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Architecture and Review Board (OAB) Policies and Procedures

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1 Preface and Background

OpenGIS Standards documents are developed within the OGC Technical Committee. Members of the TC Working Groups and Revision Working Groups serve voluntarily and without compensation. The standards developed within OGC represent a consensus of the broad expertise on the subject within the Institute as well as those activities outside of OGC that have expressed an interest in participating in the development of the standard.

Since 1994, this collaborative effort has resulted in a robust set of member approved and maintained standards. These standards represent the core of the OGC Standards Baseline. There are now well over a thousand server implementations of OGC standards.

There has been a growing member and OGC Board of Directors demand for better life cycle management and general alignment (or harmonization) of the Baseline. The current OGC Policies and Procedures contains elements of proper life cycle management and various existing Working Groups focus on elements of standards alignment. The OGC Reference Model defines the framework within which all of the OGC standards – current and evolving – fit.

All of these activities represent elements of the baseline architecture for OGC standards and related supporting documents. However, there is currently no overarching forum within the OGC structure that provides the mechanism to review, document, and provide guidance related to the architecture of the Baseline, including life cycle guidance and governance.

Therefore in late 2005, both the Planning Committee and the OGC Board of Directors requested staff to consider the structure, policies and procedures for an OGC Architecture Board and to provide a draft document for consideration by the OGC Membership. In 2010, the Members agreed that the Architecture Board should also incorporate the role of conflict resolution previously the responsibility of the OGC Review Board. The revised entity is known as the OGC Architecture and Review Board, hereafter in this document referred to as the “OAB”. For consistency and continuity, the acronym OAB shall continue to be used.

2 Introduction: Architecture and Review Board (OAB)

On June 2006 the OGC Technical and Planning Committees approved a standing committee of the OGC members and staff called the “OGC Architecture Board” (OAB). This document defines the Policies and Procedures by which the OAB performs its mission. The OAB was established as part of the formal management and coordination structure of the standards development, approval, and conflict adjudication process.

2.1 Mission of the OGC Architecture Board

The mission of the OAB is to provide a forum within which Consortium wide standards architecture and life cycle management issues can be discussed and deliberated with the intent of providing guidance and recommendations to the TC and the PC on these issues. Specifically, the OGC Architecture Board works with the TC and the PC to insure architecture consistency of the Baseline and provide guidance to the OGC membership to insure strong life cycle management of the OGC standards baseline. In order to properly provide such guidance and perform the Governance functions as outlined below, the OAB can, at its discretion, evaluate current technology issues and identify gaps in the architecture that need to be responded to by the Membership.

2.2 Terms and Definitions

Most of the terms and definitions used in this document can be found in the OGC Technical Committee Policies and Procedures. However, in addition and for the purposes of this document, the following terms are defined.

Architecture: For the purposes of this Document, Architecture is the fundamental organization of a system embodied in its components their relationships to each other, and to the environment, and the principles guiding its design and evolution. Within this context, the consistency of the architecture of the OGC Standards Baseline (see below) will be the primary function of the OGC OAB. We recognize that there are many levels to Architecture, such as reference architectures, implementation architectures, and so forth. However, the focus of this group is the OGC Standards Baseline architecture.

Life cycle model: A framework containing the processes, activities, and tasks involved in the development, operation, and maintenance of the system, which spans the life of the individual OpenGIS standards from the definition of its requirements to the termination of its use.

OGC Reference Model (ORM): The ORM describes a framework for the ongoing work of the Open Geospatial Consortium and our standards and implementing interoperable solutions and applications for geospatial services, data, and applications.

OGC Standards Baseline: The currently approved set of OpenGIS standards and other approved supporting documents, such as the OGC abstract Specification and Best Practices documents. Also known as the OGC Technical Baseline. Hereafter in this document the OGC Standards Baseline is known as “the Baseline”.

Standards: All member approved interface and encoding standards, abstract specifications, and best practices.

2.3 Governance

The OAB operates under the OGC By-laws as approved by the OGC Board of Directors. The By-laws establishes the OAB's domain of operations. The OAB can recommend changes to the published architectural documents of the OGC, will approve RFC issuances prior to consideration by the full membership, provide life cycle management guidance, provide architecture guidance for use by the Planning Committee in its technology deliberations, and provide recommendations regarding liaison activities with other standards organizations. Finally, the OAB shall be responsible for the review and recommendation for adoption to the Membership of a document called the OGC Reference Model (ORM). This document shall also serve as the description of the Baseline of the OGC and will be used as the basis for guidance, decisions, and rulings of the OAB.

To perform these duties, the OAB has a set of less formal procedures that facilitate the flow of actions between and during OGC meetings. It may also occasionally issues guidance documents about what it expects in technology submissions.

2.4 Relation to OGC Technical Committee Policies and Procedures

The OGC Technical Committee Policies and Procedures (P&P describe the operation and standards adoption processes of the entire OGC. The P&P contains membership categories, the organization and the procedure for adoption and revision of standards. The OAB must synergistically interact with the Technical Committee. Therefore, the work of the OAB must be open and transparent to the entire OGC membership.

The OAB can provide guidance to the Technical Committee and its Working Groups regarding areas of standards harmonization activity, gaps in the Baseline, guidance on life-cycle management, and recommendations related to the ORM. Further, the OAB has the responsibility for evaluating any newly submitted RFC and recommending, based on alignment with the Standards Baseline, whether the RFC submission should be further considered by the OGC membership or should be returned to the submission team with guidance as to how to better align the RFC submission with the Baseline.

2.4.1 Relationship to the OGC Architecture Working Group

There is currently an active Architecture WG. The Architecture WG is an open forum for discussion of and presentations on architecture and technologies issues that may impact multiple OGC standards. An example might be a discussion of the role of SOAP and WSDL to OGC Web Services. The Architecture WG is also the proper forum for decisions related to larger architecture discussions, such as reference architectures. An example might be a presentation on the Orchestra or SDIP reference architectures and a decision to approve these reference architectures for public release. The OAB does not

perform these functions. Therefore, the relationship between the OAB and the Architecture WG is synergistic.

2.5 Relation of the OAB to the OGC Planning Committee (PC)

The OAB also needs to collaborate with the Planning Committee. While the OAB does consider issues related to the Technology Baseline architecture and alignment, the Planning Committee has final authority to vote for the adoption of a candidate standard as an official OGC Standard.

However, the PC may ask the OAB for architecture guidance related to a specific candidate standard as part of their due diligence on any given adoption vote. The OAB may also proactively provide guidance and input to the Planning Committee regarding specific Standards Baseline architecture or life cycle management issues that need to be discussed and acted on as related to the OGC TC Policies and Procedures.

2.6 Summary

The OAB is viewed as an integral and important component of the OGC Standards Development Process. Therefore, OAB members may also be actively involved in various OGC Working Group meetings.

3 Membership in the OAB

Of the fourteen OAB seats, twelve are from the OGC membership and are elected by the OGC Technical Committee with final approval by the OGC Board of Directors. OGC Staff representatives fill the other two OAB seats. Four seats are elected each year, and each elected seat has a term of three years¹. In addition to their other duties, each OAB member is given a semi-formal liaison relationship with a number of TC subgroups.

The Chair and facilitator of the OAB shall be the OGC Chief Technology Officer. The OGC Chief Architect is the other OGC staff member of the OAB. The Chief Architect is also a voting member of the OAB.

3.1 Rules of Membership

OAB seats are assigned to an individual, but only for as long as he or she remains affiliated with the same OGC Member. There may be no more than one OAB member from any particular OGC member organisation.

An OAB member may relinquish that membership voluntarily at any time. Further, the OAB Chair may ask an OAB member to resign for non-attendance and/or non-participation. As long as the official OAB member attends the

¹ The exception is when we first “stand up” the OAB. In this case, 4 members will be elected to one-year terms and 4 members will be elected to 2 year terms, and four members will be elected to 3 year terms.

teleconferences and fulfils their voting responsibilities, then they may send a proxy or substitute to attend the Face-to-Face (F2F) meetings. However, the OAB Chair must approve the proxy.

Upon loss to the OAB of a member for any reason, a replacement must be chosen by election at the earliest reasonable opportunity. See section 3.4 below regarding special elections.

3.2 OAB Elections

Election for seats on the OAB is by Vote of OGC Technical Committee Members eligible to vote. When one or more of the corresponding OAB seats becomes vacant, the TC Chair initiates an OAB election. Where an election for a seat takes place before the expiry of a 36-month term², the newly elected OAB member occupies that seat for at most the balance of that original term. Normal OGC electronic voting procedures will be used in the election of the OAB membership.

To get elected, the candidate has to be well known to the voters (either in person or by reputation). Canvassing helps, but ultimately people vote for someone they respect personally.

3.3 Nominations

Nomination requires the endorsements of 3 or more of the Member Representatives of the Technical Committee. An endorsement email to the TCC is sufficient.

Self-nominations are allowed but still require written endorsement by at least two other Member representatives. A short resume for each nominated candidate must be submitted to the TCC. These resumes should document the nominees experience in the OGC, experience related to systems architecture, and familiarity with the OGC Standards Baseline and OGC Reference Model. Either the nominee or a member endorsing that nominee may submit the resume.

The time commitment for participation on the OAB includes participation in a minimum of three (3) out of the four (4) annual OGC Technical Committee meetings, monthly teleconferences of one hour's duration, and time to review and comment on OGC member technical documents as required. (See section on Proxies above).

The closing date for nominations for OAB candidates shall be announced to the OGC membership at least thirty days beforehand by email or at an OGC Technical Committee meeting and by email.

If, at the closing date, there are no more candidates than seats available, all the

² Except of the case for the initial OAB membership. In this case, four members will have one-year terms, four members will have two year terms, and four members will have three year terms.

candidates are deemed elected unopposed, and no election is held. If there are both full- and partial-term seats in an unopposed election, but more candidates than full-term seats, lots will be drawn to determine which candidates are assigned the full-term seats.

At the closing date, the list of nominees is provided to the Planning Committee. The PC will validate the list of nominees and vote on the formal slate of nominations for the OAB to be considered by the TC.

3.4 Special Elections

From time to time, due to circumstances in job changes, medical reasons, or failure to meet the requirements for membership in the OAB, an OAB member will resign from the OAB. In this event, the TCC shall initiate a special election. The special election will abide by the same rules and procedures as normal OAB elections except for the following conditions:

- Term: The term for the elected individual will be for the balance of the term of the individual who resigned.
- The closing date may be as short as 14 days (two weeks) following announcement of the special election by the TCC.

If the term will be less than 6 months, there will not be a special election and the vacant OAB position shall remain so until the next normally scheduled OAB election.

4 Role and Function of the Architecture Board

This section describes the role and the functions or activities performed by the OAB.

4.1 Role and Responsibilities

The role and responsibilities of the OAB is described below.

- The OAB shall be responsible for the review and recommendation for adoption by the Technical Committee of a document called the OGC Reference Model (ORM). This document describes the Baseline and a general roadmap for future baseline development. Further, the ORM provides a baseline and guidance for OGC reference architecture work and provides the baseline for OGC Interoperability Program activities. The OAB shall not unilaterally change the ORM but can provide guidance as to the content of the ORM. The OGC Chief Architect is the OGC staff person responsible for the coordination and maintenance of the ORM.
- The OAB shall use the ORM as its primary guidance for framing technical and architectural discussions.
- Based on the ORM as well as individual standard Roadmaps, the OAB will consider OGC wide Roadmap issues with the intent of insuring logical and

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consistent releases of new versions of existing OGC specifications. The OAB will also document and release high-level Roadmaps for use by the Membership. The OAB will therefore require individual Roadmaps, as per the TC P&P, for each standard undergoing revision.

- The OAB can monitor current technology issues, trends, and so forth as part of their mandate in order to identify technology gaps or issues related to the OGC Baseline or with a candidate standard that is part of an RFC submission.
- Once an RFC submission package has been submitted to the Technical Committee Chair, the OAB will review the RFC candidate standard before the document is delegated by the TCC to the appropriate TC Working Group for further consideration. The OAB will check the candidate standard for consistency with the Baseline. This evaluation will occur in coordination with the submission team. An RFC Submission Team must be prepared to attend an OAB meeting in which the candidate standard will be discussed. The OAB has the authority to return an RFC submission to the RFC submission Team with a request to make changes before the RFC submission can be considered by the TC.
- The OAB can review other Work Items as they are created for consistency with technical and architecture baselines and make change recommendations to the appropriate body.
- The OAB can consider, discuss, and make recommendations for guidance related to proper and consistent life-cycle management of all OpenGIS Standardss as related to the Baseline.
- The OAB can recommend new relationships with other standards bodies and can review existing liaison relationships with other standards bodies and organizations. Annex A has more information on the OGC and our liaison relationships with other SDO's and consortia.
- Conflict Resolution and Appeals: Disputes are possible at various stages in the OGC process. To the extent possible, OGC programs and supporting processes are designed so that compromises can be made, and consensus achieved. However there are times when even the most reasonable and knowledgeable people are unable to agree. To achieve the goals of openness and fairness, such conflicts must be resolved by a process of open review and discussion. Section 6 of this document specifies the procedures that shall be followed to deal with procedural and technical issues that cannot be resolved through the normal processes whereby the OGC Specification and/or Interoperability Program participants ordinarily reach consensus. For purposes of this document, a *Working Group* is defined as any subgroup of the Specification Program or any set of stakeholders (sponsors and participants) within the Interoperability Program.

4.2 Types of OAB Guidance

- The OAB produces short position papers and the OAB occasionally makes definitive statements regarding the Baseline based on the findings in these papers. Some statements may change the OGC architectural documents. Some statements address expectations for technology adoptions.
 - OAB Position -- The stated position is a recommended approach for standards adoption.
 - OAB Policy -- The OAB requires the subject matter to be binding on all RFC and related candidate standards submissions. Deviations will usually result in rejection.
 - OAB Architecture Finding -- The OAB directs that OGC architectural documents (the Baseline and the OGC Reference Model) be updated.

5 Architecture Board Meetings

The work of the OAB shall be performed using e-mail, the OGC Portal, teleconferences, and face-to-face (F2F) meetings. A special OAM e-mail reflector will be instantiated. There will normally be 1 OAB teleconference per month but more if there is a new RFC submission. The teleconference schedule will be made available to all OGC members at least one week prior to any scheduled OAB teleconference.

F2F meetings of the OAB shall be announced at least 8 weeks in advance to the entire OGC membership.

There shall be at least four F2F meetings of the OAB in any calendar year, these meetings shall be co-located with meetings of OGC Technical Committee. There will be no more than four F2F OAB meetings per year.

The extended notice period for OAB meetings is because OAB members can potentially lose their seats through non-attendance. The co-location requirement helps ensure cooperation between the OAB and the TC Working Groups, and lessens the travel load on OAB members.

Face to face OAB meetings are open to all OGC members. Any OGC member may ask questions of the OAB or provide technical information as long as such questions and information do not disrupt the OAB meeting. However, non-OAB members cannot vote on any issues or topics being discussed by the OAB.

5.1 Voting During and Between Architecture Board Meetings

Quorum for voting at OAB meetings is normally five less than the number of current OAB members (including the chair). However, should this yield a quorum of less than seven, quorum will instead be set at seven. Quorum may be satisfied by OAB members in attendance or by proxy votes.

The assent of a simple majority of OAB members in attendance at a face-to-face meeting is required to pass any motion in the AB. For votes in F2F meetings, the

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results of a vote are a majority vote in the presence of the quorum, i.e."if you have a quorum and #yes > #no, the motion passes, else the motion fails."

Written proxies for voting on specific issues at meetings may be given to the OAB Chair or another OAB member by an OAB member unable to attend a meeting in person. Proxies are not counted towards an OAB member's attendance record, and must specify the issue to be voted on and how the vote should be cast.

A poll on any OAB Item may be initiated by the OAB Chair between meetings, collecting votes by fax or electronic mail. The OAB Chair will take reasonable precautions to ensure that the OAB members themselves cast the votes, rather than, say, other representatives of their companies. There are no proxies for electronic votes, but neither is there is a time limit. Instead, the OAB Chair must continue gathering votes until no further voting could affect outcome. Results of any electronic poll must be announced to the whole OGC membership (by email), and at the next AB meeting.

Note: Quorum for OAB electronic polls is effectively 100%, but without requiring the OAB Chair to pursue OAB members for votes that cannot effect the outcome, nor allowing an AB member to block progress simply by refusing to cast a vote.

The OGC Chief Architect has full voting rights on the AB.

The OAB Chair and OGC Chief Architect take an active part in the technical work of the OAB. The Chief Architect is a voting OAB member, providing an impartial OGC technical opinion on Architecture Board Items.

In addition to the above duties of a Chair, the OAB Chair shall ensure:

- Active participation of OAB members in the subgroups of the Technical Committee Working Groups;
- Notification of empty OAB seats to the membership.

6 Conflict resolution

6.1 Working Group Disputes

An individual (whether a participant in the relevant Working Group or not) may disagree with a Working Group recommendation based on his or her belief that either (a) his or her own views have not been adequately considered by the Working Group, or (b) the Working Group has made an incorrect technical choice which places the quality and/or integrity of the Working Group's product(s) in significant jeopardy. The first issue is a difficulty with Working Group process; the latter is an assertion of technical error. These two types of disagreement are quite different, but the same process of review handles both.

A person who disagrees with a Working Group recommendation shall always first discuss the matter with the Working Group's chair(s), who may involve other members of the Working Group (or the Working Group as a whole) in the discussion.

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If the disagreement cannot be resolved in this way, any of the parties involved may bring it to the attention of the Executive Director for the Program in which the Working Group is chartered. The Executive Director shall attempt to resolve the dispute.

If the Executive Director cannot resolve the disagreement, any of the parties involved may then appeal to the OAB. The OAB shall then review the situation and attempt to resolve it in a reasonable and timely manner.

The OAB decision is final with respect to the question of whether or not the procedures have been followed and with respect to all questions of technical merit.

6.2 Process Failures

The OGC Procedural Baseline sets forth procedures to be followed to ensure openness and fairness of OGC processes, and the technical viability of the specifications created. The OGC Planning Committee is the principal agent of the Specification Program for this purpose and the OAB is the principal agent of the Interoperability Program for this purpose. In the case of the Specification Program, the Executive Director is charged with ensuring that the required procedures have been followed, and that any necessary prerequisites to a specification adoption have been met. In the case of the Interoperability Program, the Executive Director has the charge to ensure that required procedures have been followed in the creation of Interoperability Program Reports.

If an individual should disagree with an action taken by the Executive Director in these processes, that person should first discuss the issue with the Executive Director. If the Executive Director is unable to satisfy the complainant then the OGC Planning Committee or Initiative Sponsors as a whole should re-examine the action taken, along with input from the complainant, and determine whether any further action is needed. The OGC Planning Committee or Initiative Sponsors shall issue a report on its review of the complaint to the OAB.

Should the complainant not be satisfied with the outcome of the OGC Planning Committee or Initiative Sponsors review, an appeal may be lodged to the OAB. The OAB shall then review the situation and attempt to resolve it in a manner of its own choosing and report to the OGC membership on the outcome of its review.

If circumstances warrant, the OAB may recommend that an OGC Planning Committee or Initiative Sponsors decision be modified. The Board may also recommend an action to the Executive Director, or make such other recommendations as it deems fit. The OAB may not, however, pre-empt the role of the OGC Technical or Planning Committees by issuing a decision that only they are empowered to make.

The OAB decision is final with respect to the question of whether or not the appropriate procedures have been followed.

6.3 Questions of Applicable Procedure

Further recourse is available only in cases in which the procedures themselves (i.e., the procedures described in this document) are claimed to be inadequate or insufficient to the protection of the rights of all parties in a fair and open process. Claims on this basis may be made to the OGC Board of Directors. The Chairman of the OGC Board of Directors shall acknowledge such an appeal within two weeks, and shall at the time of acknowledgment advise the petitioner of the expected duration of the Board of Directors' review of the appeal. The Board of Directors shall review the situation in a manner of its own choosing and report to the OGC membership on the outcome of its review.

The Board of Directors' decision upon completion of their review shall be final with respect to all aspects of the dispute.

6.4 Appeals Procedure³

All appeals must include a detailed and specific description of the facts of the dispute.

All appeals must be initiated within two months of the public knowledge of the action or decision to be challenged.

At all stages of the appeals process, the individuals or bodies responsible for making the decisions have the discretion to define the specific procedures they will follow in the process of making their decision.

In all cases a decision concerning the disposition of the dispute, and the communication of that decision to the parties involved, must be accomplished within a reasonable period of time.

All appeals made to the OAB under the above processes shall be registered in a tracking database, assigned a unique identifier, and be made available to all OGC members via electronic media.

Each appeal record shall include the source of the appeal, detailed and specific description of the facts of the dispute, and the OAB recommendation once completed.

³ These procedures intentionally and explicitly do not establish a fixed maximum time period that shall be considered "reasonable" in all cases. The OGC process places a premium on consensus and efforts to achieve it, and deliberately foregoes deterministically swift execution of procedures in favor of a latitude within which more genuine technical agreements may be reached.

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Annex A

The OGC find it increasingly necessary to communicate and coordinate their activities involving spatial web related technologies. This is useful in order to avoid overlap in work efforts and to manage interactions between their groups. In cases where the mutual effort to communicate and coordinate activities is formalized, these relationships are generically referred to as "liaison relationships".

Therefore, OGC communicates extensively with other organizations on issues relating to the development of Internet standards. Part of this communication occurs in written form, known as "liaison statements". In order to ensure the delivery of liaison statements, as well as to enable other forms of communication, the OGC appoints a liaison manager to be responsible for the relationship with the other organization. We normally speak of such a person as "the liaison" from the OGC to the other organization.

In general, a liaison relationship is most valuable when there are areas of technical development of mutual interest. For the most part, SDOs would rather leverage existing work done by other organizations than recreate it themselves (and would like the same done with respect to their own work). Establishing a liaison relationship can provide the framework for ongoing communications to

- o Prevent inadvertent duplication of effort, without obstructing either organization from pursuing its own mandate;
- o Provide authoritative information of one organization's dependencies on the other's work.