

The First Results of User Experience Experiment with Accessing Geospatial Information in the Kadaster Knowledge Graph with Augmented Reality

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SUMMARY

"User experiences in accessing high quality, authoritative data available in the Kadaster Knowledge Graph through an Augmented Reality application".

The Netherlands' Cadastre, Land Registry and Mapping Agency – in short Kadaster – collects and registers administrative and spatial data. Kadaster also maintains both the Key Registers for Cadastre as well as for Topography. Users of the data provided by Kadaster and other governmental organisations have indicated that this data can be made available in a more accessible, integrated and user-friendly way; suggesting that these improvements may support these organisations in their ambition to reach to broader and more diverse groups of data users.

Kadaster recently experimented with publishing several key registers as linked data and integrated these in Kadaster Knowledge Graph (KKG). To provide this data in a more user-friendly way, Kadaster developed a prototype Augmented Reality (AR) application with the intention of providing users with extensive building object information originating from several of the key registers maintained by Kadaster. With this application, the user is able to scan building objects in their environment using a smartphone camera, select these objects and display associated building information through the user interface. This application is intended to serve as but one example of how technologies such as augmented reality could be both be supported by graph technologies as well as offer data visualisations which support users in accessing authoritative data contained in these graphs.

To evaluate how the users experience and perceive the aforementioned methods of data provision and visualisation, a number of consultation sessions were conducted where users provided feedback on the content of the information available in the KKG as well as feedback on the interface of the

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AR application itself. In general, testers of the AR application were positive but do offer a number of potential improvements regarding the information content of the KKG and the functionality offered by the application. These results highlight that making use of AR as a new technique for the presentation of governmental data is attractive and improves the accessibility of this information for a wider variety of users. Additionally, these first results also highlight the fact that the combination of the KKG as data foundation and the AR application for the visualisation of data offers a powerful architectural solution which ensures that the high quality, authoritative data from different key registers can be used in various applications; providing assurance to the end user as to the trustworthiness and actuality of the source.

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