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d) Data standards and interoperability

A method for place names interoperability within a national spatial data infrastructure

Submitted by Finland **

A method for place names interoperability within a national spatial data infrastructure

The National Land Survey of Finland (NLS) maintains the primary national repository of standardised place names, the Geographic Names Register (GNR). There are also several other organisations that maintain names as attributes of spatial objects stored in their databases.

One of the objectives set for the national spatial data infrastructure (SDI) in Finland is to avoid duplicated collection, maintenance and updating of spatial information. For this reason, the National Land Survey has proposed a method for place names interoperability within the Finnish SDI. The method, illustrated in Figure 1, is based on existing interoperability components, i.e. persistent unique identifiers of objects called Places in the GNR, and the NLS names Web Feature Service (WFS) interface.

According to the proposal, only the National Mapping Agency (NLS) needs to maintain standardised names. In the GNR data model, each Place may have one or more Place names, with appropriate attributes for both Places and Place names. The GNR data is accessible through a standard service interface (WFS), which allows queries using, e.g., place-ids as a search key.

In order to make use of the proposed method, the external organisation (Organisation X in Figure 1) stores, when applicable, GNR place-ids as attributes to its respective spatial objects. Afterwards, by using the NLS names Web Feature Service with place-ids as search keys the organisation may update the names information of its spatial objects with NLS up-to-date names data (e.g. change-only-updates), or include the GNR names data in its data services when needed. Hence, the organisation does not need to take care of the maintenance or updating of the names data itself.

In Figure 1, Organisation Y receives spatial data from Organisation X. This data may include GNR place-ids as attributes of the spatial objects transferred. In this case, Organisation Y may later make use of the NLS Web Feature Service the same way as Organisation X.
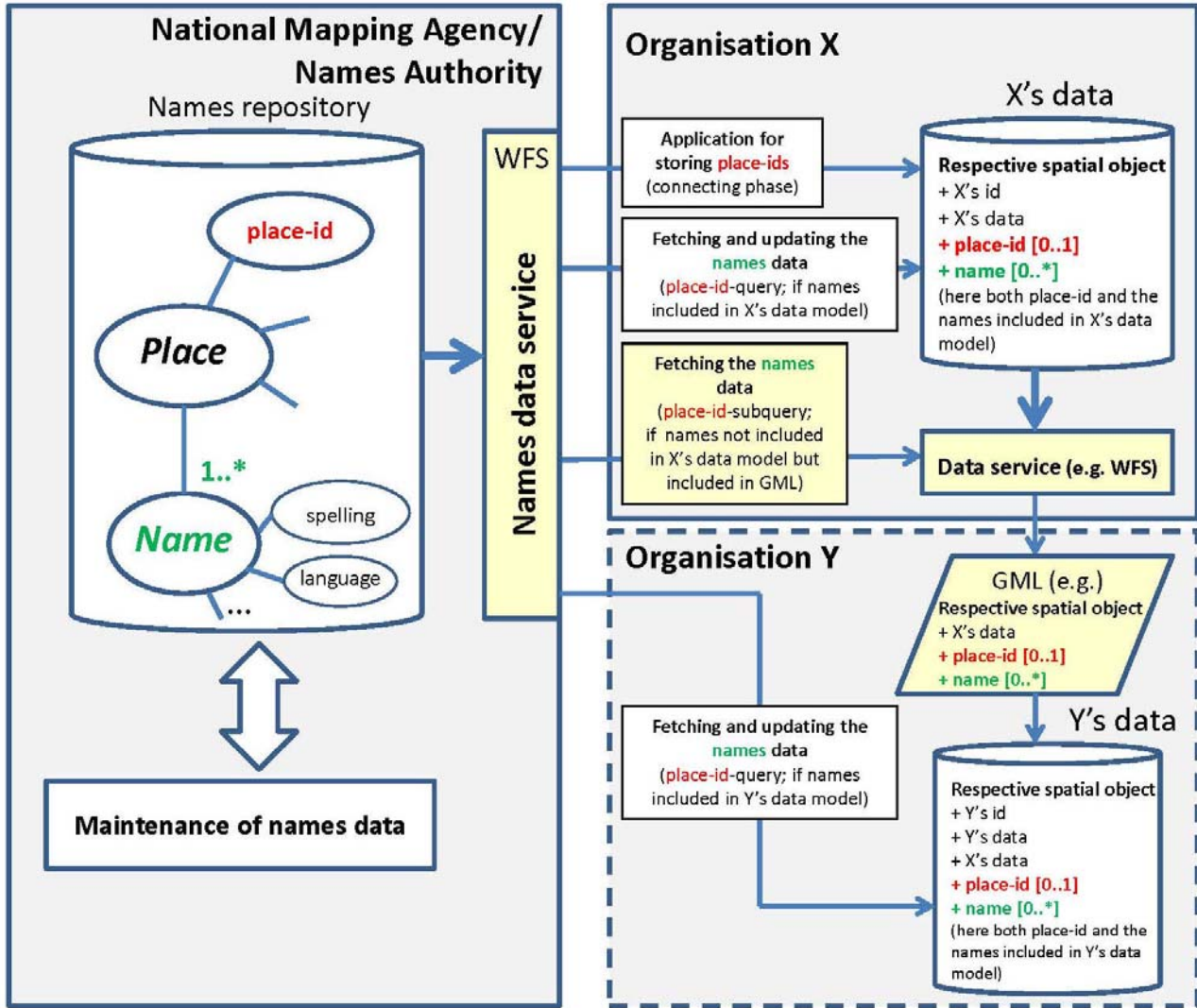
Figure 1. A method for place names interoperability based on persistent unique identifiers and a data service interface provided by the holder of a national names repository.

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