A GIS Approach to Exploring Monetary Value on Enclosure Era Property-Related Maps

Christopher Macdonald Hewitt

Abstract

Historical enclosure era property-related maps can tell us a great deal about the life and times of communities in the past. This study offers a unique approach to studying the historical landscape by applying GIS techniques to the examination of an eighteenth-century English village. Using novel GIS applications relying on historical maps, the study explores various aspects of the village's physical and social characteristics. In doing so, the study forges effective linkages between cultural and landscape variables to reveal aspects of the historical landscape in eighteenth-century Britain previously inaccessible to researchers. This, in turn, provides a much more comprehensive and sophisticated template for future use by historical geographers in a number of contexts.

Cross-Checking: A Method to Test the Comprehensiveness of Pigot's Nineteenth-Century Plans of Manchester & Salford

Brian Robson

Abstract

The long sequence of Pigot's plans of Manchester and Salford is used to test the concept that the dates of churches and chapels can be used as a valuable indicator of the completeness of the coverage of large-scale nineteenth-century town plans. The approach appears to hold some promise and suggests that Pigot's plans were surprisingly comprehensive. This may reflect not merely his drawing on existing surveys but, more interestingly, may be the incidental product of collecting data for his town directories. The methodology could usefully be extended to explore the value of directory plans of other towns.

Localization of Manuscript Müller's Maps

Václav Čada & Karel Janečka

Abstract

The paper describes a localization of Müller's maps of regions of Bohemia from 1712 to 1718. Original maps represent the territories within regional boundaries in approximate scale 1: 100 000. It is relatively problematic to extract spatial information from the maps based on precise geodetic control and well-known cartographic projection. A different approach must be chosen in case of old maps without geodetic control and identifiable cartographic projection. In such a case the identical points whose coordinates in the reference coordinate system are known must be identified in the old map and their cartometric coordinates measured. This is also the case of manuscript Müller's maps. For creation of a transformation key the suitable input data must be selected. As the most frequented features on these maps are settlements it was decided to use this part of planimetric component. Several ways how to use the settlements for transformation were explored in order to find out the most appropriate way of localization of these rare old maps. For purpose of old maps localization the database of settlements (DBS) was used. This database is based on the Territorial

Identification Register of Basic Settlement Units (TIR-BSU) which has been created in 1992–2004 and contains current coordinates of settlements. Furthermore, after transformation, the analysis of the visualization accuracy of watercourses was done.

Quality Assessment of an Automatic Sounding Selection Process for Navigational Charts

Dejan Lovrinčević

Abstract

A good seabed representation is one of the important characteristics of any navigational chart. Along with depth contours and coloured depth areas, soundings are used for this task. All the soundings on a navigational chart are selected for a reason. Soundings contribute to the navigational chart safety aspect by alerting to all the threats and dangers. They also show all the attributes of a seabed relief without overcrowding it, thus maintaining the overall chart quality. Soundings are selected from a hydrographic survey and since it consists of a vast number of data, the process of sounding selection is a challenging and demanding task. It requires experience and knowledge from the nautical cartographer and is mostly done manually. Some types of software nowadays provide an automatic selection feature. This paper analyses a process of automatic sounding selection in the dKart Editor software. On the Croatian side of the Adriatic Sea, Šibenski Kanal (Šibenik channel) and Kanal Sv. Ante (St. Ante's channel) are used as the study area. A hydrographic survey of the area represents the input data. The official navigational chart of the surveyed area is used as the basis for determining three different sets of parameters for the selection process. After the selection, obtained results are assessed based on geometrical accuracy and on the conservation level of navigational safety. For geometrical accuracy, the best results were produced by the third set that was divided in two subsets for each channel. It was determined that the nature of the seabed relief had an impact on the selection process. The same set had the best result for navigational safety assessment but it was concluded that all the sets undermined the aspect. Because of these crucial shortcomings noticed in all the tested sets of parameters, the feature is considered inadequate for serious usage as a completely automatic tool for the process of sounding selection on navigational charts.

The Differentiation of Point Symbols using Selected Visual Variables in the Mobile Augmented Reality System

Łukasz Halik & Beata Medyńska-Gulij

Abstract

On the basis of initial studies devoted to a better understanding of how the public user (a pedestrian in the city) perceives cartographic symbols in the mobile augmented reality system, we present an attempt to determine the threshold values of differentiation for three visual variables. The variables of *size*, *transparency*, *and focus* were implemented into image point symbols representing five types of objects. The set of symbols was designed in accordance with the rules of cartographic design taking into consideration an analysis of 19 professional tourist works. The symbols were presented on the screen of a mobile device in a system imitating the augmented reality system against four different backgrounds: white, a wall, and two typical urban landscapes. The results of an internet survey conducted using a tablet at four locations in Poznan (Poland) allowed us to determine the following: threshold differentiation values for the analysed variables, indication of the dependence on the type of background displayed on the mobile device in augmented reality, and the advantage of using a combination of visual variables.

Creating a Dot Density Map: Resident Population in Mainland Portugal

Eduardo Gomes

Abstract

Dot maps are one of the best ways to visualize absolute values in thematic cartography. Dots represent quantitative data on a map. Population is often used in this type of representation. This paper presents a population dot density map for the year 2011 on two scales: (1) for mainland Portugal, and (2) for the Lisbon and Oporto regions. We have used dots with constant values and sizes at the most detailed statistical level (i.e. statistical subsection) for localities with less than

5000 inhabitants, and proportional circles for localities with more than 5000 inhabitants. These two scales of analysis coupled with two cartographic representation techniques used on a single map allow for a clear reading of the distribution of population.

Francisco José de Caldas's Unaccomplished Life-Project – His Map *Provincias Unidas de la Nueva Granada*, 1811/ 1815

Sergio Mejía

Abstract

The first attempted republican map of present-day Colombia remained unachieved. Francisco José de Caldas worked on it since 1797 and, come the revolution and Nueva Granada's republican inception, he prepared two successive cartouches to introduce it: the first one in 1811, the latter in 1815. Finally entitled Provincias de la Nueva Granada, Caldas's map remains understudied. In this article, I establish its basic cartographic parameters, discuss the political context of its unfinished making and link it to its pertinent cartographic precedents.

Rethinking the Land: An Exhibition of Ulster Maps

Garrett Carr

Abstract

The author curates a touring exhibition of Northern Ireland cartography, called Mapping Alternative Ulster. The project emerged from a dissatisfaction with how Northern Ireland is represented in maps, and one example is given. To counter them, he sought independent cartographers making original maps. The curator discusses the criteria he applied when selecting work for the show. He wanted maps with politics, although not the region's traditional sectarian politics. All the selected maps constitute arguments, critiquing problems in the lived environment or drawing attention to valuable things that may be at risk. The latter sections of the article discuss five of the contributors and looks at their work in detail. In the conclusion, the impact of the exhibition is assessed by examining visitor comments. The paper is illustrated.

Embracing Informality – A Commentary

Liora Bigon & Ambe J. Njoh

Abstract

This short commentary surveys an international exhibition entitled 'The cartography of the unseen', presented at HIT's Faculty of Design Research Gallery, Israel, February 2015. For a better understanding of this exhibition and its implications, also theoretically, we intervened with a further interpretation on one of the exhibited projects, that is, Map Kibera.