"Cartography and Open Standards": A Proposal for an Open Geospatial Consortium Technical Paper

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Abstract:

In December 2020 the ICA joined the Open Geospatial Consortium (OGC) as an associate member. As a community composed of businesses, government agencies, universities, and research organizations that work with geospatial data, the OCG is a resource to which software developers who work with geospatial data turn for guidance and advice. As such, it provides the ICA with an opportunity to reach a group of people who might not have had prior experience or background in cartography.

In 2021, the ICA Commissions on SDI and Standards, Cognitive Issues in Geographic Information Visualization, Open Source Geospatial Technologies, and Geospatial Semantics and Ontologies began discussing ways in which they could work together to engage OGC members to share our cartographic knowledge. We held regular discussions to develop some initial ideas about how we could share our knowledge. We got some feedback on those ideas from the wider ICA membership through a pre-conference workshop, and a presentation at the 2021 ICC in Florence (Griffin et al., 2021).

At the same time, we approached the leadership of the OGC's Portrayal Domain Working Group (DWG) to explore opportunities for collaboration, which led to a series of two online presentations at OGC Portrayal DWG meetings in March and October of 2022 to discuss map design with a wider range of Portrayal DWG members and to better understand their interests and challenges they are trying to solve. In the first of these meetings, we presented some of the materials from our 2021 ICC pre-conference workshop, and in the second, we presented a proposal for a technical paper that would be submitted to be reviewed and published by the OGC. Technical papers take research and explore how it might be applied in practice in an operational environment. They aim to make research intelligible to non-researchers, to raise awareness of the topic covered in the paper, and to propose aspects of practice that could be standardized.

We plan to include the following topics of cartographic knowledge in a technical paper: cartographic terminology (see Coetzee et al., 2021 for our previous work on this topic), good cartographic practices in different contexts, map design, thematic maps, geosemantics and ontologies, cognitive and user issues, big data, 3D and immersive cartography (VR/AR), accessibility, inclusivity (e.g., of different social and cultural groups), and ethics. Each of these topics will include recommendations for software developers, grounded in a high-level synthesis of the relevant cartographic research. The paper will include a gap analysis to identify any areas in which standards might help to support broader application of cartographic best practices. The technical paper will also include several use cases chosen because of their interest to OGG Portrayal DWG members where we further explore how cartographic knowledge can help software developers build software that can make good quality maps. We are currently working on developing this draft technical paper and will road test the draft with OGC Portrayal DWG members at a joint workshop to be held at the June 2023 OGC meeting in the USA.

In this presentation, we will share our draft technical paper to seek feedback from the wider ICA membership on our approach to sharing our cartographic knowledge.

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References

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