GEOSS Task IN-05
Architecture Implementation Pilot
AIP-5 Planning

Points of Contact:

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GEOSS Design and Interoperability

Related GEOSS Strategic Targets

•*Architecture*: Deployment, population, and enablement of sustained operations and maintenance of a user-friendly and user-accessible GEOSS Common Infrastructure (GCI), including the core components and functions that link the various resources of GEOSS.

Description

•Manage the evolutionary technical architecture (design) of GEOSS and contributed Earth observation data and service resources.

•Promote GEOSS interoperability principles.

•Enable a sustainable GEOSS of value to the user – supporting the development of the GEOSS Common Infrastructure (GCI) and GEOSS communication networks for the access to, and use of, Earth observations and related services.

AIP Evolutionary Development Phases
has piloted the GEOSS 10 Year Plan Architecture

- **AIP-1**
  - Kickoff: June 2007
  - Result: "Core" Architecture defined most of the GCI IOC – Architecture Workshop

- **AIP-2**
  - Kickoff: September 2008
  - Results: SBA implementations of common cross-cutting architecture, refined GCI concept for transition to operations

- **AIP-3**
  - Kickoff: March 2010
  - Results: Enabled network building in GEOSS SBA communities, piloted broker and processing capabilities

Architecture Implementation Pilot, Phase 4 (AIP-4)

Accessibility to Critical Earth Observation Priority Data Sets

Thesaurus for Earth Observation Parameters

Software Tools for publishing, accessing and using data

Tutorials to support data providers to get data online

AIP-4 Participation (28)

- Afriterra
- Astrium SpotImage
- CIESIN
- Compusult
- CREAF
- enviroGRIDS
- EO2HEAVEN
- EOX and Rasdaman
- EuroGEOSS - GENESIS
- EuroGEOSS - UncertWEB
- GENESI
- GeoViQua, QA4EO, ESIP
- GIS.FCU
- Graphitech

- INCOSE
- INPE
- Jacobs University
- KNMI
- Mines ParisTech
- NASRDA
- NOAA DMIT
- NOAA & GMU
- PML
- PYXIS
- SIF
- TEAM Network
- Vightel
- Wash Univ St.Louis

Responses to AIP-4 CFP are posted

GEOSS Infrastructure Enhancements

Demonstration Navigation

AIP-4 Demonstration Videos

StP Demonstration Videos

AIP-4/SIF Tutorials

AIP Engineering Reports

Previous AIPs

http://www.ogcnetwork.net/pub/ogcnetwork/GEOSS/AIP4/index.html

Planning for AIP-5

- Scenario Driven Development as in AIP-3 and AIP-2

- Draft Schedule
  - Announce CFP: February 2012
  - Kickoff Workshop: May 2012
  - Integration begins: September 2012
  - Results for GEO Plenary in 2012

- AIP Plenary Telecons - 1500 UTC Tuesdays

Societal Benefit emphasis in AIP-5

- Development driven by scenarios for the SBAs:
  - Disasters preparedness and mitigation
  - Health: AQ and Waterborne
  - Water Resource Observations
  - Energy
  - Agriculture
- Approach
  - "SBA Integrators" liaison between SBAs and IT
  - SBA Scenarios deployed through Use Cases
  - information technology research for SBAs, e.g. WaterML, QA and Provenance, Services

Technical Research in AIP-5

- User Management and Authentication
  - Support GEOSS Data CORE
  - Develop technical definitions for Licensing
  - Build on AIP-3 and existing GEO member systems

- Research supporting GCI - Task IN-03
  - GCI and User Management and authentication
  - EO Vocabulary led by Ontology Task and DIAS
  - Further advance Discovery and Access Brokers
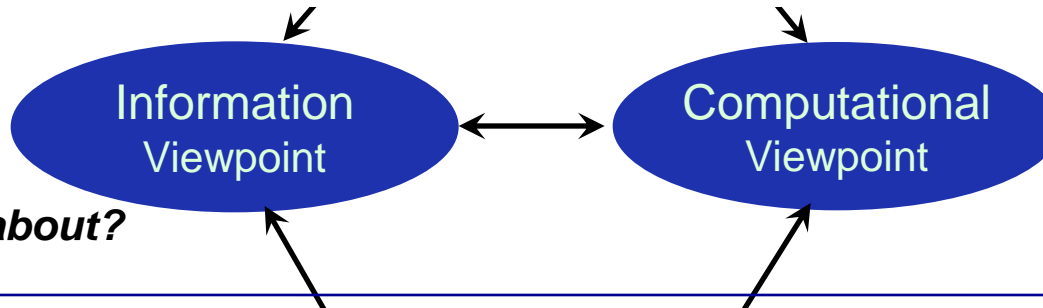 - Discovery of client help aplications

RM-ODP Viewpoints

Community Objectives

Enterprise Viewpoint

Business aspects: purpose, scope and policies
What for? Why? Who? When?

Abstract/Best Practices

Information sources and models
What is it about?

Information Viewpoint

Computational Viewpoint

Types of services and protocols
How does each bit work?

Implementation/Development

Engineering Viewpoint
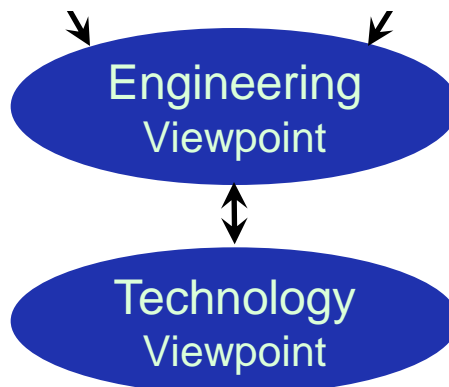
Solution optimization: distribution infrastructure
How do the components work together?
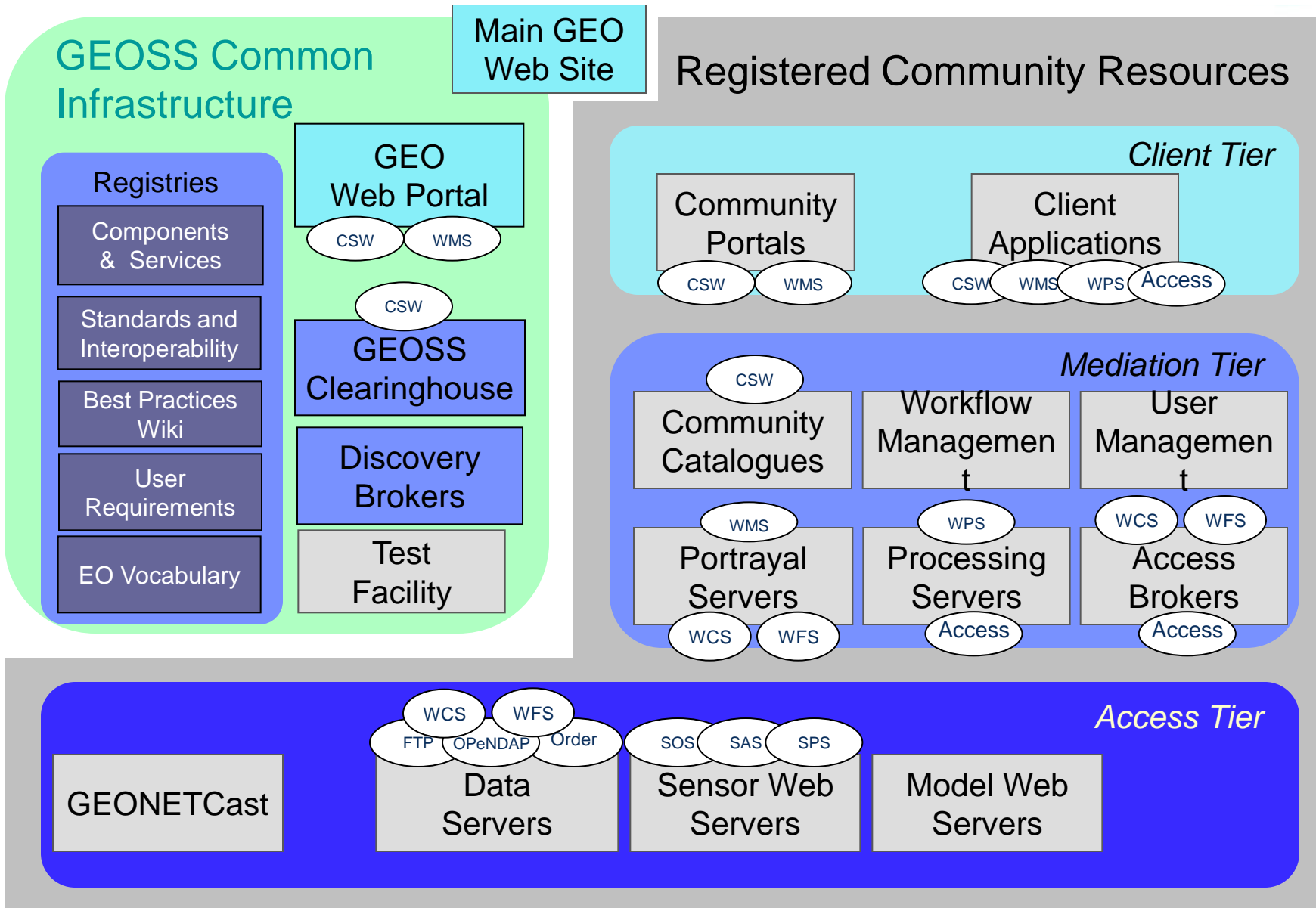
Technology Viewpoint

Implementation system: hardware, software, distribution
With what?

GEOSS AIP Use Case Summary
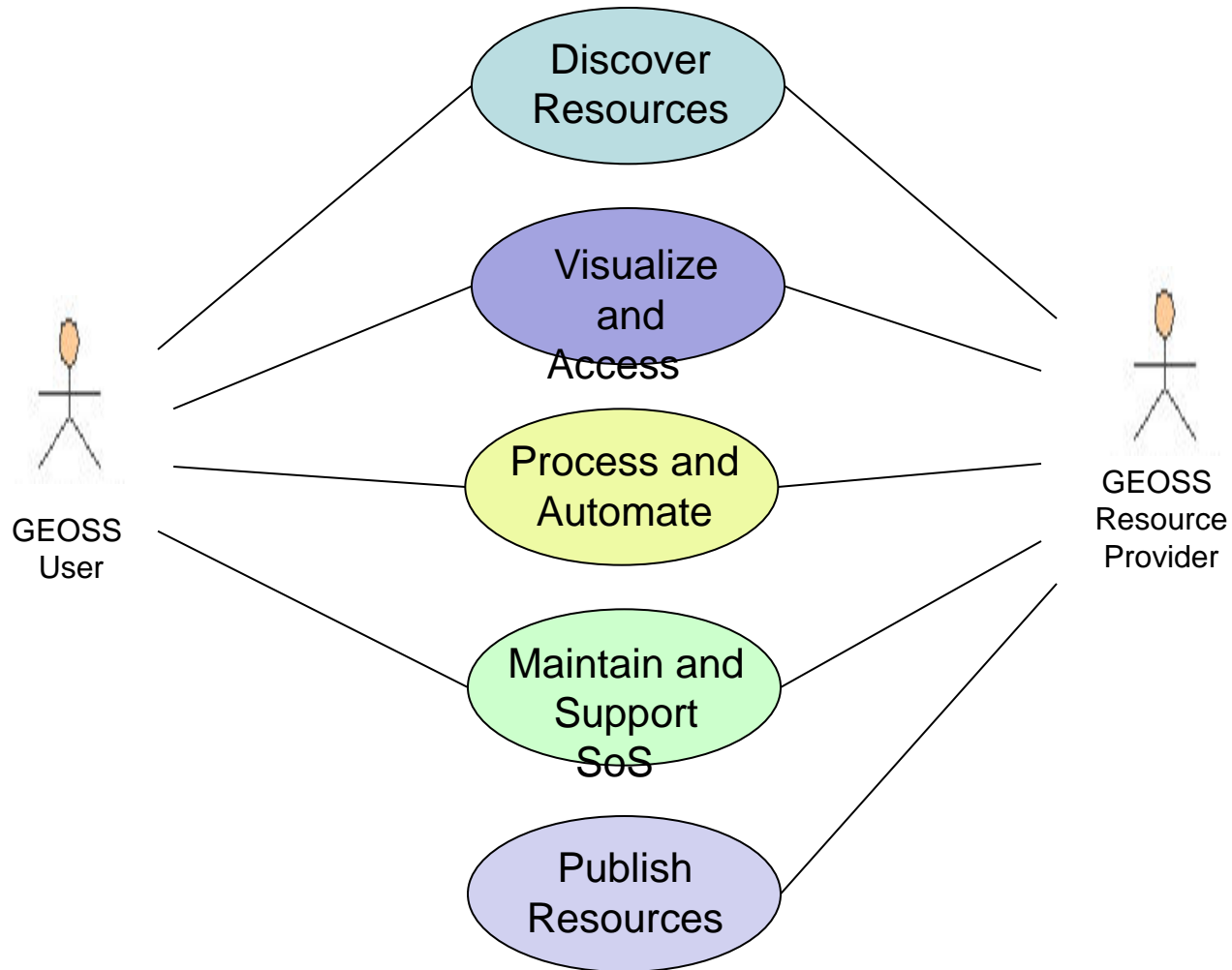
Components Interact thru Services

Disaster Management objectives in AIP-5

- Support GEO Task DI-01 Disasters

- Scenarios for a global network of **in-situ** observation sites for disasters preparedness and mitigation cycle.

- Collaborate with CEOS WGISS GA.4. Disasters: "GEOSS Architecture for the use of Satellites for Disasters and Risk Assessment"

- Mobile client for disaster response: SMS, Geosync

- Space-based earth observations availability through GCI to benefit the international or regional disaster management agencies

Call for Participation in AIP-5

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References

- GEO
  - earthobservations.org

- GEO Architecture Implementation Pilot
  - www.ogcnetwork.net/AIpilot

- GEOSS registries and SIF
  - geossregistries.info