

Map Design for Handhelds

(By Mathias Lemmens, Senior Editor, GIM International)



We are caught up in an unprecedented high-tech revolution. Microprocessors, solid-state mass storage devices and ultra-broadband internet allow huge volumes of data to be transmitted and received anywhere, anytime. All that is needed is a small device packed with electronics and web access. Nowadays, maps can also be sent to and displayed on handhelds. In conjunction with the advancement of positioning services, the use of maps is exploding and making them part of everyday life for billions of citizens around the world. This new mobile usage calls for a rethink of how maps look, feel and are used, especially when they are displayed on small screens. Ian Muehlenhaus, assistant professor at the University of Wisconsin, USA, recognised this need and has written a book on the subject, entitled *Web Cartography – Map Design for Interactive and Mobile Devices* (published by CRC Press). His goal is to offer students, practitioners and innovators a starting point for designing aesthetically pleasing and intuitive web maps; he promises not to bother the reader with lessons on how to write software and how to create tools. It is a practical and well-written book which offers students and web designers with no geomatics or cartography training plenty of handles for designing usable maps. The book is full of advice, including dos and don'ts and general rules of thumb. For example, it tackles the pitfall of solely striving for attractive

maps and losing sight of their actual role as an information medium by stating that such maps are like “cute cat photos on Facebook: nice to look at but worthless”. The illustrations are insightful too. For example, the human and canine silhouettes on page 139 clearly demonstrate that symbols should be designed to withstand both extreme reduction and enlargement.

One of the premises at the heart of the book is that, in terms of concepts, designing maps to be printed on paper differs significantly from designing them for web-based use. I regard this tenet as a flaw: if it were true, why is nearly half of the book (pages 83 to 172) devoted to standard cartographic rules, including the use of colour (Ch. 5), typography (Ch. 6), Bertin's visual variables (Ch. 7), symbolisation (Ch. 8) and the creation of thematic maps (Ch. 9)? (Strangely enough, Jacques Bertin's seminal work on the Semiology of Graphics [i.e. the study of signs and symbols], which was published in French in 1967, is referred to as “Bertin & Berg, 1983, a publication of the University of Wisconsin Press”, although William J. Berg merely contributed the translation from French to English.) Of course, new media have added new cues for conveying map data: maps nowadays can appeal not only to the eyes but also to the ears and the fingertips, as shown in Chapter 11 devoted to ‘Sound and Touch’. Nevertheless, while paper is indeed static and thus does not support animation (Ch. 10), animation can also be created using moving pictures or video and is not exclusively reserved for the web. At the start of Chapter 2, the author claims: “The biggest difference between designing maps for print versus the web is that we no longer design for map *readers* but map *users*,” (own emphasis). However, I would counter that people also interact with and manipulate paper maps – they zoom in on details using a lens, they interact by emphasising roads with a red felt pen or encircling locations of interest, they drag distances by rolling a map odometer and tape a transparent slide on the map to redraw a portion which is useful for their goals. In short, over the course of time, the information from paper maps is transferred into unique leaflets. Added to this, maps are a means of communication, and that process involves two parties: a sender and a receiver. As far as I am aware, the way humans receive and process data has not changed profoundly over the last two centuries, except that we have become used to so many visual stimuli from movies, television, YouTube and billboards. In other words, it is not the concept that has changed but rather the flexibility, speed and ease of interaction and manipulation. As the number of users and the rate of use continue to expand and the way people use maps continues to evolve, creating good maps is becoming more essential than ever – and this requires skilled web designers who are aware of the rules and practices involved in producing them. Often, today's web designers or self-taught web 2.0 users are not familiar with those map-making rules and practices, and this accessible book fills that gap.

Web Cartography – Map Design for Interactive and Mobile Devices, Ian Muehlenhaus, published by CRC Press, Taylor & Francis Group, 262 pages, 114 (colour) illustrations, ISBN hardback 9781439876220, crcpress.com, GBP57.99