

Soviet city plans and OpenStreetMap: a comparative analysis

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Abstract:

This paper compares the mapping of cities by the Soviet Union and by OpenStreetMap (OSM). Although these global mapping projects are vastly different in terms of their origins, format and methods, they are both characterised by their multi-scale outputs, standardised symbologies and aspirations of completeness (Ramm *et al.*, 2011; Davis and Kent, 2021). This investigation analyses the symbologies used in a Soviet 1:10,000 plan of Frankfurt am Main, Germany (1983) and in modern OSM coverage of the same area. The results indicate that the two symbologies are similarly comprehensive regarding some topographic features, notably road infrastructure, but identifies significant differences between others, such as the much more detailed coverage of the physical environment (especially hydrology) presented in Soviet mapping and of the urban environment (especially leisure facilities) in OSM mapping. The study highlights possible areas in which the symbology and coverage of OSM may be developed for the benefit of its wide range of user groups, and how the harmonisation of complementary aspects of Soviet and OSM symbologies has potential to form a universal, accessible and comprehensive global geospatial resource, particularly for humanitarian and other applications.

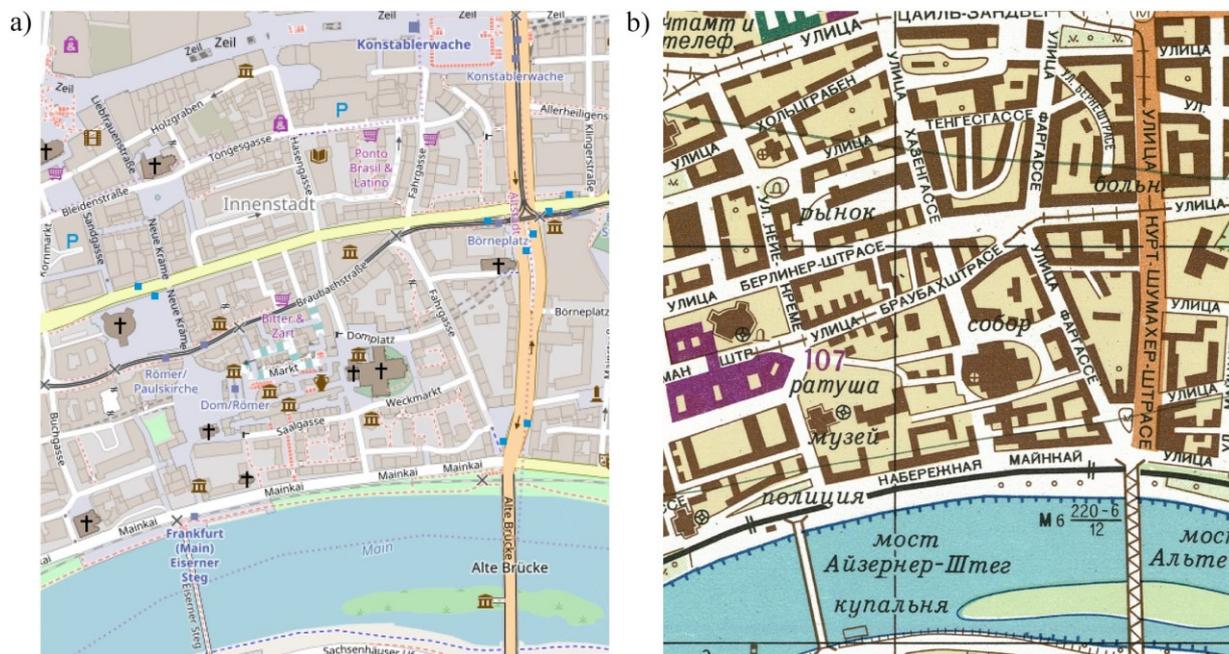


Figure 1. Central part of Frankfurt am Main, Germany, a) on the OSM standard layer (originally 1:8,000) (© OpenStreetMap contributors, licensed under CC BY-SA 2.0), and; b) on the Soviet 1:10,000 city plan (reproduced from a private collection).

References

- Davis, M. and Kent, A.J. (2021). An Analysis of the Global Symbology of Soviet Military City Plans. *The Cartographic Journal*, DOI: 10.1080/00087041.2021.1958193.
- Ramm, F., Topf, J. and Chilton, S. (2010). *OpenStreetMap: Using and enhancing the free map of the world*. Cambridge: UIT Cambridge.