

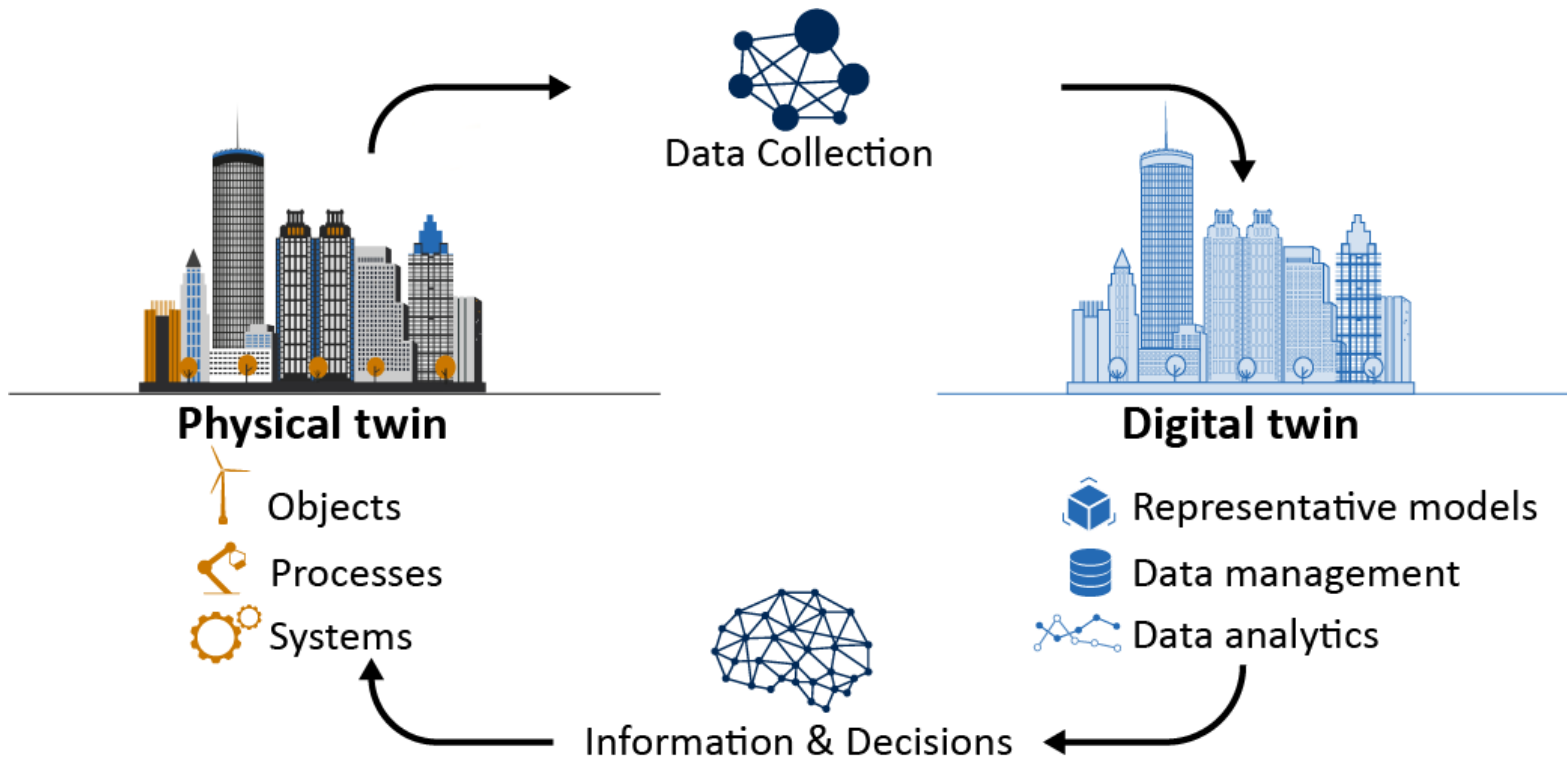
Introducing ISSMGE TC222

Mickaël Beaufils (Vice-Chair, BRGM)

ISSMGE TC222

- Building Information Modeling (BIM) and Digital Twins (DT) for Geotechnics
- Born in 2022
- Currently 55 members from 20 countries
- One of the most « Digital focused » TC from ISSMGE

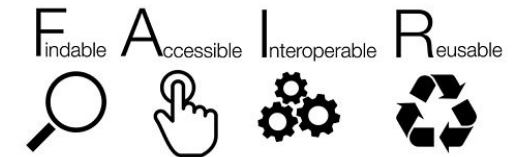
What is a Digital Twin?



- A digital replica of real objects / processes / systems,
- Mimicks the physical twin,
- Helps anticipation and decision making,
- During all the physical twin lifecycle!
- Note: BIM is targetting the application of the Digital Twin principles to a construction (building, infrastructure).

BIM and Digital Twins for Geotechnics

- Better geotechnical information management and sharing
 - Targetting FAIR (Findable, Accessible, Interoperable and Reusable) geotechnical data.
- Opportunities and challenges:
 - Federate the geotechnical community around the topic of data (notably on semantics),
 - Alignment and collaboration between drillers, engineering companies, geological surveys, city stakeholders but also academics,
 - Capacity of update and reuse of existing data,
 - Better knowledge of the underground,
 - More efficient / optimized construction,
 - Standards and regulations,
 - Digital transformation and change management.



TC222 Council



Chair

Magnus
Rømoen

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NGI



Vice-chair

Mickaël
Beaufils

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BRGM



Secretary

Mats
Kahlström

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NGI



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Ninic

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University
of
Birmingham



Raymond
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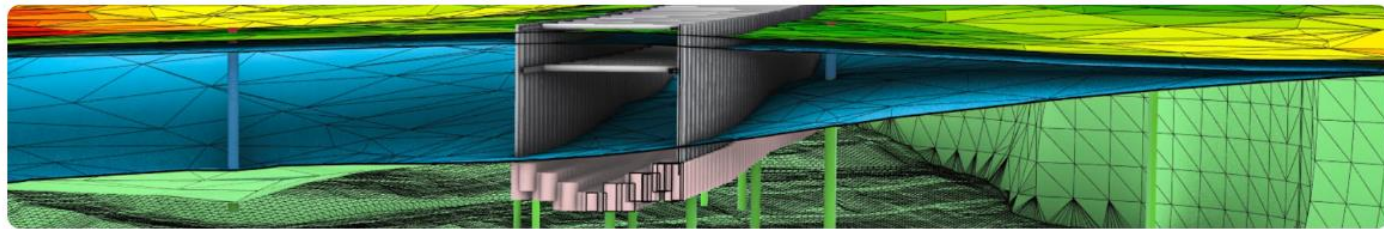
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Hong-Kong
City

ISSMGE TC222 terms of reference

- Dissemination and Conference Assistance
 - Organize workshops / symposia / webinars,
 - Outside or inside the ISSMGE conferences.
- Guidelines and Recommendations
 - Collaboration with standard organizations from bSI, OGC, AGS and DIGGS,
 - Collaboration with other ISSMGE TCs.
- Industry Links
 - Better connection between State of the art & State of the practice.

3 online workshops already made!



- https://www.youtube.com/channel/UC7eMKzva_gK7DN3MnIvK7yCQ

ISSMGE TC222
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ISSMGE TC222 Geotechnical BIM and Digital Twins
Online Workshop
Digital standards for geotechnical data
Thursday April 4th | 14:00 (Paris) | 8:00 (New York) | 20:00 (Hong Kong)
Duration: 2 hours
with video from:
Neil Chadwick (AGS Data Management (AGS), San Pedro (2005) Steering Committee),
James Ward (BGS TC Tunnel Geotechnical and Michael Reynolds (BGS) Chairperson)

2:07:31

3rd ISSMGE TC222 workshop
- Digital Standards for...

303 vues • il y a 11 jours

TC222 Council

Chair: Neil Chadwick
Vice chair: Michael Reynolds
Secretary: James Ward
Core members: Neil Chadwick, Michael Reynolds, James Ward, Neil Chadwick, Michael Reynolds, James Ward

2:21:22

2nd ISSMGE TC222
workshop - Frontiers in...

217 vues • il y a 2 mois

Analysis and uncertainty

2:22:59

1st ISSMGE TC222 workshop

1 k vues • il y a 1 an

Highlight on our last workshop




**ISSMGE TC222 Geotechnical BIM and Digital Twins
Online Workshop**

Digital standards for geotechnical data

Thursday April 4th | 14:00 (Paris) | 8:00 (New York) | 20:00 (Hong-Kong)
Duration : 2 hours

with talks from:

Neil Chadwick (AGS Data Management WG), Dan Ponti (DIGGS Steering Committee),
Jonas Weil (bSI IFC Tunnel GeoSubgroup) and Mickaël Beaufils (OGC GeoScience DWG)

- An overview of digital standards for geotechnical data and synergies between:
 - AGS
 - DIGGS
 - buildingSmart International (bSI)
 - Open Geospatial Consortium (OGC)
- Attendance: 153 people



Magnus
Rømoen



Mickaël
Beaufils



Mats
Kahlström



Neil
Chadwick



Dan
Ponti



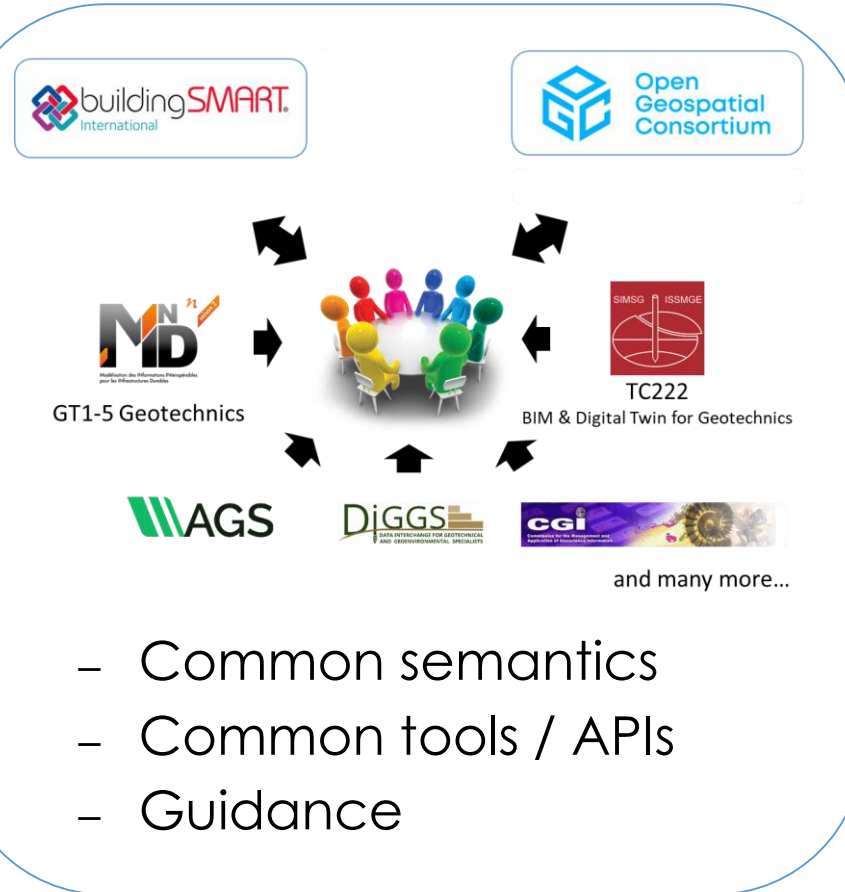
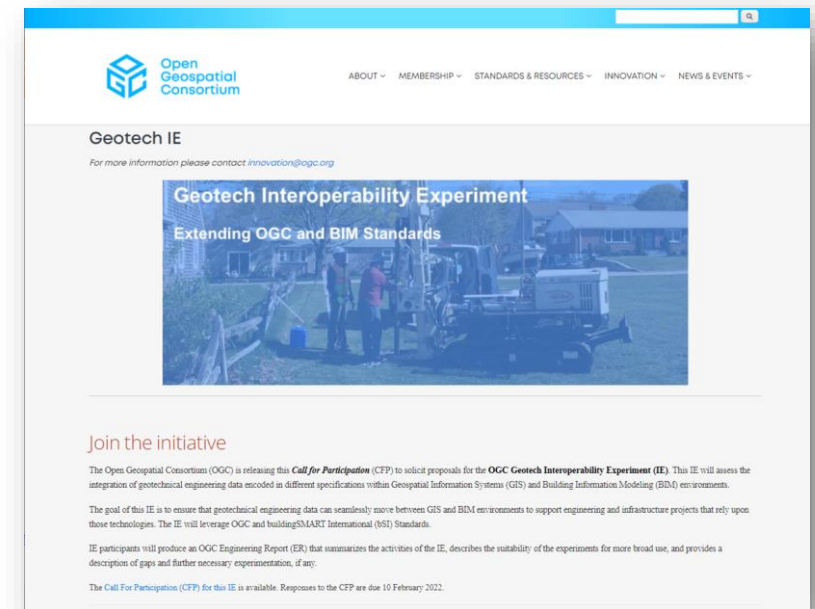
Jonas
Weil

Geotech Interoperability Experiment

January 2019



February 2022 > December 2023



- Common semantics
- Common tools / APIs
- Guidance

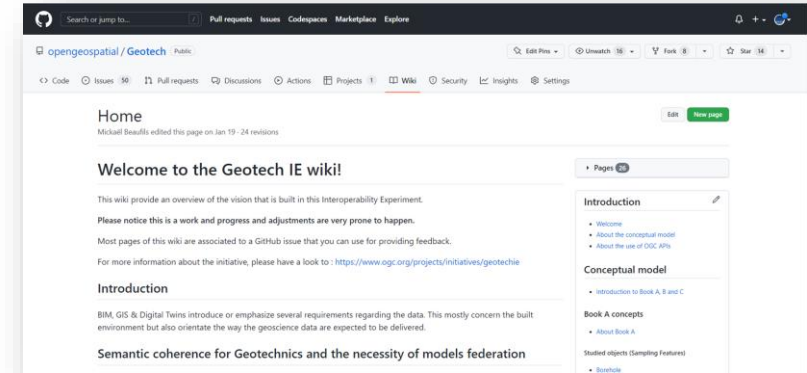
Geotech IE deliverables

#4a: White paper



https://github.com/opengeospatial/Geotech/blob/master/Geotech_IE/white_paper/Digital%20continuity%20for%20Geotechnics%20at%20the%20BIM%20era%20v1.pdf

#4b: Technical paper



<https://github.com/opengeospatial/Geotech/wiki>

- #1 : Common conceptual model
- #2: Extension proposal of OGC Geoscience standards
- #3: Technical documentation on the use of OGC APIs
 - #3bis: Implementation forum
- #5: Implementation Guide for Software Vendors

Next event(s)

- ISSMGE TC222 4th Online Workshop
- Dates (tentative):
 - Session 1: Thursday 30th of May, 2024
 - Session 2: Tuesday 25th of June, 2024
- Topic:
 - National geotechnical database and assets registers

ECSMGE 2024

About: <https://www.ecsmge-2024.com/>



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- On Youtube:

- <https://www.youtube.com/channel/UC7eMKzvagK7DN3MnIvK7yCQ>

Become a member of TC222



- Please get in touch with your national society

- <https://www.issmge.org/the-society/member-societies>