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Towards Effective BIM/GIS Data Integration for Smart City

Guest Editors:

Dr. Junxiang Zhu
1. Civil Engineering, Department of Engineering, The University of Cambridge, Cambridge CB2 1TN, UK
2. School of Design and the Built Environment, Curtin University, Perth, Australia

Dr. Yi Tan
Colledge of Civil and Transportation Engineering, Shenzhen University, Shenzhen 518052, China

Deadline for manuscript submissions:
closed (10 July 2023)

Message from the Guest Editors

Compared with ten years ago, more techniques and data standards are now available, such as the labelled property graph (LPG)-based database, 3D tiles, and Indexed 3D Scene Layer (I3S), not to mention the newly published CityGML 3.0. These new techniques and data standards might bring new opportunities or challenges to the data integration between building information modelling (BIM) and geographic information systems (GIS); therefore, papers contributing to topics including but not limited to the following are encouraged:

- New integration patterns (e.g., how geometric information and semantic information can be more effectively relinked on the GIS side);
- Graphs (e.g., LPG) for semantics transfer;
- RDF for semantics transfer;
- CityGML 3.0 and BIM/GIS data integration;
- The comparison between new techniques and data models with old ones;
- Information requirements for BIM model production considering BIM/GIS integration;
- More effective geometry conversion;
- Other topics relating to BIM/GIS data integration.

For scholars interested to submit papers to the Special Issue, please click "Submit to Special Issue" or contact Astoria Yao: astoria.yao@mdpi.com.

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Editor-in-Chief

Prof. Dr. David Arditi
Construction Engineering and Management Program, Department of Civil, Architectural, and Environmental Engineering, Illinois Institute of Technology, 3201 South Dearborn Street, Chicago, IL 60616, USA

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

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Buildings Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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