METADATA

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Abstract

This book presents an analysis of spatial information collection, processing, and visualization in thematic maps. In essence, it includes the "grammatical" and "syntactic" rules of the "cartographic" language, a primarily graphic language, suitable to communicate spatial information but also to generate new spatial knowledge through the map. The content of the book is organized into seventeen chapters. The first six chapters establish the necessary theoretical framework for the analysis of spatial phenomena and corresponding data, so that they take the appropriate form to be rendered through graphical elements in the thematic map. In particular, the first Chapter - Introduction presents the basic principles that govern Thematic Cartography and defines the thematic map, its content, and function. The second Chapter focuses on the analysis of the characteristics of spatial phenomena, while the third Chapter describes the data sources and data processing methods for the representation of spatial phenomena. The fourth Chapter presents a systematic analysis of data classification methods, while the fifth Chapter presents spatial interpolation methods. The sixth Chapter analyzes the use of color in thematic maps. The following chapters analyze the methods and techniques for the graphic design and spatial information visualization. In particular, the seventh Chapter examines the methods and techniques of mapping qualitative spatial data. Chapters eight through fifteen analyze the different types of thematic maps for mapping quantitative spatial data: proportional and graduated symbol maps, flow maps, choropleth maps, dasymetric maps, isarithmic maps, 3D maps, dot maps, and cartograms. Chapter Sixteen focuses on bivariate and multivariate mapping, that is, the visualization of two or more variables. Finally, Chapter Seventeen introduces web thematic maps, focusing mainly on the two subcategories of dynamic maps: animated and interactive maps.

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