

TITLE: Business Intelligence and Decision Support
Domain Working Group Charter

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CATEGORY: Domain Working Group

1. Introduction

This Domain Working Group charter defines the role for OGC activities within the Business Intelligence and Decision Support DWG and to provide an open forum for the discussion and presentation of interoperability requirements, use cases, pilots, and implementations of OGC standards in this domain. This Charter is to be presented to the OGC's Technical and Planning committees for consideration.

Domains as distinct Information Communities that defines a user domain where:

- A distinct market, application or business approach exists
- Common data definition, structure, syntax, and definitions exists
- Common user requirements exist
- Common approach to vendors exists

1.1 Working Group

Operation of OGC Domain Working Group follows the policies and procedures of the [Technical Committee](#). The following definitions from the Technical Policies and Procedures apply to this DWG Charter template.

Definition of a Domain Working Group: A group (organizationally, a subgroup of the TC) of individuals composed of members of the TC and invited guests, with the specific intent of solving some particular interoperability problem or problems in a particular technology domain for recommendation to the Technical Committee.

Functions of a Domain Working Group:

- Provide a forum for discussion and documentation of interoperability requirements for a given information or user community;
- Provide a forum to discuss and recommend document actions related to Interoperability Program Reports.
- Develop Change Requests Proposals (CRPs) for existing OGC Standards.

- Develop engineering reports with the intent seeking approval by the TC for release of these documents as OGC White Papers, [Discussion Papers](#) or [Best Practices Papers](#).

Informational presentations and discussions about the market use of adopted OGC Standards.

- Have a formal approved charter that defines the DWGs Scope of Work and estimated timeline for completion of the work.

Have all-member voting policies (unless otherwise stated).

Have missions and goals defined by the TC.

A DWG Does Not work on RFC submissions, candidate standards, or revisions to existing OGC Standards. However, a DWG can develop change requests as document interoperability requirements that can then be submitted as work items to a SWG.

A DWG may determine that they wish to have public collaboration, such as in teleconference, email discussions, or a public twiki. In this case, the DWG shall make a motion to the TC to approve public participation in the DWG. Voting in DWGs is by simple majority of OGC Members present at the WG meeting, not just Voting TC Members, with the caveat that no OGC Member organization may cast more than one vote in a WG vote

2. Purpose of Working Group

Proposers will describe the purpose of the Domain Working Group and its overall mission in relation to OGC processes and OGC's business plan.

3. Problem Statement

The ability to provide a decision maker with interoperable access to distributed geospatial web services in order to aid in the forming, analyzing, and selecting alternatives is a very important in advancing the broad use of OGC services. Within most of the working groups within OGC, there is a heavy concentration on providing access, through interoperable interfaces, to various data sources and data types. Although this is certainly a necessary part of interoperability, we must also remember the end user of these services and how those users can utilize a number of these services within an integrated environment in order to make better and faster decisions.

As the desire for Service Oriented Architectures continues to rise, so will the desire to provide various sources and types of data in an interoperable exchange. This illustrates the need for the Business Intelligence and Decision Support (BIDS) Domain Working Group that can help define and represent the client side of these interface exchanges. It is one thing to define the interface between a web service (such as Web Feature Service) and a requesting client. But the aim of this working group will be to help define how that feature data can be integrated with other data services designed by the OGC, such as Web Map Services or Sensor Observation Services, as well as those developed in the general IT domain, to create a chain of web processing services.

This technological paradigm is particularly suited to business intelligence (BI) systems. BI aims to support better business decision-making. It mainly refers to computer-based techniques used in identifying, extracting, and analyzing business data, such as sales revenue by products and/or departments, or by associated costs and incomes. BI technologies provide historical, current and predictive views of business operations. Common functions of business intelligence technologies are reporting, dashboarding, scoreboarding, online analytical processing (OLAP), data mining, process mining, business performance management analytics and predictive analytics

During the December 2006 Technical Committee meeting in San Diego, it was decided that a decision support working group needed to become more active in addressing the issues of Decision Support and Integrated clients along with their relationship to OGC publications. In 2011, the OGC Board of Directors identified Geospatial Business Intelligence (GeoBI) as a major focus area for OGC standards related activities. Increasing the uptake of OGC standards in the location intelligence marketplace and within the

business enterprise can be a basis for improved decision making and opportunities for broader use of products that implement OGC standards.

Although the interoperability requirements in the BI market have not been an explicit emphasis for the work of the OGC, the standards established by OGC have been applied to business applications. For example, the OGC Simple Features Access (SFA) Encoding Standard specifies an SQL schema that supports storage, retrieval, query and update of geospatial features with simple geometry via the SQL Call Level Interface (SQL/CLI) (ISO/IEC 9075-3:2003).. OGC SF has been implemented in the majority of commercial and commercial open source spatial databases. OGC's Web Map Service (WMS), Web Feature Service (WFS) and Web Coverage Service (WCS) interface standards provide access to geospatial information based upon service-oriented architecture—a main computing paradigm for internet-based business.

This document establishes an operational Charter for a Business Intelligence and Decision Support (BIDS) Domain Working Group within the Open Geospatial Consortium, Inc. (OGC) Technical Committee devoted to management, implementation, and integration of applicable geospatial services and information encodings.

4. Charter

As a Working Group of the Open GIS Consortium Technical Committee, the Business Intelligence and Decision Support (BIDS) Domain Working Group will be organized and operate in accordance with the Standard Operating Procedures of that body. Activities of the Business Intelligence and Decision Support (BIDS) Domain Working Group related to the organization, coordination, and execution of interoperability experiments will be performed in accordance with the Standard Operating Procedures of the Open GIS Consortium Interoperability Program.

4.1 Charter Members.

Since this Domain working group is being created through the merge of the GeoBI and the Decision Support Domain Working Groups, the initial membership of the Business Intelligence and Decision Support DWG will consist of the current membership of those two groups. This merger is being put forth by the following members:

Stan Tillman, Intergraph

Mike Sanderson, 1Spatial

The Business Intelligence and Decision Support Domain Working Group will be open for participation by all interested OGC members. The DWG will have up to two co-chairs and up to two vice-chairs, who will co-ordinate the agenda for OGC meetings. They will be selected by majority vote by the DWG members.

Participation in the Business Intelligence and Decision Support (BIDS) email discussion list <bids@lists.opengeospatial.org> is open to the public. Because this group reflects the extremely diverse interests at play, it is expected to have a broad participation from other working groups.

4.2 Key Activities.

- **Raise awareness and build relationships**
 - Focus both the geospatial and BI industries' attention on the problems and issues of location-aware BI and decision support.
 - Catalyze and mediate communication within this target audience.
 - Initiate an OGC presence at BI conferences and events.
- **Identify need for use cases.**

- Identify scenarios that could be more efficient and effective through the use of various web services.
- Identify the needs and requirements for the user community and flow those back to the appropriate working groups for consideration and action.
- **Develop standards**
 - Cultivate technical solutions that support interoperable concepts, data definitions, formats and services for publishing, search, and exchange of information.
 - Conceive, design, coordinate, and implement demonstration, pilot, and production projects that demonstrate technical approaches to business data management and exchange within the context of the OGC suite of technologies.
 - As appropriate, serve as a forum for the development of standards profiles and application schemas for GeoBI.
 - Engage the interest of sponsors for these activities.

4.3 Business Case

The primary objective of the Working Group is to discuss the integration of various Web services within and outside of the geospatial domain in order to advance the broad use of OGC services, particularly within the BI paradigm. This objective will be accomplished by addressing the following topics:

- How to represent information to users using OGC services. This is not meant to set user interface standards, but rather to identify best practices in ways to better understand the information presented by the particular web service.
- Consider human workload where more is not always better. The WG will look at information provided in the context of the event. For example, in an emergency response situation, the data/performance needs will likely be different than a detailed analysis of a building location.
- Client support services. Take a closer look at services that will support an integrated environment. This will likely involve packaging of new capabilities with workflows or Web Processing Services.
- Making OGC services more consumable (as in portlets and apps). Identify challenges to incorporating services in various client environments. This will involve working with a number of other working groups in order to find solutions to these challenges.
- Catalog usability. Although catalogs give us a method of identifying available resources, this WG will work with the Catalog WG to develop concepts to make catalog information more easily accessible from client applications.
- Exposing services in a broader context. As one of the primary objectives of the WG is to advance the broad use of OGC services, we help to identify areas where OGC services could be used.

5. Organizational Approach and Scope of Work

5.1 Business Intelligence and Decision Support DWG Business Goals

The Business Intelligence and Decision Support DWG will need to establish a set of business goals that frame the basis for determining the nature and type of recommendations made to OGC, framed around the above mentioned business issues. Examples of the types of discussion for framing goals include

- 1) Efforts should focus on working both Business Intelligence and Decision Support issues and problems that result in a net gain for the community.
- 2) Minimize technical distinctions between Business Intelligence and Decision Support data processing systems that use geography, as this can lead to artificial barriers that limit the potential of all segments of the information community to come together and fully prosper.
- 3) Avoid placing artificial technical barriers on use of Business Intelligence and Decision Support data.
- 4) Establish the means by which OGC can achieve interoperability and yet preserve the proprietary nature of data.
- 5) Define the supporting infrastructure for the community to achieve these goals.

5.2 Business Intelligence and Decision Support DWG: Mission and Role

The mission of this Working Group is to establish a forum for describing and discussing issues regarding the need for easy integration of multiple data sources through multiple service types. The primary focus of this working group will be to help the decision maker have access to the tools and data in an integrated environment that allows for smarter and faster decisions. This Working Group's interests will address the need for easy integration of geospatial data models and analytics into data warehouses, analytics, and client-side statistical visualization tools.

5.3 Activities planned for Business Intelligence and Decision Support DWG

Since the Working Group will deal with the use and integration of many OGC services and technologies, it will involve a work plan that addresses a number of domains. We will also work with other Working Groups in order to avoid duplication of work assignments. Areas of interest will include the following:

- 1) Clients: Integration of all data sources
 - a. Integrated Client to access all OWS services
 - b. BI dashboards
 - c. Web browsers, portals, and portlets
- 2) Distributed Feature Styling and Portrayal
- 3) Collaboration
 - a. Context document
 - b. Dynamic sharing of context document
 - c. Common/Shared Operating Picture
- 4) Multilingual OWS
- 5) Visualization
 - a. Spatial and temporal correlation: layers, events
 - b. 3-D visualization (presentation not calculation in 3-D)
 - c. Scientific visualization applied to geospatial
 - d. Visualization analytics
 - e. Human factors
- 6) Representation of the user community to OGC

- a. Manage a mailing list for domain-relevant issues within the OGC
 - b. Aid in flowing user community requirements to the appropriate OGC working groups
- 7) BI-specific
 - a. Develop high-level information models for common types of business information for easier exploitation in ETL and analytics and visualization
 - b. Develop communications materials, including white papers, a website (including OGCNetwork), and other documents that focus on the technical problem area of business intelligence data management, analysis and visualization.
 - c. Initiate an effort to define a Web Processing Service profile for business analytics.

6. References

1. No references are given since this is a merger of two existing groups within OGC.