

DDI Alliance

Standards Development and Review Process and Procedures

The Data Documentation Initiative (DDI) Alliance develops standards and semantic products supporting the documentation, management, and integration of social science data and other data about human activity.

Definitions

DDI Codebook: The development line aimed at providing the comprehensive documentation needed to effectively use and analyze social science data focusing on simple surveys and data sets.

DDI Lifecycle: The development line aimed at documenting and managing data across the entire life cycle of research data from conceptualization to publication and beyond.

DDI Controlled Vocabularies: The lists of standardized terms that provide semantics (definitions of the meaning of metadata elements) and content (declaration of instructions for what and how values should be assigned to elements) rendered in a DDI specified structure using an XML format called Genericcode (an OASIS specification).

Expedited Review: An abbreviated review process for Sub-Minor Version Changes. Expedited review must be approved by the Director in consultation with the Director's Advisory Group. At minimum, such a review includes notification of the Scientific Board describing the proposed changes and a period for comments.

Invalidating Change: A change to a specification such that instances created using the previous version of the specification may be invalid when parsed against the new specification.

Major Version Change: A revision resulting in a new version of the DDI Codebook or Lifecycle specification that changes the coverage, scope, or functionality. A major structural remodeling of a specification would also result in a Major Version Change. These changes are generally invalidating. The change results in a new product namespace. In the three-digit DDI version numbering scheme, e.g., V. 3.2.1, a major change is indicated by the first digit.

Minor Version Change: A revision resulting in a new version of a specification that contains corrections for bugs or minor changes to improve functionality of current features. Instances created using the previous version may be invalid when parsed against the new specification. The change results in a new product namespace. In the three-digit DDI version numbering scheme, e.g., V. 3.2.1, a minor change is indicated by the second digit.

Specification: In the DDI context, a specification is a set of requirements for metadata describing social science and other data about human activity. The specification consists of a model, its rendering(s) in specific technical languages (like XML), and its documentation.

Sponsor Request: A request with accompanying funding from an Alliance Member for specific changes to a DDI specification to advance the standard.

Sub-Minor Version Change: A revision resulting in a new version of a specification that contains corrections for bugs or minor changes such as relaxing cardinality constraints or field-level documentation improvements. All DDI instances created using the previous version of the specification will still be valid when parsed against the new specification. The change does not result in a new product namespace. In the three-digit DDI version numbering scheme, e.g., V. 3.2.1, a sub-minor change is indicated by the third digit.

Technical Committee (TC): The group that models, renders, maintains, and updates the specifications.

Validating Change: A change to a specification such that instances created using the previous version will be valid when parsed against the new specification.

Development Lines

The DDI standards and products are progressed through development lines that meet the needs of specific audiences, solve common issues in the relevant domain, and adapt to changes in the domain. Current development lines are DDI Codebook and DDI Lifecycle. A line of Controlled Vocabularies is also made available and maintained.

Proposals for Changes to the Standards

Every proposal for a modification to an existing DDI specification goes through one or more of the following processes, depending upon the extent of change involved, unless alternative processes are later approved by the Director, the Executive Board, and the Scientific Board. All proposals must be (a) accompanied by a revised model and technical implementation developed by the Technical Committee, (b) publicly posted for an open review period enabling comment from the DDI community, and (c) voted upon by the Scientific Board or receive expedited approval by the Director in consultation with the Director's Advisory Group.

The change procedure for the Controlled Vocabularies is outlined at <http://www.ddialliance.org/controlled-vocabularies>.

Scheduled Publication of New Versions

Major and Minor Version Changes can occur a maximum of twice a year with publication for review in January or July. It is anticipated that revisions resulting in a change to the namespace will occur less frequently than this. Sub-Minor Version Changes (those not affecting the namespace) may occur as required to address critical bugs or other non-invalidating minor changes.

Controlled Vocabularies are versioned to meet the needs of the community.

Development and Review Process

1. Identifying Objects of Change

User Requests. Any DDI Alliance member or user of DDI specifications may note and report DDI items that require change, either correction or expansion, through the DDI tracking system. The Technical Committee routinely reviews these reports and determines if an immediate sub-minor change is warranted or if the change should be noted and corrected in the next planned version change. In addition, the Technical Committee can note that an issue is broader than a specific correction to an existing element and can recommend to the Director that the broader issue be brought before the Scientific Board for consideration as a topic for a Working Group tasked with preparing a proposal for change to the standard.

Working Groups. The Scientific Board may authorize the creation of a Working Group to explore changes to a specification in terms of the depth of current DDI coverage or expansion of that coverage into new areas whenever recommended by the Director, when proposed by a Member Organization with the support of two additional Member Organizations, or upon its own initiative, such as focused discussions among members. The creation of a Working Group by the Scientific Board implies that resources should be directed towards support of the Working Group and the integration of the change into the standard once approved.

Sponsor Requests. In the event that a Working Group is not formed due to lack of resources or the competing need for limited resources, a proposal for change may also be developed as a Sponsored Request for Change. The proposal may be submitted by a Member Organization with the support of at least three other Member Organizations. The proposal must meet the same specifications as that developed by a Working Group and proceeds through the same review process. The Member Organization(s) agree to sponsor the proposal and provide the financial resources required to review, process, and implement the change.

2. Proposal Development and Content

A proposal for change may be prepared by an established Working Group, a sponsored Working Group, or the Technical Committee. A proposal for change should reflect the input of the DDI community concerned with the topic area. To help the community assess the proposal during review, the proposal must include a complete draft statement of content and functionality as well as information about the business case for the proposed change and the objectives that the change will achieve. When relevant, the proposal should also document solutions suggested but not followed up on to ensure that the proposal for change was thoroughly considered before submission.

A member of the group preparing the proposal should be designated the Architect and is responsible for ensuring that the proposal is complete, for coordinating with the Technical Committee in preparing a technical implementation for testing, and for answering questions arising during review. Working Groups are encouraged to involve a member of the Technical Committee as

a liaison to facilitate development of a well-integrated proposal. The Director must be kept apprised of all proposal development.

3. Technical Review

A proposal may be submitted to the Director by the Technical Committee or a Working Group. The proposal must include a model as well as a technical implementation for the purpose of testing. The provision of multiple Use Cases is strongly recommended.

The Director will then ensure that the proposal is circulated to all Alliance members for a Technical Review before it is made available for public comment. The Technical Review period should span one to two months. The proposal will be made available electronically and a means of tracking discussion and feedback will be established. The electronic discussion will be open to all Member Organizations, without constraint. As issues are raised during the Technical Review, it is expected that participants will provide feedback (formally or informally) on how to resolve the issues. The Architect of the specification should post responses to these issues. The Architect will consider the comments on each issue in consultation with the Technical Committee and make an informed decision on whether to change the proposal accordingly.

At the end of the Technical Review period, each member of the Scientific Board will be asked to give the Director a “Yes”, “No,” or “Not-Yet” vote. A “No” vote, to discontinue the Review and reject the specification, must be accompanied with comments to explain the vote. A “Not-Yet” vote indicates that the specification either needs substantially more design work or that the complexity of the specification requires a longer Technical Review cycle. A “Not-Yet” vote also must be accompanied with comments to explain the vote. The Director will consider the votes and make an informed decision as to whether to proceed to the next stage of the process, to extend the Technical Review, to dismiss the specification without prejudice and ask the sponsor to resubmit after redesign, or to reject the specification. In order to proceed to Public Review, at least 50 percent of those voting must have voted “Yes.” The Director must explain his or her decision in writing to the Scientific Board.

At the end of a Technical Review the proposal may be made available in a beta version for immediate use and testing prior to incorporation into a new version of the specification. This is done at the discretion of the Director with input from the Technical Committee. This makes the content available for use prior to official publication and allows for further refinement of the proposal. This is particularly useful for proposals that add increased depth or new content to the specification.

4. Public Review with Proof of Concept and Change Log

If the proposal is accepted after Technical Review, then the proposal is made available for a Public Review of at least one month. The Director will make a reasonable effort to distribute the revised specification to the public, primarily by posting on the public Web site. All public comments will be published and openly available. Any issues raised during this Public Review must be publicly

answered by the Technical Committee. The period of Public Review may be extended at the discretion of the Architect, the Technical Committee, or the Director.

In parallel with the Public Review, a “proof of concept” implementation of the specification should be undertaken. Proof of concept typically requires a complete, public, portable implementation, but a public implementation is not a requirement. Alternatives to proof of concept may be proposed on a case-by-case basis and are subject to the discretion of the Scientific Board. It is not required that the lead sponsor of the proposal be the organization that undertakes the proof of concept implementation.

When relevant, a Change Log should also be made available, showing which elements in the specification were changed, how they were changed, and the rationale for the changes. If acceptable to the Scientific Board, the Change Log may be an alternative to the Proof of Concept.

5. Vote

When Public Review has ended and the Director believes proof of concept (or its alternative) has been established, each member of the Scientific Board will be asked to give the Director a “Yes” or “No” vote. A “Yes” vote indicates that the validity and usefulness of the proposed modification have been demonstrated and that the revised specification should now be accepted as a part of the DDI standard. A “No” vote indicates the case has not yet been made for the proposed modification. A “No” vote must be accompanied with comments to explain the vote. The Director will consider the votes and make an informed decision as to whether to accept the specification or to restart the process at some earlier stage. In order for the specification to be approved, at least two-thirds of the Scientific Board must vote “Yes,” but the Director is not required to approve the specification even if a higher proportion of the Board recommends its approval. The Director must explain his or her decision in writing to the Scientific Board. Ordinarily, the Director will override a substantial vote of the Scientific Board only when he or she perceives that the proposal would compromise the DDI as an international standard. The decision of the Director may be vetoed by a two-thirds vote of the Executive Board.

6. Publication of the Approved Version Change

The Technical Committee will incorporate corrections noted in the Public Review and prepare the new version of the specification for publication. This will include a revised model, a technical implementation of the specification, field-level documentation as a usable guide, and revised high-level technical documentation. The Technical Committee will review corrections with the Director to determine if an additional review period is needed. Timing of publication is dependent upon resources and will be determined by the Director in consultation with the Technical Committee.

Process Requirements Based on Level of Change

1. Major Version Change

Major Version Changes are the result of adding new areas of coverage or making significant structural changes to the specification. These changes are generally invalidating but this is not a

requirement for a Major Version Change. Given the scope of change, Major Version Changes generally involve the development of one or more Working Groups or extensive consultation between the Scientific Board and the Technical Committee.

Major Version Changes involve a Technical Review addressing each specific area of change, a Public Review of the complete content of the new version, a vote to approve, and publication. At the discretion of the Director with advice from the Technical Committee, multiple areas of change may be rolled into a single Technical Review.

2. Minor Version Change

Minor Version Changes may involve a wide range of corrections and added depth to current coverage. They may be focused or wide reaching depending on the bugs and issues filed against the specification. Minor Version Changes may be initiated by the Technical Committee with the approval of the Director. They may or may not incorporate the proposals of Working Groups submitted while the Minor Version Change is in process. The Director may decide to place such a proposal on hold and not include it in the Minor Version Change if there is a need for further review or if the proposed change would greatly impact the larger specification (incorporation resulting in a Major Version Change).

A Minor Version Change involves a Technical Review, Public Review, a vote for approval, and publication. The Technical Review may be limited or bypassed if the Director determines that the process of developing the proposed changes involved sufficient input and review by Member Organizations concerned with area of coverage.

3. Sub-Minor Version Change

All Sub-Minor Version Changes must contain only validating changes. Common reasons for a Sub-Minor Version Change include a major or blocking bug found post-publication, expanded or corrected field-level documentation, or relaxing cardinality rules. The preparation of a Sub-Minor Version Change is proposed by the Technical Committee and must be approved in advance by the Director in consultation with the Director's Advisory Group. This is to ensure that resources are available for the work involved. Sub-Minor Version Changes may be expedited when the Director in consultation with the Director's Advisory Group determines that sufficient review has taken place with the concerned Member Organizations. At minimum an Expedited Review will include notification of the Scientific Board describing the proposed changes and a period for comments.

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