EarthCube Architecture Working Group Report

The EarthCube Architecture Working Group was established in April, 2015 to conduct a set of tasks for developing an EC architecture roadmap. This document is a one to one response of the activities to the tasks chartered for the working group.

1. Explore topics that were prompted by the TAC members in recent discussions. These include:
   a. fostering a shared terminology about architecture terms,
   We explored the high level common concepts June 18th, 2015 before the 19-20th workshop and found this to be very time consuming and needs the three conceptual design projects (CDs) to collaborate closely.

   b. shared information about use cases and requirements for the architecture that the current CDs have collected,
   This was shared through several activities, including building matrices of capabilities/projects and services/projects

   c. other architectures being considered by the CDs.
   The enterprise architectures, e.g., FEA and DoDAF, checked by the CDs were introduced.

2. The group will prepare a presentation for the All-hands meeting in May outlining points of consensus and disagreement.
   A presentation and relevant session was organized and given at the May All-Hands meeting.
   https://drive.google.com/drive/u/0/folders/0B2nwuUTfB2YvfnRYalk3TW9DcnJzbURtanpzVjk1TlZJZXdzb3JSRHNaQjViRFB3T21wbHc

3. Answer practical and high-level questions that have been articulated at recent EC meetings:
   ● What are the mechanisms for making resources developed by geoscientists a part of EarthCube?
   This will depend on the definition and an operational EarthCube to come up with practical mechanisms.

   ● What are the criteria for evaluating EarthCube resources from the perspective of their contribution to geoscience and to the emerging EC infrastructure?
   This will depend on the definition and operation/testbed of EarthCube.

● How can EC-funded building blocks, as well as other geoscience information system components developed outside EC, become part of the EC systems

This will depend on the definition and operational EarthCube and testbed outcomes.

● What architecture elements should be included and defined for EarthCube?
This was laid out in the architecture roadmap report. (see URL in #4)

● What workflows can be used to develop a practical architecture specification?
We build this workflow into the structure flow of the architecture roadmap and the sequence of recommendations in the roadmap.

● How will an EarthCube architecture interface effectively with other existing US and Global architectures?
We explored, discussed with other agencies, and GEOSS for interface comparison. A clear definition and operation of EarthCube is needed to answer this question.

4. Draft a roadmap recommending a plan to the TAC for the evolution from current CD projects to an architecture that supports the EarthCube operation.
The architecture roadmap was drafted at https://docs.google.com/document/d/1phzixOYhwrTK9Viuy_KpsMeUlk30LBnnCzOntVsMGdk/edit.

5. Collect responses to the questions from each project,
Questionnaires were sent out for collecting capabilities and services information to answer the questions.

6. Held a face to face meeting to enumerate, compare, and contrast ideas and approaches and formulate
An in-person meeting was held on August 20, 2015 at Univ. of Washington. A broad architecture workshop was held on June 19-20, 2015 at UC-San Diego with report at https://drive.google.com/drive/u/0/folders/0B2nwuUTfB2YvfnRYalk3TW9DcnJzbURtanpzVjk1TIZJZXdzb3JSRHNaQjViRFB3T21wbHc

7. Final recommendations and presentation to TAC (August 2015): The recommendation will https://drive.google.com/drive/u/0/folders/0B2nwuUTfB2YvfnRYalk3TW9DcnJzbURtanpzVjk1TIZJZXdzb3JSRHNaQjViRFB3T21wbHclay out the roadmap for developing detailed architecture for supporting EarthCube operations.
The final recommendations and presentations were made on August 24, 2015 to the TAC.

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