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## Prehistoric and Early Historic Maps in Europe: Conception of Cd-Atlas

*Keywords:* prehistoric and early historic maps; cd-atlas; atlas conception; atlas cartosemiotics.

### *Summary*

The topic of the poster was derived from the lectures "Prehistoric and Early Historic Maps". These lectures are held for cartography students in the course "History of Cartography" in Institute for Cartography of Dresden University of Technology. Our poster topic belongs to the research project "Atlas-Cartography and Atlas-Cartosemiotics" in Institute for Cartography. This project consists of several subprojects. A subproject concerning prehistoric maps consists of two parts: a. development of a conception of the cd-atlas "Prehistoric and Early Historic Maps in Europe" and b. development of a conception of the pocket-atlas "Prehistoric Maps in European Museums". The paper deals with some conception aspects of the electronic or cd-version of the atlas "Prehistoric and Early Historic Maps in Europe".

### Cartosemiotic conception aspects

From a cartosemiotic point of view it is possible to structure any atlas with the aid of the information modules. This structuring is used for creation and use of atlases (Wolodtschenko 2005). Fig. 1 shows the structural model of atlas.

The following basic information modules were selected for our atlas: maps, text, photos, register (Fig.2). The text- and photos-modules are basic information ones; the maps are used for orientation and search of museums or archaeological sites.

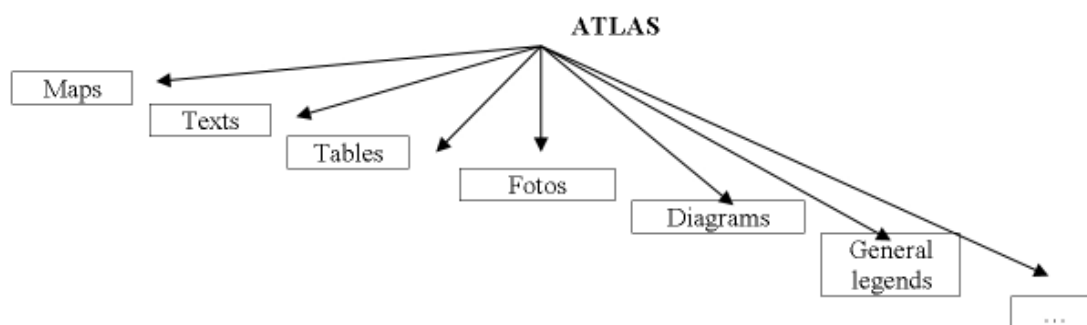


Figure 1. Module structure of atlas (Wolodtschenko 1999).

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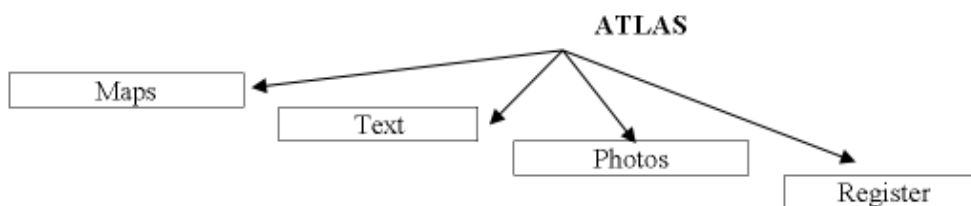


Figure 2. Module structure of cd-atlas.

### Selected museums

The different material objects of the prehistoric art (mammoth tusks, animal bones, clay boards, kitchenware etc.) with engraved and/or in-painted images one finds in museums as exhibits or in nature as rock and cave petroglyphs. Thanks to cartographic and cartosemiotic interpretation the some objects of primitive skill obtained special reputation and value as the cultural monuments of paleolith, neolith and the bronze, which reflect the locality of primitive men. One can call such primitive representations prehistoric and early historic maps.

Our poster shows selected map-similar representations, which are demonstrated in some European museums as archaeological exhibits. From a cartosemiotic point of view they represent various topographic, cosmological and sky-referred objects. The table 1 shows the list of selected museums.

Prehistoric maps	Museum	State
Pavlov map (24000-25000 BC)	Archaeological museum, Dolni Vestonice	Czech Republic
Mezherich map (11000-12000 BC)	Museum of natural history, Kiev	Ukraine
Maikop map (2000-3000 BC)	Eremitage, St. Petersburg	Russia
Gold plate of Moordorf (1500 BC)	Niedersächsisches Landesmuseum, Hannover	Germany
Nebra map (1400 BC)	Landesmuseum für Vorgeschichte, Halle/Saale	Germany
Petroglyphs (1000-1500 BC)	Archeological monument „Stone Grave“, Melitopol	Ukraine
Early Historic Maps	Museum	State
Nippur map (1500 BC)	Hilprecht-Collection of middle-east antiquities, Jena university	Germany
World map of Babylon (500 BC)	British Museum, London	Great Britain

Table 1. Selected European museums.

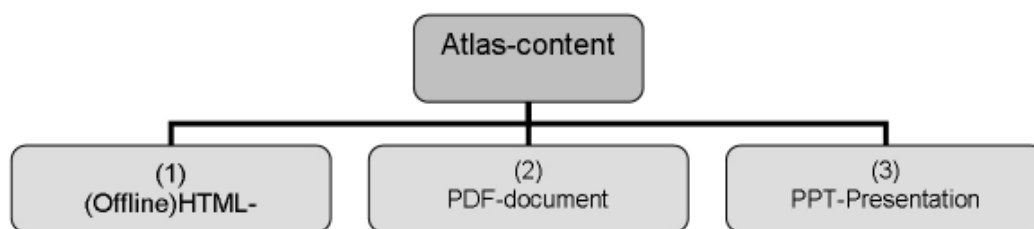
The selected prehistoric and early historic map-like images can be found in museums of following European states: Czech Republic, Germany, Great Britain, Russia and Ukraine (tab. 1)

### Technological aspects

The cd-system is the connection of traditional analogue cartography to the digital electronic world of our time. The digitization of maps, photographs, graphics etc. and/or their assumption from already existing digital material ensures a faster and more economical

processing, than it would be necessary for the print of a conventional atlas. In addition it makes a flexible and various new use perspective (e.g. step less zoom in maps) for the user possible, whereby the data in the cd-format can be used on the most usual computer platforms. Cd-roms with digital map graphics contain usually a browser (see internet-links), which takes over the user guidance and which makes the visualization needs and treatment of the data possible, without that the user needs a locally installed, special software. Fig. 3 shows further representations of the atlas-content.

Naturally the first variant must be regarded as the optimal one, because interactivity (e.g. Hot Spots) increases the functionality and the value in use of the atlas. Finally cartography at the screen can catch up and overhaul the paper standard only by interaction. The trend goes by that cd-roms are no more produced isolated. They should provide links to the internet and/or generally be published as on-line versions, whereby a higher degree of actuality can be achieved. The cd-atlas is conceived in such a way that the topic can be made accessible for a broader public. As user circle naturally private and scientific users are possible as well as libraries. In addition schools are conceivable, where the product could be used for example in history lectures.



- (1) Organization of the entire atlas as off-line HTML document with integration of map/graphics/text → user friendly  
 (2) Representation of the content as PDF-document  
 Export of the complete content from DTP program by page (e.g. Adobe InDesign)  
 (3) Mediating contents in form of PowerPoint presentations

Figure 3. Further representations of cd-atlas

### References/Internet links

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Atlas of Finland. CD-Rom Version (English) <http://www.helsinki.fi/ml/maant/geofi/atlas.html>

Atlas of Switzerland. CD-Rom Version (German, French, English)  
<http://www.swisstopo.ch/de/products/digital/multimedia/ads2/>

National-Atlas of Germany. CD-Rom Version (German)  
<http://www.elsevier.de/elsevier/covers/nationalatlas/cd.html>