

## Section 11 Cartographic aspects

### Chapter 28 Updating Geographical Names and assessing the optimal Names density in Topomaps

Helmut Zierhut

#### 28.1 Introduction

Just as in reality the landscape changes over time, so the graphical map content has to be adapted and updated. Changes in the landscape lead to changes in the geographical names or to new geographical names, and these have to be taken into account and to be corrected in the map.

Depending on the nature of its landscape, an area will contain more or less named features. Depending on the scale of the map it will not always be possible to render the names of all these features on the map. This is because we have to be aware of the fact that each additional name on the map will not only bring information, but will also lose information, as it will also conceal graphical map content.

Chapter 28 will deal with updating the geographical names and acquiring a meaningful names density on modern topographical maps.

#### 28.2 Updating the map content

Simultaneously with the systematic updating of the graphical map contents (in Austria every six years), the geographical names in the map will be checked as well, and be corrected if necessary. This updating will be effectuated by trained topographers of the national

mapping agency. All changes, additions and deletions in the toponymy will be submitted for approval to specialists in the authorized geographical names commissions (in Austria these exist for each federal state). If necessary, the submitted names will be corrected by them. A new name can only be inserted in the map after approval by the commission.

The total surface area of Austria is covered by 191 map sheets at the scale 1:50 000 (see figure 28-1). Each map sheet extends for 12°x20' and covers an area of about 520km<sup>2</sup>.

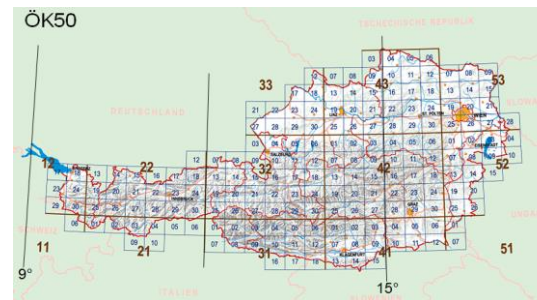


Figure 28-1 Coverage of Austria by the 1:50 000 topographic map series.

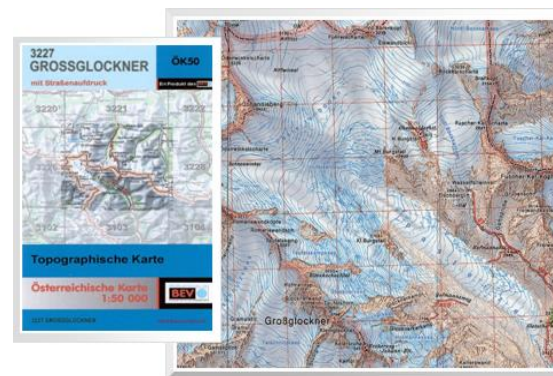


Figure 28-2 Title page of the 1:50 000 Austrian topomaps

The title page of each map sheet (see figure 28-2) shows an overview of the extent covered by that sheet with parts of the adjoining sheets.

#### 28.3 The optimal names density

Depending on the nature and structure of the landscape – whether it is a plain, low or high mountain range, whether it is a settled or non-settled area - the number of named features will vary as well as the number of named features worth to be inserted in the map. This is because we have to be aware of the fact that each additional name on the map will not only bring information, but will also lose information, as it will also conceal graphical map content.

A topographical map should describe the important terrain features and assist map users to orient themselves in the terrain.

To allow for that purpose, internal workbooks of the Austrian national mapping agency require that each map sheet should contain at least 700 geographical names, and at most 1000.

#### 28.4 Categories of Geographical Names

A distinction is being made between settlement names and non-settlement names.

##### 28.4.1 Settlement names

A settlement name, or place name proper or oikonym, (from Greek οἶκος 'house'), is the name of a settlement. This could be a town (like Zell am See in figure 28-3) or a village, a single farm, a hamlet or a dispersed settlement (like Schmitten in figure 28-3).



Figure 28-3 Types of settlements

Usually, for the orthography of a settlement name, a local authority (e.g. a municipality) is responsible. For the correct writing of the names of single objects like private farms the owner would be responsible.




#### 28.4.2 Non-settlement names

Non-settlement names generally describe the general topographical features of the Earth surface. These could be extensive areas like mountain ranges, valleys, or administrative areas but also point features like mountain summits, mountain passes or saddles.

#### 28.4.3 Type sizes and type faces to be used on topographic maps on the scale 1:50 000

The examples in figure 28-4 show the diversity in type sizes and type faces in use for the Austrian 1:50 000 map series.

Type size and type face will vary depending on the structure, size, number of inhabitants and administrative status of the settlement.

Towns,		1 STÄDTE 2 STÄDTE 3St STÄDTE 4St STÄDTE 5St STÄDTE 6St STÄDTE 7St STÄDTE
market towns,		3M Märkte 4M Märkte 5M Märkte 6M Märkte 7M Märkte
Villages,		4 Dörfer 5 Dörfer 6 Dörfer 7 Einzelgehöfte 7a Hofgruppen

Individual buildings and extensions

Figure 28-4 Types of settlements and matching type sizes and faces

A locality or area without a place of residence will be indicated on the map by non-settlement names, such as names of mountain ranges or mountain tops, hydrographical names or landscape names. The examples in figure 28-5 show the variety in type sizes and type faces in use for indicating the names of mountain ranges and summits, landscapes and rivers.




areas		8 GEBIETE 9 GEBIETE 10 Gebiete, Kulturen 11 Gebiete, Kulturen
hydrography		12 FLÜSSE 13 Flüsse 14 Flüsse 15 Flüsse 15a Flüsse
ranges, summits		16 Gebirge 17 Gebirge 18 Kuppen, Spitzen 19 Kuppen, Spitzen 20 Kleine Bergteile, Kuppen, Spitzen

Figure 28-5 Non-settlement features and the representation of their names on the Austrian 1:50 000 map

#### 28.4.4 Geographical Names in areas with minority languages

In some Austrian areas, next to the German language, Croat, Slovene and Hungarian also have official status. According to the appropriate laws and regulations, nameplates for settlements and streets have to be rendered bilingually, in German and the respective minority language. In Austria, these bilingual areas can be found around and south of Eisenstadt and around Klagenfurt.





Figure 28-6 – Minority language areas in Austria



Figure 28-7 Slovene names rendered in parentheses after the German names

In the Austrian topographic maps 1:50 000 und 1:250 000, officially recognised minority names are rendered in parentheses, after their German language name versions, as can be seen in figure 28-7.

## 28.5 Abbreviations

As mentioned in section 28.3, an optimal names density is required in order to safeguard map reading and interpretation possibilities.

Figure 28-8: list of abbreviations used

Bhf., -bhf.	Bahnhof, -bahnhof
Fh.	Forsthaus
Kls., -kls.	Kloster, -kloster
Q.	Quelle

Generic concepts that occur frequently, like railway station, foresters' residences, monasteries, wells, etc. can therefore be abbreviated and thus have a less strong impact on the map image.

In order to ease the use of abbreviations, as well as to standardize them, a list of abbreviations is often included in the map margin (see figure 28-8).

## 28.6 Geographical Names in adjoining foreign countries

Settlements beyond the state border, that used to have close relationships with the German-speaking population, and of which the German name versions still are well-known and used in Austria, would be rendered by both their official foreign name and by their German name (in parentheses) on official Austrian topographic maps 1:50 000, 1:200 000, 1:250 000 und 1:500 000. This is shown in figure 28-9, where settlement names in adjoining Czechia are rendered bilingually.



Figure 28-9 Austrian Czech border area as rendered on Austrian maps 1:50 000

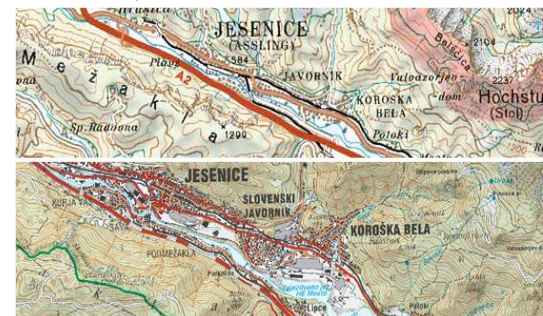


Figure 28-10 Top: Austrian map 1:200 000 with the Slovene settlement Jesenice (Assling). Below: Slovenian map 1:50 000 without German name variants

In the new civilian-military Austrian topographic maps, the cartographic contents of the neighbouring states rendered on them are no longer processed, drawn and updated by Austria. Instead, the map content for these foreign areas is based on the updated original databases of these adjoining states. As can be seen in figure 28-10, by comparing the two maps, these foreign cartographic databases do not contain German-language name variants for settlement names.

I hope that with this information about cartographic procedures in Austrian official mapping I have provided some incentives for the production and processing of cartographic products.

### **28.7 References**

-Bundesamt für Eich- und Vermessungswesen, Wien (2000). Technische Weisungen zum Zeichenschlüssel, (interner Arbeitsbehelf für Topographen und Kartographen)

-Bundesamt für Eich- und Vermessungswesen, Wien (2007). QM-Verfahrensanweisungen, Österreichische Karte 1:50 000, 1:250 000. Aktualisierung der Kartographischen Modelle KM50, KM250.