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Group
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Existing TDWG Processes

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Summary

TDWG's current processes for the development of standards for interoperability of biological diversity information are informal and diverse. There are only two formal aspects of the process, the sanction of a new subgroup by the Executive, and a vote on acceptance of a new standard at the annual TDWG meeting.

There is no formal mandate for new groups, no reporting schedule, no systematic broad-spectrum documentation expected and no integrating architecture that outputs and outcomes need to adhere to. The Executive is over-burdened with the organization and running of the annual meeting, and there is an unhealthy emphasis placed on progressing standards at this meeting.

There is a strong need to create a simple, effective and well-publicized process that spans the roles of the all TDWG groups including the Executive in the establishment, tracking and completion of TDWG initiatives.

Introduction

This document provides raw material for the TDWG Process subgroup. It is intended to summarize the current processes for the development of standards and protocols in TDWG. The sections identify key areas within TDWG where processes are form a significant component. There are un-avoidable overlaps in issues between the sections. Where this is the case, they have allocated them to the most obvious category. The observations are just that; I may have misinterpreted what I perceived, or just got it wrong. The recommendations are provided as the simplest remedies to most of the observations.

Quotes

- “We can get a lot of agreement over a few hours on what needs to be done in face to face environments, but it's no surprise that everyone goes home to their day jobs and we don't revisit until a key need arises. I think what would be quite useful is a structured environment for standards development where the steps from inception to published standards are well documented for particular types of standards - documented process. Integrating this with tools that "require" contributors (via a system of carrots and sticks) to author or comment within a well established time frame. It's very easy to let things go by in a volunteer system”.
- “The hardest thing seems to be to require participation.”
- “People need to see action to take action...”
- “The bottlenecks to standards development are definitely getting the appropriate people to participate in a timely fashion. I think we would benefit from a much more rigid standards development process, such as those used by W3C, OGC, or even ISO.”
- “What we're missing is the appropriate level of documentation to engage those who need engaging. We leave too much of a barrier for newcomers to really get their feet wet - we make them have to take their shoes off first.”

A. General Observations

1. TDWG does not appear to communicate effectively with organizations that have a vested interest in TDWG activities. The information on the TDWG Web site does not constitute useful information for organizations that should have a cost/benefit interest in TDWG activities. Communication about TDWG activities to many organizations would appear to be only via TDWG members. This perspective would likely be far too technical and limited in scope to communicate effectively with heads of organizations.
2. While related to (1) above, TDWG does not appear to communicate effectively with what could be best described as the managers of TDWG members. These clients are the 'middle managers' of organizations whose staff support TDWG activities. Discussions at TDWG 2005 suggested that members activities in TDWG projects was opportunistic and limited by their 'normal work'. The organizational head and middle management therefore have in most cases, a limited perspective of the significance of TDWG to their core business. It is likely that TDWG members spend a considerable proportion of their time in TDWG-related activities; work that could be done more effectively, with effective interoperability standards and protocols.
3. TDWG does not appear to have any policy on **Copyright** or **Intellectual Property Rights**. The majority of other standards bodies reviewed usually had these issues close to, if not on their home pages.
4. TDWG does not appear to have a **Glossary** of terms that would be useful for new members, interested clients or search engines.
5. Evidence of the lack of a strong and well-defined process has been in the development dichotomy between Darwin Core – ABCD and consequently BioCASE and DiGIR. It would appear that TAPIR is trying to play 'catch-up' for tangential developments. See Recommendation D1.
6. I didn't detect evidence of a strong **consensus** ethic in TDWG. Consensus was a theme that was obvious in many of the other standards organizations reviewed.
7. Lack of **formalized links** to related standards organizations such as OGC.

Recommendations

1. Expand the TDWG Executive to include a member responsible for '**outreach**'. This member works with the Chair of TDWG to identify key activities during the up-coming year, with a recognition of the responsibility to the host organization and country during the annual meetings.
2. Effective '**push and pull**' communication must be developed that targets
 - a. Heads of organizations and
 - b. Middle managers of organizations who have or should have staff that are TDWG members.

The trigger for new 'push' communication should be, at the latest, when approval is given for the formation of a new 'Task Group'. Organizations and middle managers (the latter through TDWG staff conduits) should be provided with a

- concise (< 1 page) summary of the new initiative. I would recommend C1(a, g, j and k) from a Charter as a minimum. This action could be semi-automated.
3. A one hour Plenary Session at TDWG 2006 to discuss what the relationship was between TDWG members 'normal work' and TDWG initiatives. These 'data' would provide a better understanding of what strategies TDWG may employ to gain greater support.
 4. Steal a 'best-practice' example of **IP** and **Copyright** from other standards development groups. My review of other similar organizations suggests that the IETF text on IP would be applicable, see <http://www.ietf.org/IESG/Section10.txt>. I am not in a position to advise on Copyright that may be applicable to TDWG. TDWG does however require a position on copyright.
 5. TDWG requires at a minimum, a standard '**Glossary**' that includes abbreviations and acronyms. Over time, this could evolve into one or more **ontologies**. A glossary resource needs to be accessible from the TDWG Home Page. Without such a resource, Organizational directors, middle managers and new TDWG members are likely to find entry to TDWG information difficult. Such a resource would be an anticipated outcome of the TDWG Infrastructure Project Task 2 (environment).
 6. Approved TDWG initiatives should be required to amend the Glossary as an early step in their Charter (see Recommendation C1).
 7. **Consensus** should be a standard charge within the Charter of any new TDWG initiative. Consensus forms a strong component of many similar standards organizations, and with good reason. Contention between viewpoints on new initiatives is inevitable, and healthy. Consensus is a principle that is easy to embrace, but its effectiveness largely relies on the skills and effort of the Chair. Effective consensus may take time, but maximizes the utility and acceptance of the outcome while minimizes the overall heartache and time to deployment.
 8. At a minimum, links to other standards bodies (people and subgroups) should be documented on the TDWG Web site. 'Linking members' assures that TDWG remains in context, draws on and influences other standards where appropriate, and raises its own profile. Wherever possible, members of other standards organizations should be encouraged to join TDWG. In some cases where financial resources permit and mutual interest is high, TDWG membership of other standard organizations such as OGC could be considered. An alternative could include payment or subsidization of TDWG members in other standards organizations.

B: TDWG Annual Meeting

Observations

The current emphasis on the TDWG annual meeting creates significant problems-

1. There is less incentive for regular progress the development of standards and protocols when the annual meeting creates an opportunity for intensive face-to-face communication. No comprehensive supportive collaboration environment exists.
2. The annual meeting has been the only occasion for **voting** on new standards/protocols.
3. The annual meeting creates a conflict between using face-to-face time to advance a standard and an environment to communicate less formally on a wider range of issues. The ongoing SDD meeting created a parallel stream.
4. The workload that the annual meeting places on the Executive makes it difficult for them to be more involved with the meetings and in outreach.
5. Many presentations during the TDWG annual meeting do not communicate effectively to new and potential new members. It required considerable effort on my part at TDWG 2005 to understand a context and significance for >80% of the presentations.
6. Dominance of the meeting by English native speakers has created a barrier in communications – even people familiar with the subject matter and generally very fluent in English had difficulties understanding some of the discussions.

Recommendations

1. Delegate responsibility for organizing the TDWG annual meeting to a subgroup of members with the Secretary of TDWG as the Executive's representative on this subgroup. The '**Meeting subgroup**' should be chaired by someone from the hosting agency. The 'Meeting subgroup' Chair should be ex-officio, a member of the Executive for the year leading up to and including the annual meeting. The incoming and outgoing 'Meeting subgroup' Chairs should overlap during the TDWG annual meeting. It is the responsibility of the 'Meeting subgroup' to ensure the smooth running of the meeting. A member of the subgroup should have responsibility to collect presentations from session chairs immediately after each session, and ideally, upload them to the TDWG Web site each evening.
Consequence: invite Chuck Miller or another MO representative to serve on the Exec.?
2. The first slide (~2 minutes) of all presentations at the TDWG annual meeting should assume no knowledge of the issue being presented. Each speaker should address in simple language issues such as
 - a. Why this work being done (the TDWG context)?
 - b. What strategy was used?
3. Use a single venue in easy walking distance from the accommodation. The venue should include 'break-out' rooms for impromptu meetings, an office dedicated to the Executive and one for the 'meeting subgroup'.

4. Session Chairs to intervene if discussions deteriorate into jargon, inaudible talks and heavy accented talk (either by calling upon contributors or by repeating and summarising statements).

C: Establishment and Operation of TDWG Subgroups

Observations

1. There is no **formal plan** outlining specifications, milestones, outcomes, membership, reporting or a sunset clause for the establishment of a new subgroup.
2. There is no formal **checklist** for an Executive group to evaluate a proposal to establish a new subgroup.
3. There is no **Charter** applying to new initiatives in TDWG. Such a Charter should address issues such as identity, mandate, membership, links to TDWG and other standards groups, milestones, outputs and outcomes.
4. No clearly-defined **roles of the Executive** in relation to on-going subgroup processes.
5. No **standardized collaborative development environment** for subgroup activities. Each subgroup appears to have a different operational IT environment, most of which are hosted independently of TDWG. Members operating in more than one subgroup concurrently or over time would find the different 'environments' and processes a barrier to involvement. Interested parties within, or external to TDWG would currently find it difficult to impossible to identify relevant information.
6. (Related to the point above) No easy way for potential new members of a subgroup to catch-up with subgroup activities or **status of the work**.
7. No formal structure for differentiating some form of **Task Groups** from **Discussion Groups**. It would appear that both types of subgroups are required within TDWG.
8. There is no directory of subgroups. Members of the Executive were uncertain of the status of many of the subgroups.

Recommendations

1. A **standard application template** should be used by members wishing to establish a new initiative. This template should be Web-based, and apply Discussion or Task Group. Discussion Groups would require less detail within the template. Completed forms should be stored in a database to facilitate automated workflow during a project. For example, completed forms should automatically trigger notification to an individual or an **Evaluation Panel**, while approved projects can be automatically advertised on the TDWG Web site. A template will help to ensure that applications are concise; brief and functional. A template will also enable an automatic or near automatic generation of a **Charter** (see C1) for a Task Group.

It would be in the interest of a new subgroup to ensure that issues and views are widely canvassed inside and externally to TDWG before submitting a proposal for a new subgroup. Key items in the template should include-

- a. Summary of project (a public description)

- b. Project 'champions' (a core group of 5 should be required) and contact details
 - c. How the project fits within the TDWG mandate (Scope)
 - d. Anticipated strategy
 - e. Linkages to other TDWG projects
 - f. Linkages to external standards (who, where)
 - g. Milestones
 - h. Testing/validation strategy
 - i. Documentation requirements
 - j. Anticipated outputs
 - k. Anticipated outcomes
2. A Task Group requires a **sunset clause**. At that time, a work group should if required, automatically revert to a Discussion Group that would provide a support environment for the groups outcomes and outputs.
 3. Standard **evaluation criteria (a checklist)** should be developed for the Executive to evaluate applications for new TDWG initiatives. The checklist could be developed by the Executive or by a special committee established for the purpose and made up of one or more Executive members and or subgroup chairs (see C3). These criteria should be publicly available on the TDWG Web site.
 4. An **Evaluation Panel** should be established to evaluate proposals for new TDWG initiatives. This Panel should only include Executive members as ex officio as it will be the Executive that votes on an application as a response to a recommendation from the Evaluation Panel. The extent of evaluation should depend on the nature of the proposal. A Discussion Group should only require minimal evaluation while a proposed Task Group should require **peer review** by the Evaluation Panel.
 5. I recommend that the **Advisory Panel** is the **Technical Architecture Group (TAG)**. See recommendation D1.
 6. A new member of the Executive (**Exec-EP**) be appointed as a point of contact with an Evaluation Panel.
 7. Adopt the recommendations for the creation of a supportive IT environment generated through the TDWG Infrastructure Project! The approval of a proposal for Task Group should trigger the generation of a '**workspace environment**' for the group in conjunction with the TDWG Web site. New groups should be encouraged to use the standard environment as all TDWG groups require the same 'look and feel'. This would mean that TDWG members operating between more than one subgroup, or moving between subgroups over time would have the same working environment. The public would also have consistent access to TDWG activities.

The environment should conform to useful standards like W3C CSS, HTML, accessibility etc. A work environment should include, but not be limited to aspects

such as-

- a. A public summary of their Charter
 - b. A Wiki or blog
 - c. Latest news
 - d. A calendar of events past and future
 - e. A mailing list
 - f. Documentation including public, management, technical and tutorial.
 - g. Documentation tools and formats
 - h. A glossary of terms
 - i. Links to TDWG and external projects
 - j. Current work status
 - k. Outputs (standards and/or protocols) in a standard format. This may be comprised of documents and/or code.
 - l. Test regime, harness or protocols
 - m. Demonstration, pilot or implementation sites
8. TDWG should **formally constitute Task and Discussion Groups**. Discussions at TDWG 2005 and subsequently highlighted the ambiguous status of TDWG subgroups. There is an obvious need for a two-tiered approach to the establishment of subgroups to address TDWG initiatives. TDWG requires an 'informal subgroup' to initiate discussions on member interests. In some cases, such Discussion Groups will not generate formal outputs, they maybe educational. In other cases, such groups may generate an application for the formation of a Task Group to generate a specific output and /or outcome. Once the outcomes have been achieved, a Task Group must revert to a Discussion Group to support their products. In both cases, the subgroups require a formal application. It is important that the same application form should be used so that suitable documentation of a subgroup's existence can be semi-automatically produced and consistency can be achieved.

D: Standards and Protocols

Observations

1. No **quality control** of TDWG output.
2. No requirement for harmonization of TDWG initiatives. There is a strong need for some type of coordination or **Technical Architecture Group (TAG)** that assists the Executive in ensuring consistency and complementarity of TDWG initiatives.
3. No formal **documentation folio** associated with the development of standards and protocols. There is an absence of documentation aimed at 'managers' of implementers and organizational heads.
4. No easy way to locate TDWG output. No formal links to implementations from the TDWG site. See Recommendation C7.
5. No formal requirement for testing or validating TDWG products, e.g., best practice in scanning herbarium records. See Recommendations C1h and C9l.
6. No formal promotion strategy for TDWG outputs. See Recommendation A2.

Recommendations

1. Establish a formal Scientific and **Technical Advisory Group (STAG)** as soon as possible to ensure that current and future TDWG initiatives fit within a systematic basic architecture. TDWG products should conform to a consistent design and present a consistent human and computer interface. A standard architecture would ensure that TDWG products are valued and therefore widely implemented. The STAG should be initiated with current subgroup Chairs and with additional members as required by the STAG. A member of the Executive should be identified or appointed as a point of contact with the TAG.

The activities of the STAG could include-

- a. The design of an integrating architecture plan for TDWG development activities
 - b. Evaluation of new proposals for TDWG Task Groups
 - c. Guidance to subgroups on integration issues
 - d. Monitoring of Task Groups against milestones
 - e. Evaluating Task Group outputs against the TDWG architecture plan
2. Adopt the recommendations for documentation within TDWG being generated through the TDWG Infrastructure Project.