Call for Papers:

Special Issue on Virtual Geographic Environment Construction Based on Ubiquitous Geographic Information

The geographic environment is a vast and complex system in which various natural processes, human activities, and information interactions exist. Researchers have made and are continually making efforts to understand this complex environment. In addition to in-depth exploration in individual disciplines, studies that integrate knowledge from multiple fields are getting increasing attention. Following such a trend, Virtual Geographic Environments (VGEs) were proposed as a new generation of a geographic analysis tool. The construction of a VGE brings Geographic Information Science (GISc) together with natural geography and human geography, aiming to form a digital twin of the real world. In a VGE, experiments can be conducted based on geographic rules, and potential solutions for the real world can be explored.

Traditionally, information from climate, hydrology, ecology, land use, social-economics, and other domains are integrated into a VGE to solve complex problems. Over the last decade, the development of big data, machine learning, and artificial intelligence has also promoted social media data, Volunteered Geographic Information (VGI), and other human behavioral data, supporting environment analysis and simulation. From a holistic view, all these domain-related and social information can be regarded as ubiquitous geographic information. It is a new opportunity and great importance that researchers make full use of ubiquitous geographic information to understand the real world as a whole.

In this context, we propose a Special Issue that targets constructing VGE based on ubiquitous geographic information, supporting better modeling and simulation of the real world.

Our interest is in papers that cover a broad spectrum of topics, including, but not limited to, the following:

- Virtual geographic environment
- Ubiquitous geographic information
- Digital twin environment
- Data aggregation and fusion
- Integrated modeling
- Participatory planning
- Intelligent reasoning
- Social media
- Human behavior
- Multi-dimensional visualization

- Virtual Reality with geographic analysis
- Spatiotemporal analysis with interdisciplinary knowledge

Submission guidelines

Submission deadline: October 20, 2021

Expected final decision: December 31, 2021

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