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Abstract
Reliable and unhindered access to raw materials is a growing concern within the EU and across the globe and the demand for Critical Raw Materials (CRM) plays a crucial economic role in most developed countries around the world. These are of extreme importance for supply chains regarding new technologies, sustainability issues and carbon footprint reduction. The definition of a continuously updated list of CRM by the European Commission led to the first CRM Map of Europe in 2016. Following this, several countries have been surveying, preparing, and evaluating their mineral occurrences to create a resources/deposits database and, therefore, to create a CRM map of their own. With this purpose in mind, we present and explain the first Critical Raw Materials Deposits Map of mainland Portugal, at 1:700,000 scale. This paper describes the scientific, technical, and graphical methodologies involved in its design.

Abstract
The author aims to propose a model digital edition of historic maps using as an example the Gaul/Raczyński map (1807–1812). The digital editions of historic maps elaborated so far vary greatly, from map facsimiles without editorial interference, through georeferenced and mosaicked maps and, finally, to spatial databases. Very rarely they are supplemented with a proper source commentary and editorial work documentation. So far, there has been no edition combining all the above. Thus, the proposed edition connects all those functionalities, illustrating the result with an example of a very interesting nineteenth-century topographical map of part of Greater Poland. It can serve as a starting point for an extensive discussion on the role of historic maps in historical cartography in the digital era.

Abstract
Dynamic maps are commonly used for the depiction of quantitative information. However, their users often fail to notice changes in the intensity of geographic phenomena. Moreover, if the distribution of colour values between two scenes changes, the user might have a problem with recalling the colour arrangement from the previous scene. A commonly occurring mistake is indicating that the colour changed its value, while in reality it did not. This paper examines the potential impact of the magnitude of change on the detection of the fixed enumeration units of a dynamic choropleth map. The research is based on Signal Detection Theory methodology and uses eye-tracking technology to examine the change blindness phenomenon on spatiotemporal maps. The results show that regardless of the magnitude of change

and the number of enumeration units, the participants were convinced that the colour value in a particular place changed, even though it did not.

Hierarchical Extraction of Skeleton Structures from Discrete Buildings P. 268-289

Xiao Wang & Dirk Burghardt

Abstract

Map generalization is a process of hierarchically reorganizing features whereby the global shape of the original datasets can be transferred in different scales. We propose a stroke and centrality-based method to hierarchically extract the skeleton structures from buildings aiming to support generalization. Firstly, the strokes are generated from refined proximity graph network. Next, by regarding the strokes as dual graph, three centrality indices are calculated for each stroke whereby an integrated factor is created to measure the importance level of the strokes. Finally, the hierarchical skeleton structures are extracted based on the stroke importance levels through different selection ratios. By classifying the buildings into different categories, different generalization operators are selected considering their characteristics. The experimental results demonstrate that the extracted hierarchical skeleton structures can represent the global shape of the entire region. Through this support, the global and local patterns of the original buildings can be both preserved.

Marmaduke Raynor and the 1617 Map of the James River, Virginia P. 290-298

E.M. Rose

Abstract

Who deserves credit for the map of detailed soundings taken in the James River in the summer of 1617, the foundation for all subsequent navigation in Virginia for the next half century? This essay proposes that the chartmaker is not a pirate, as previously suggested, but one Marmaduke Raynor, a trained and experienced seaman who might have been commissioned by the Virginia Company of London as part of a new initiative. The original map is no longer extant, but was copied, perhaps surreptitiously, and then used by the famous Dutch mapmakers of the Vingboons family for their chart of the 'Powhatan River' of 1639.