

ICAN Governance Model

Discussion Document and Outline Charter

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This is an attempt to capture the current thinking with respect to the various issues that need to be resolved in order to establish an appropriate governance model for ICAN. It is intended to form the basis for discussion in Copenhagen rather than deliver a complete detailed governance model. The outline Governance Charter attempts to capture the key aims of ICAN and also presents a possible approach to how ICAN might function.

Three types of governance with relevance to ICAN have been identified:

- **Organisational Governance:** covering issues such as strategic planning with proposal development, funding, project management, technology implementation, membership, usage conditions and Intellectual Property Rights (IPR).
- **Ontology Content Governance:** determination of the terms and definitions to be included in ICAN interoperability ontologies.
- **Ontology Technical Governance:** storage, security, change management and serving of the ICAN interoperability ontologies.

Organisational Governance

Two groups came out of the Oregon workshop. One aimed at securing funding through proposal development, which is the function of an embryonic Steering Group. The second aimed at the development, management and implementation of a pilot interoperability project between the Marine Irish Digital Atlas (MIDA) and the Oregon Coastal Atlas (OCA). This may be termed an Engineering Task Force. Let us consider how these governance elements may be developed.

Steering Committee

A properly constituted Steering Committee (SC) comprises a chairperson, a secretary and ordinary members, although the role of secretary (meeting organisation and minutes) may be spread between ordinary members on a rotational basis. Steering Committee instantiation raises the following issues:

- **Membership selection:** This should initially be on a consensus/volunteer basis, which seems to be the only practical way to get things started.
- **Tenure.** Initial proposals were for a tenure period of a year. However, this may be too short, particularly for the chairperson role, to provide necessary stability and continuity. Optimal tenure is tied into anticipated activity, with a chairperson ideally seeing more than one project activity through their full life cycles.

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Comment: How about 2 co-chairs for 3 years? This would relieve the pressure from one person, but give a certain continuity. Or is it better to have one point of contact?

- Activity model. Monthly teleconferences with a possible annual physical meeting
- Size. A committee requires a critical mass to function, but equally will not function effectively if it is too large. Experience shows that between 8 and 12 works.
- Structure. Some extremely effective committees are based on a 'satellite' structure with small (around 5 member) groups working in specific areas chaired by a steering committee member. These can either be permanent groups or transient entities formed and dissolved as required. ICAN membership, ontology development, use case, education/outreach and coastal governance policy could be possible themes for such satellites.
- Terms of reference.
 - Strategic planning
 - Funding strategy
 - Proposal development
 - Policy development
 - Technical Task Team direction and management
 - Intellectual Property Rights issues (usually a conflict resolution role)

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Comment: This seems quite frequent – especially to maintain it. Maybe every 2 or three months is sufficient. I think email would suffice in the interim periods.

Engineering Task Force

The Steering Committee issues also arise for the Engineering Task Force (ETF).

- Structure. If a group is to achieve anything concrete, it needs leadership. However, this doesn't imply that an ETF has to have a structure with a chair and members because leadership can be at the project level.
- Membership selection. Recruitment using funds obtained through SC proposals reinforced by volunteers.
- Tenure. A 'by project' model might work better than a specified period of time.
- Activity model. This really depends upon the level of activity. Teleconferencing and periods of co-located working can both be effective. A possibility is the engagement of a wider community in projects through moderated discussion fora.
- Size. Again this is totally dependant on the level of activity.
- Terms of reference
 - Project selection (see approach in charter below via a review sub-committee)
 - Standard/solution technical development, assessment and selection
 - Project implementation
 - Project evaluation? - Come up with thematic categories, queries, use cases (think of Interrisk); people who can just look at an interface and say honestly whether or not it works for them as a user

As ICAN develops there are two other potential 'actors' that need to be taken into account by governance. These are:

- Technology users – people who become interoperable with ICAN through implementation of ICAN technology but without necessarily being involved in its development.
- Service users – people who develop portals displaying datasets from ICAN but do not develop or hold datasets (such as a local government or the portal for a disaster control centre).

Whether these actor types are permitted is a governance issue in itself.

Consortium Agreement

The Memorandum of Agreement drafted during the first Coastal Atlas Workshop (<http://workshop1.science.oregonstate.edu/mou>) forms a sound basis for the establishment of an initial volunteer/consensus SC. It covers organisational commitment for participation by its employees in ICAN SC and ETF activities. This MOU needs to be strengthened in terms of Intellectual Property Rights. A suitable extra paragraph (replacing the last sentence) might be:

ICAN participants will be involved in the development and subsequent shared use of resources subject to which the developers have Intellectual Property Rights. ICAN participants agree to respect these rights by not distributing these resources without the developers' permission and by providing full acknowledgement to the developers where these resources are deployed.

A clear issue raised by the question marks on the web posting is the identity of the entity signing up to the agreement. Is it an individual, a group, a department, or a 'legal entity' (e.g. NERC for BODC)? This needs to be clearly resolved.

The emergence of other types of actor outside the current group of players possibly raises further issues concerning agreements. Would the same agreement cover both SC/ETF participants and 'Technology Users'? Would another document, along the lines of a licence, be required for 'Service Users'?

As ICAN develops, it is inevitable that the situation will arise where circumstances force a partner to withdraw from the consortium. Any conditions associated with such circumstances need to be documented in the consortium agreement. It might include a 'will clause' to cover the unlikely circumstance of full dissolution of the consortium.

Ontology Content Governance

Ontology Content Governance: determination of the terms and definitions to be included in ICAN interoperability ontologies

One possibility is that of an 'ontology development' specialist subgroup reporting to the SC. This would provide the ideal nucleus for ICAN ontology content governance

Ontology Technical Governance

Ontology technical governance covers the storage, security, change management and serving of the ontologies developed by ICAN. Such governance has to deliver:

- Stability and permanence for at least the lifespan of ICAN
- Data security with backup policies conforming to digital preservation best practice standards (daily backup with copies in at least two physical locations)
- Managed file versioning with preservation of previous versions
- Version time stamping
- Effective serving to both humans and software agents

The principles and best practice for feature type catalogue content and technical governance (albeit in VERY confusing language: too many similar words beginning with 'r') are specified in ISO19135. These are equally applicable to vocabulary and ontology repositories.

ICAN needs to make a choice as to whether it wants to develop its own ontology technical management infrastructure or outsource the work through either a service level agreement or by establishing a partnership with an existing repository.

ICAN Governance Charter

The membership of the International Coastal Atlas Network (ICAN) is dedicated to the development and operation of a set of world-wide-web (WWW) sites that publish data and information describing coastal areas throughout the world. We endeavor to develop a community of common purpose to collectively and individually improve the existing information resources and to develop standards and practices that will improve the value of these resources for the future.

As a network, we agree to abide by a common set of standards and conventions to enable and facilitate the qualitative and quantitative analysis and comparison of information between sites for the purposes of scientific research and rational resource management. Our efforts encompass information technology, geographic information systems, and data and metadata content standardization to enhance comparability of information and interoperability of data systems. This statement does not commit resources nor convey any intellectual property rights but serves to recognize and describe our common purpose and willingness to cooperate with each other.

To facilitate this work, ICAN is organized into two working groups: the Steering Committee (SC) and the Engineering Task Force (ETF). The Steering Committee is comprised of those individuals responsible for ICAN sites and each member of the Steering Committee will have a single vote in matters requiring voting. The Steering Committee will have a chairperson elected by members of the Steering Committee.

Description of workflow in ICAN

The SC and ETF are meant to provide a check-and-balance against the emergence of conflicting network administration policies, technical standards, and network goals. In order to achieve this balance the ICAN has a workflow such that issues that require concurrence of network membership are clearly articulated and shared, reviewed for technical merit, and acted on in a timely and traceable manner. The nominal workflow procedure is as follows.

Any individual member of ICAN may publish an Issue Statement to the community. Publication of an Issue Statement is done by entering it into a local ICAN page on the member's local ICAN node. The Issue Statement should have, as a minimum,

- a unique identifier (e.g., ICAN_<LocalNodeID>_<Datetime UTC>_< Username>),
- title,
- description including background motivation,
- requested action,
- issues,
- responsible parties.

Review and Approval Process

The published Issue Statements will be harvested by a Review Subcommittee from all network nodes on a schedule to support two (2) reviews within each year. In order to provide for adequate review prior to a decision, each Issue Statement will have at least a 60 day review period. If that period elapses before the next meeting after publication of an Issue Statement, then action on the Issue Statement will be carried over into the next review for disposition. The Review Subcommittee will have a potentially rotating membership whose charge is to organize the review process, including technical review by the ETF, and shepherd each Issue Statement through the review and document the results of the review in the Review Subcommittee minutes.

If the action requires technical effort, such as software development, by one or more ICAN nodes, then a positive disposition will require the concurrence and commitment by the affected nodes, including SC and ETF members, to implement the decision. If this concurrence is not received during the review process the Issue Statement expires by default unless explicitly carried over to the next review cycle by a two-thirds majority of either the SC or the ETF.

Definition of and Responsibility for Network Documentation

The SC will be responsible for the development and maintenance of the ICAN Policy Document (IPD) describing organizational procedures and minutes of all SC and subcommittees and the record of the Issue Statements. The ETF will be responsible for the development and maintenance of the ICAN System Description Document (SDD) and the ICAN Interface Control Document (ICD) as well as the minutes of . These two documents will be the authoritative basis for technical reviews as well as a reference source for ICAN software and network engineering.

Intellectual Property

All software and documentation developed by members of this project will be covered by the Creative Commons license as defined in the attachment to this document and identified as XXXXXXXX.

Modifying the Process

- annual meetings
- voting rights
- majority/minority decisions