

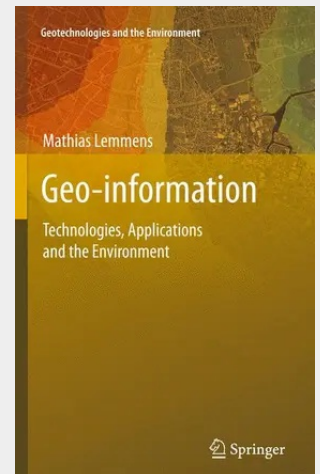
Geo-information

Technologies, Applications and the Environment

Geomatics, the handling and processing of information and data about the Earth, is one geoscience discipline that has seen major changes in the last decade, as mapping and observation systems become ever more sensitive and sophisticated. This book is a unique and in-depth survey of the field, which has a central role to play in tackling a host of environmental issues faced by society. Covering all three strands of geomatics - applications, information technology and surveying - the chapters cover the history and background of the subject, the technology employed both to collect and disseminate data, and the varied applications to which geomatics can be put, including urban planning, assessment of biodiversity, disaster management and land administration. Relevant professionals, as well as students in a variety of disciplines such as geography and surveying, will find this book required reading.

This rapidly developing field uses increasingly complex and accurate systems. Today, technology enables us to capture geo-data in full 3D as well as to disseminate it via the Web at the speed of light. We are able to continuously image the world from space at resolutions of up to 50 cm. Airborne LiDAR (laser surveying) sensors can be combined with digital camera technology to produce geometrically correct images of the Earth's surface, while integrating these with large-scale topographic maps and terrestrial as well as aerial images to produce 3D cityscapes that computer users can explore from their desktops.

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