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Nota di contenuto	Related work and GEOQL -- The spatial kd-tree -- Performance analysis and case studies -- Query optimization -- Implementation and experiments -- Conclusions.
Sommario/riassunto	This monograph describes methods for extending relational database systems for geographic applications. The ways in which a relational database system is supplemented with unconventional spatial indexing structures, additional spatial subsystems and query processors are described in great detail. The work presents an extensive survey of existing spatial indexing techniques and a taxonomy of the extensions to the multidimensional indexing structures. An extensive experimental analysis of spatial indexes is presented. The work covers the following

areas: - the design of geographic information systems (GIS) - extended query languages for GIS - spatial indexing mechanisms - query processing strategies. The author presents his own skd-trees and extended query optimization strategies. The survey of spatial indexing structures for non-zero sized objects provides a framework for workers in the field of spatial information systems to evaluate spatial access methods. The consideration of query optimization will assist understanding of the role of that topic in GIS.