

23 May 2002

English only

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**Eighth United Nations Conference on the  
Standardization of Geographical Names**

Berlin, 27 August-5 September 2002

Item 12 (c) of the provisional agenda\*

**Toponymic data files: toponymic data transfer  
standards and formats**

**Characteristic features of toponym objects and  
their dynamics**

**Submitted by Poland\*\***

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\* E/CONF.94/1.

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## **Introduction**

Toponyms have attracted cartographer research not only due to their linguistic material but also by reason of their function in communication. Toponyms are used to designate individual objects in reference to the Earth's surface, mainly by natural language. In the pre-cartographic period all topographic information was delivered as descriptions.

Since the first maps appeared, cartographers have borrowed toponyms for a natural language as symbols of individual objects. Hence, all toponymic research in cartography concerns the relation between a toponym and its object, separated by any features from its surroundings. The separating role played by features has caused an object to become an individual and receive a proper name, i.e. a toponym. Hence research into toponym objects should commence by examining these objects' characteristic features.

## **Types of toponym objects**

Research into toponym objects should begin by reviewing different ways of how they came to exist on land, from the viewpoint of synchrony. Traditionally, cartography is linked to visual reception of information; the most evident features of objects on the Earth's surface are perceived visually – immediately or with the use of special devices. Possession of individual visual features is a major reason for object denomination.

Hence, all toponym objects can be divided into objects possessing characteristic visual features and those void of such features. A division so constructed is called dichotomic and exhausts the whole range of divided objects. A division founded on the visual character of objects can be called physiognomic.

This comprises natural and artificial objects: relief forms, waters, forests, buildings, settlements, roads and so on. Visibility of objects depends on an observer's position, at ground level or above. A map convenes these two viewpoints. Visual features can be easily graduated and may exist at a higher or lower degree. They thus belong to a typological group of features since no clear limits exist between physiognomic and non-physiognomic features. Named objects possessing such features to a high degree are called outstanding and receive special treatment on maps.

Toponym objects on the Earth's surface can also be divided in another manner basing on features determined by social and economic relations. As a rule, a division by social contract is independent from terrain physiognomic features. New objects can be created by administrative decision (e.g. establishing a new commune) or by property transaction (purchasing a piece of land). On a par with physiognomic objects they may also be of outstanding character when playing a significant role in social life. Contrary to the first group of objects, the limits of these objects are accurately defined on the ground and protected by law with infringement being penalised.

As was earlier mentioned, all toponym objects are divided into social and non-social objects. Though the feature discussed in this case is of non-typological but classificatory character, clear limits exist between these objects. This division is also of a dichotomic nature. Social objects may possess

characteristic visual features though that is not imperative. They are visualised only on maps dedicated to these topics.

Apart from toponym objects defined by physiognomic or social features, objects named without the above mentioned features can be encountered in our surroundings. These include parts of the earth's surface determined by toponyms rooted in objects existing in the past or in unusual events which took place there. Places denominated because of non-existent water mills, ancient battlefields, or other places connected with human beliefs are to be mentioned here.

Features defining such named objects can be termed cultural features. Hence all toponym objects can be subject to a third division, into cultural and non-cultural objects, yet another dichotomic division. Cultural objects may also be distinguished when they are of historical value or deeply rooted in human consciousness. As previously, a cultural object may, or may not, possess its own physiognomic or social features.

Cultural places are at the bottom of the list where clarity of limits is concerned. It is impossible to give the exact location where a village existed in the past. It can be admitted that cultural and physiognomic features are of a typological character. The difference here is between social and cultural objects though both possess anthropological roots.

It could be claimed that not enough attention has been directed by cartographers to such objects. With only a few exceptions their symbols have not been elaborated, with cultural objects being designated on maps solely by toponym inscriptions. That may lead to doubts concerning the object to which an inscription refers and, as a result, cultural object toponyms are frequently omitted from maps.

### **Structure and dynamics of toponym objects**

The above presented types of toponym objects as the result of three divisions are of a model character and rarely appear on the ground in their pure shape. All relations of extensions between them are possible, to mention equivalence (when all types of extensions overlap), intersection (when they overlap in part), exclusion (when they do not overlap) and so on. Such a state of affairs allows different interpretations to be made of the same terrain object and its toponym: as physiognomic, social or cultural. For instance topographers may consider a toponym to mean a hill, farmers – a field and elderly inhabitants – a place visited by witches.

In topographic cartography all toponyms tend to be interpreted as symbols of physiognomic objects presented on these maps, even should the extension of two different types of objects only overlap in part. Toponyms of social and cultural objects which cannot be interpreted in that manner are frequently omitted since they cannot be related to any symbol on the maps. When written on maps, such toponyms seem to have lost their objects. Similar problems are encountered in relation to some toponyms of physiognomic objects when elaborating cadastral maps, while the same problems accompany elaboration of cultural objects on both kinds of maps.

Toponym objects may be defined not only from the synchronic viewpoint by differentiation of features, but also by how they have changed in time. Diachronic studies display that object features may change in intensity, some features disappearing – others declining. Their dynamics are also manifested in the partition and junction of objects.

An evident regularity exists in the historical development of individual types of objects and their mutual relations. Primarily physiognomic objects of toponyms predominate. Natural landscapes in early times were substantially differentiated, as were cultural landscapes. Land was felt to be inhabited by spirits, either friendly or hostile to human beings. Spiritual phenomena were not felt to be connected with any concrete object but rather with a section of space. This was propitious to the formation of cultural alongside physiognomic objects. The social toponyms which were then formed to a great degree overlapped physiognomic objects, since those were persons who brought land into cultivation were limited by natural conditions.

But as technology developed and economic activity increased in intensity, social toponym objects became independent of physiognomic objects. Today they are the most dynamic section of landscape and toponym objects, whereas cultural objects tend to change in the opposite direction. Rapid changes in the environment and transformations of human mentality have resulted in cultural features no longer being perceived and toponymically productive. Toponyms of cultural objects which remain are interpreted as signs of physiognomic or social objects.

## **Conclusions**

Research into types of toponym objects and their dynamics is leading to a more general concept of a toponym object. In the wake of transformations of toponym objects, both within particular types of objects and from physiognomic to cultural and social objects, it can be remarked that toponyms continue generally to determine the same place on land despite changes which may occur in object features and type. For instance, toponyms of waters are reduced to meadows situated on the same spot, toponyms of cleared forests – to fields and in consequence – to settlements created on such fields.

Transmitting a toponym from one object to another results from attachment a toponym to the place occupied by a previous object. It can, thus, be accepted that the most general object of a toponym is a place, a section of space connected with the Earth's surface. The singular character of such a toponym object is expressed in spatial continuity or in the compactness of some sections of space. Since it is the individual symbol of a place, a toponym thus defines every kind of object in such a place. A name which denotes objects in different places could not function as a proper name but only as a topographic appellative.

Toponyms used as symbols of the place occupied by an object on the Earth's surface, were used in the oldest pre-cartographic and pre-geodetic land documentation. They defined, by description, where state frontiers and estate borders ran, as well as the position of different objects on land. In this manner objects were identified many times over down the centuries.

Today this function is performed by these toponyms alone concerning which objects are contained in a map, for instance topographic or cadastral. Such a large-scale map is still required, on which all types of toponym objects would be indicated, also including cultural objects with their borders. Such a map would serve as a thesaurus of toponyms for purposes of cartography and other interested areas of activity.

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