nodegoat: Enabling Explorative Research

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Introduction

nodegoat allows scholars to build datasets based on their own data model and offers relational modes of analysis with spatial and chronological forms of contextualisation. By combining these elements within one environment, scholars are able to instantly process, analyse and visualise complex datasets relationally, diachronically and spatially; trailblazing. nodegoat follows an object-oriented approach throughout its core functionalities. Borrowing from actor-network theory this means that people, events, artefacts, and sources are treated as equal: objects, and hierarchy depends solely on the composition of the network: relations. This object-oriented approach advocates the self-identification of individual objects and maps the correlation of objects within the collective.

Research Environment

nodegoat is a web-based research environment that facilitates an object-oriented form of data management with an integrated support for diachronic and spatial modes of analysis. This research environment has been developed to allow scholars to design custom relational database models. nodegoat dynamically combines functionalities of a database management system (e.g. Access/FileMaker) with visualisation possibilities (e.g. Gephi/Palladio) and extends these functionalities (e.g. in-text referencing, LOD-module) in one web-based GUI. As a result, nodegoat offers researchers an environment that seamlessly combines data management functionalities with the ability to analyse and visualise data.

The explorative nature of nodegoat allows researchers to trailblaze through data; instead of working with static 'pushes' – or exports – of data, data is dynamically 'pulled' within its context each time a query is fired. The environment can be used in self-defined collaborative configurations with varying clearance levels for different groups of users.

As a result of nodegoat's object-oriented set-up, everything is an object. In the case of a research project on correspondence networks, this means that a researcher would define three types of objects in nodegoat: 'letter', 'person', 'city'. Each object relates to an other object via relations (e.g. a letter relates to persons to identify the sender/receiver and this letters has been sent from/received in a city). In an extended research process, researchers could also define themselves as objects in the dataset, their sources or other datasets. Due to the focus on relations and associations between heterogeneous types of objects, the platform is equipped to perform analyses spanning multitudes of objects. By enriching objects with chronological and geospatial attributed associations, the establishment and the evolution of networks of objects is fully contextualised. In nodegoat, these contexts and sets of networked data can be instantly visualised through time and space.

This open-ended approach makes nodegoat different from tools like the Social Networks and Archival Context Project, Alan Liu's Research Oriented Social Environment, the Software Environment for the Advancement of Scholarly Research, Prosop, or tools with a main focus on coding of qualitative data as seen in various computer-assisted qualitative data analysis software. With its object-oriented approach, nodegoat facilitates the aggregation of collections, coding of texts, and analysis of networks, but models these methods towards the creation and contextualisation of single objects that move through time and space.

Facts & Figures

nodegoat is conceptualised and built by the independent research firm LAB1100, based in The Hague, The Netherlands. In order to share the functionalities of nodegoat with the scholarly community, scholars and research institutes are invited to use nodegoat for their own research purposes. Over 300 scholars have a personal research domain on nodegoat.net. Over 15 institutional partnerships have been established with universities, research institutes, and museums in The Netherlands, Belgium, Luxembourg, and Germany.

A nodegoat user forum and FAQ is hosted on the Historical Network Research website. In the course of 2018 an open source package of nodegoat will be

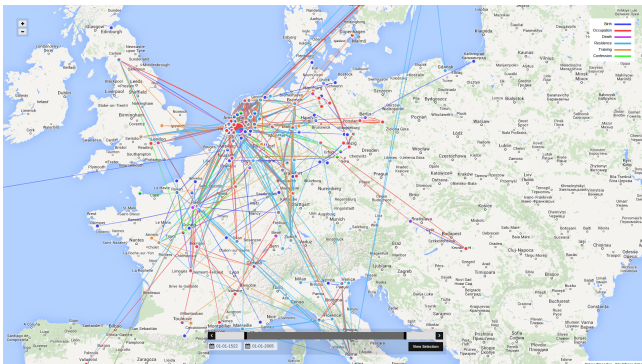released within the wider framework of the nodegoat community.

Examples of projects in nodegoat

Project 'Mapping Notes and Nodes in Networks' in collaboration with Huygens ING, University of Amsterdam, & KNIR

The whereabouts of over 20.000 people visualised through time and space in nodegoat
http://mnn.nodegoat.net/viewer.p/1/47/scenario/17/geo/

Illustration of a personal research dataset in nodegoat

Geographical network visualisation in nodegoat by Tobias Winnerling for the project 'Wer Wissen Schafft'

A Wikidata/DBpedia Geography of Violence

Over 12.000 battles as described by Wikidata and DBPedia users visualised in nodegoat,
http://nodegoat.net/blog.s/14/a-wikidatadbpedia-geography-of-violence.