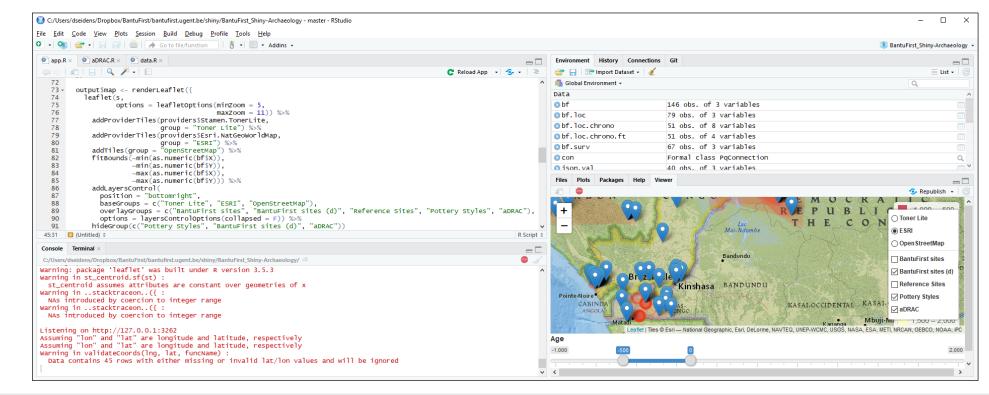


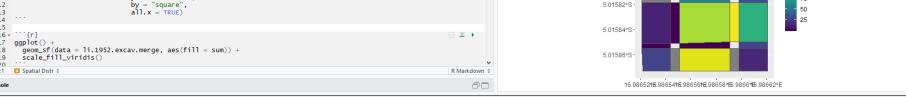
Baden-Württemberg

MINISTERIUM FÜR WISSENSCHAFT, FORSCHUNG UND KUNST

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Statistical analysis and mapping of all excavation data





An interactive map of archaeological sources within Central Africa (in Prep.)



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