



Federal Geographic Data Committee

March 4, 2011

Dr. Patrick Gallagher
Director, National Institute of Standards and Technology (NIST)
Co-Chair, National Science and Technology Council's SubCommittee on Technology

Subject : Effectiveness of Federal Agency Participation in Standardization in Select Technology Sectors for National Science and Technology Council's SubCommittee on Standardization [Docket No. 0909100442-0563-02]

Dear Dr. Gallagher,

The Federal Geographic Data Committee (FGDC) is pleased to provide comments on the Federal Register Announcement [DOCID:fr08de10-46] - *Effectiveness of Federal Agency Participation in Standardization in Select Technology Sectors for National Science and Technology Council's Sub-Committee on Standardization* [Docket No. 0909100442-0563-02].

The FGDC (www.fgdc.gov) is an interagency committee that promotes the coordinated development, use, sharing, and dissemination of geospatial data on a national basis. The Office of Management and the Budget (OMB) established the FGDC in 1990 and re-chartered the committee in its August 2002 revision of Circular A-16, "Coordination of Geographic Information and Related Spatial Data Activities." The FGDC is composed of representatives from the Executive Office of the President and Cabinet level and independent Federal agencies. The Secretary of the Department of the Interior chairs the FGDC, with the Deputy Director for Management, OMB, as Vice-Chair. Numerous stakeholder organizations participate in FGDC activities representing the interests of state and local government, industry, and professional organizations.

The FGDC uses voluntary consensus standards in lieu of government-unique standards whenever possible, consistent with OMB Circular A-119 on Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities. According to OMB Circular A-16, "... the FGDC ... will restrict its standards development activities to areas of spatial data standardization not covered by other voluntary standards consensus bodies, as defined by OMB Circular A-119." Data standards not covered by other voluntary consensus standards bodies include standards for specific data themes; for example, cadastral (parcels), vegetation, and wetlands. These data standards help leverage resources across Federal agencies and enable efficient and effective data sharing and interoperability. Federal agencies have responsibilities to provide leadership and to facilitate the development and implementation of needed FGDC standards, especially data content standards for data themes identified in OMB Circular A-16. NIST has "validated" FGDC standards for E-Gov activities, as they have been developed through a rigorous standards process.

FGDC data standards are developed through FGDC Subcommittees and Working Groups that are composed of representatives from various Federal agencies and representatives from non-Federal entities. The FGDC Standards Working Group is responsible for overseeing the FGDC standards

process, reviewing standards, and making recommendations for FGDC endorsement of standards. Non-Federal entities, including the private sector, may provide input in the development of FGDC standards.

OMB Circular A-16 directs Federal agencies to use FGDC standards. Further, it states that federally financed data development should be compliant with FGDC standards.

The FGDC participates in voluntary consensus standards bodies as directed by OMB Circular A-119. The FGDC and its member agencies participate in public/private partnerships on standardization activities through organizations such as ISO Technical Committee 211, Geographic Information/Geomatics (www.isotc211.org), the Open Geospatial Consortium (OGC, www.opengeospatial.org), and International Committee for Information Technology Standards Technical Committee L1 (INCITS L1), Geographic information systems. The FGDC was a founding member of INCITS L1. INCITS L1 is the means by which both public and private organizations participate in national and international geospatial standardization activities. It serves as the U.S. Technical Advisory Group to ISO Technical Committee 211. Since the establishment of INCITS L1 in the 1990s, the FGDC has provided leadership to INCITS L1.

The FGDC is also a member of the Geospatial-Intelligence Standards Working Group (GWG) chaired by the National Geospatial-Intelligence Agency (NGA). Participation ensures that there are common standards across military, intelligence, and civilian communities, when appropriate, as these communities establish a common operational environment. As noted in NGA's response to this Request for Information (RFI), the GWG recommends GEOINT standards for the Department of Defense IT Standards Registry (DISR) and Intelligence Community Standards Registry (ICSR). Over 80% of the GEOINT standards cited in the DISR and ICSR by the GWG have been developed through voluntary consensus standards bodies such as ISO Technical Committee 211 and the OGC. Through participation on the GWG, the FGDC leverages the resources of the military and intelligence communities to review and evaluate the many standards that were developed through ISO, OGC, and other standards bodies.

In 2010, the FGDC endorsed 64 standards that were either voluntary consensus standards or *de facto* standards that have been adopted through widespread use and implementation. Many of the external standards that the FGDC endorsed are also listed in the DISR. The FGDC and GWG are exploring opportunities for alignment of their standards processes, as they recognize the benefits of shared standards and expertise.

The FGDC notes the following challenges that hinder participation in standardization activities and/or adoption and use of standards:

- **ISO and ANSI charge for standards.** Many Federal agencies do not agree with the idea of paying for standards when they have actively participated in the development of the standards, paying significant staff time, membership fees to the standards bodies, and travel expenses to meetings for collaborative standards development. Occasionally, Federal agencies lead standardization activities in voluntary consensus standards bodies. In cases where most of the cost of developing standards is borne by the Federal government, it does not make sense to Federal agencies that the user pay for standards when he/she has already paid for standards development through taxes. Although fees for geospatial standards are actually quite modest (especially for federal agencies), promotion of voluntary standards adoption is easier when there is no fee incurred. The FGDC recognizes, however, that the business model of ISO and ANSI involves the sale of standards.

The Open Geospatial Consortium provides another business model for a voluntary consensus standards body: while the membership fees are high (relative cost), the standards developed through that organization are freely available to anyone (not just members) and very widely adopted. It is

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difficult to promote standards adoption to 50 states, 3200 counties and 39,000 local and tribal governments in this economic climate, when organizations are obliged to purchase standards. This is an important point, since geospatial data from state, county, tribal, and local governments are ingested by the federal government.

- **Voluntary consensus standards often have copyright restrictions that negatively affect their promulgation and use.** The FGDC recognizes, however, that OMB requires Federal agencies to “observe and protect the rights of the copyright holder and any other similar obligations” through OMB Circular A-119.
- **Federal agencies have limited resources to commit to standardization activities.** As noted in the RFI, “... changing priorities or changes in an organization’s budget may impact the resources an agency commits to an ongoing project.” The return on investment for an agency in standards activities is often a long-term outcome, reducing its priority level when agencies need to show short-term benefits. In contrast to the situation in many civilian agencies, the defense and intelligence communities have mandated funding and dedicated staff for standardization activities.
- **The Federal civilian community needs better incentives to adopt standards for use, despite the pronouncements in OMB Circulars A-16 and A-119.** In response to a recent FGDC standardization activity, one agency noted that an unfunded workload to use a particular standard would add work-years of additional burden to its already strained operational units. Another disincentive to using and adopting standards is the lack of a mechanism to enforce the use of standards; by contrast, standards in the DISR are acquisition-binding for the Department of Defense.

The FGDC remains committed to participating in public/private partnerships in standardization activities. The FGDC leverages the knowledge, skills, and talent of the geospatial community for the development of standards that enable information, data, and service interoperability across government and non-government entities. The FGDC encourages the use of solutions that are supported by multiple vendors through standards developed through a voluntary consensus process. Standardization promotes open and fair competition in the marketplace.

If you are interested in learning more about FGDC participation in geospatial standardization, you may contact me at ideloatch@usgs.gov, phone: 703-648-5752.

Ivan B. DeLoatch
Executive Director, FGDC
U.S. Geological Survey
U.S. Department of the Interior