



GENI WORKING GROUPS

Global Environment for Network Innovations

GENI Engineering Conference (GEC)

www.geni.net

Clearing house for all GENI news and documents



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- The following is a snapshot of a work in progress...

 - Join working groups at <http://www.geni.net/wg>
 - Wiki at <http://groups.geni.net>

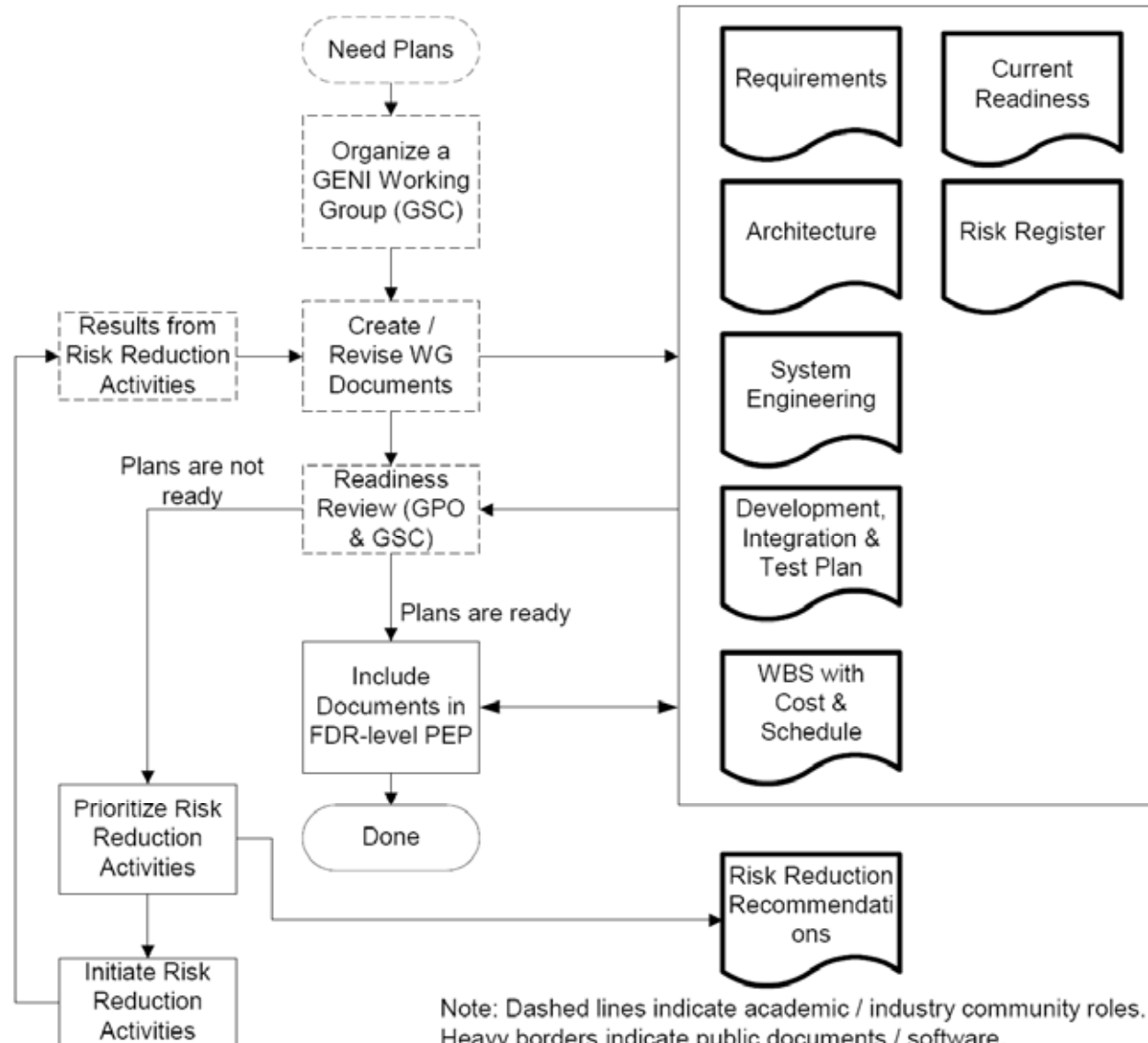


What do working groups do?

- Elaborate the GENI design
 - Define framework, tradeoffs
- Identify implied, derived requirements
- Highlight areas that are hard, ill-defined, need more thought
- Develop consensus on approach



Working Group Contributions are Key to MREFC Readiness





Concept of Organization

- Working groups are the locus of GENI technical work
- GENI-funded prototyping & design work informs the WG; WGs inform GPO about risk; GPO funds prototypes to further design and reduce risk
- Decisions are made by rough consensus, reviewed by GPO
- WG process is open and transparent: public mail archives & meeting minutes



Concept of Organization (2)

- Small design teams are permitted, output to be reviewed by WG-as-a-whole
- GENI Engineering Architect (GEA) provides oversight
- GPO will provide document publication



Working Group Operations

- Discussion primarily via email
- Face-to-face meetings & report-out at GENI Engineering Conferences (3x/yr)
- Technical Coordination Group for synchronizing WG activities
 - WG chairs & system engineers, engineering architect, key GPO staff



WG Roles

- Chairs
 - Encourage and guide WG technical progress
 - Manage decision-making, draw out minority opinions, ensure openness & transparency
 - Drawn from community (in general), serve 1-2 year terms
- System Engineers
 - Primary GPO-WG link; guide WG agenda to support GPO needs
 - Manage requirements, generate program documentation, identify immature areas
 - Staffed by GPO



Where are we now?

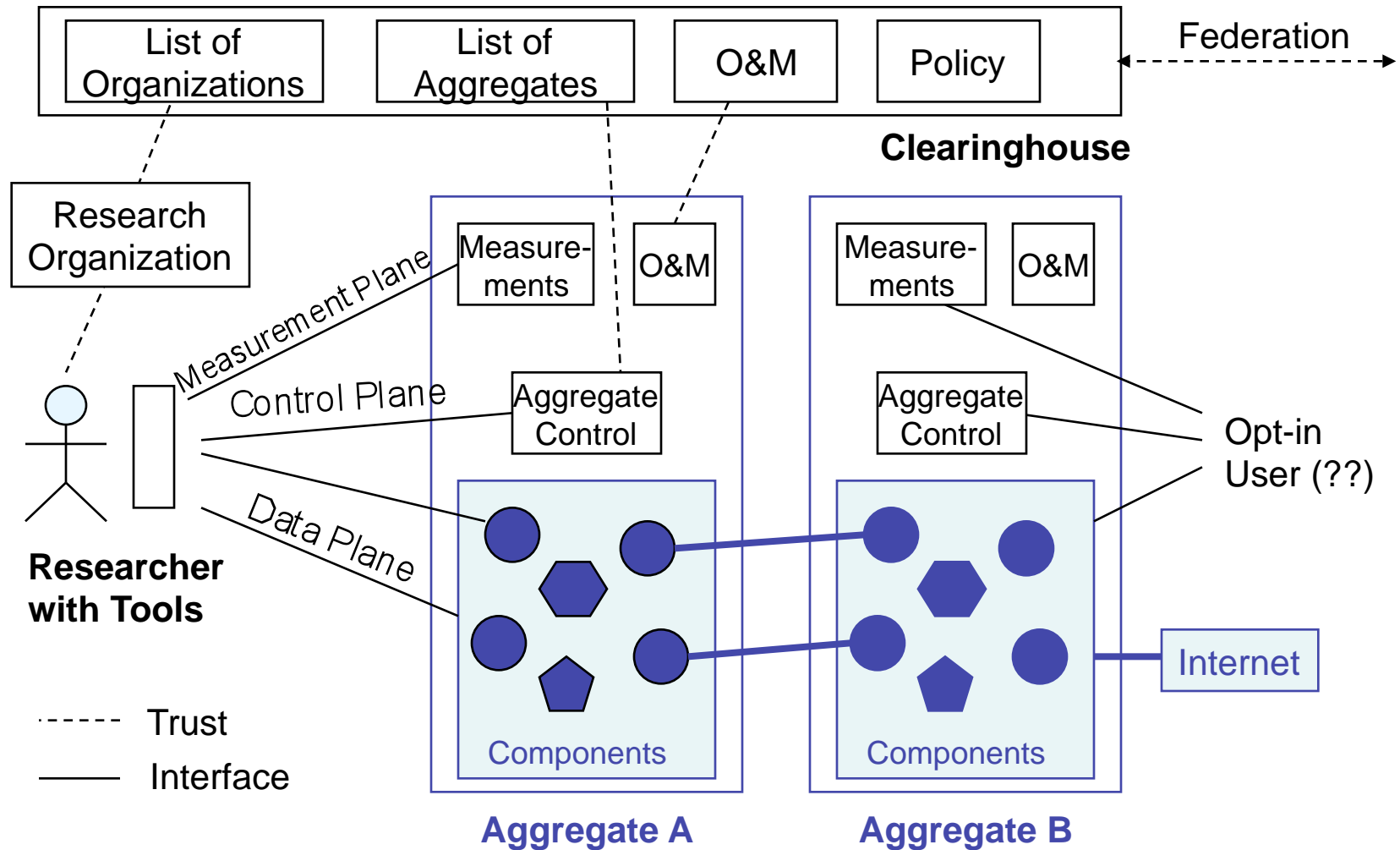
- All groups are chartered
- All groups have chairs
- GPO now has 3 of 4 SEs
 - Now hiring for distributed system engineer
- 2nd face-to-face meeting this week
- Mail lists have 80-100 subscribers, pretty quiet



Working Group Charters



Substrate WG



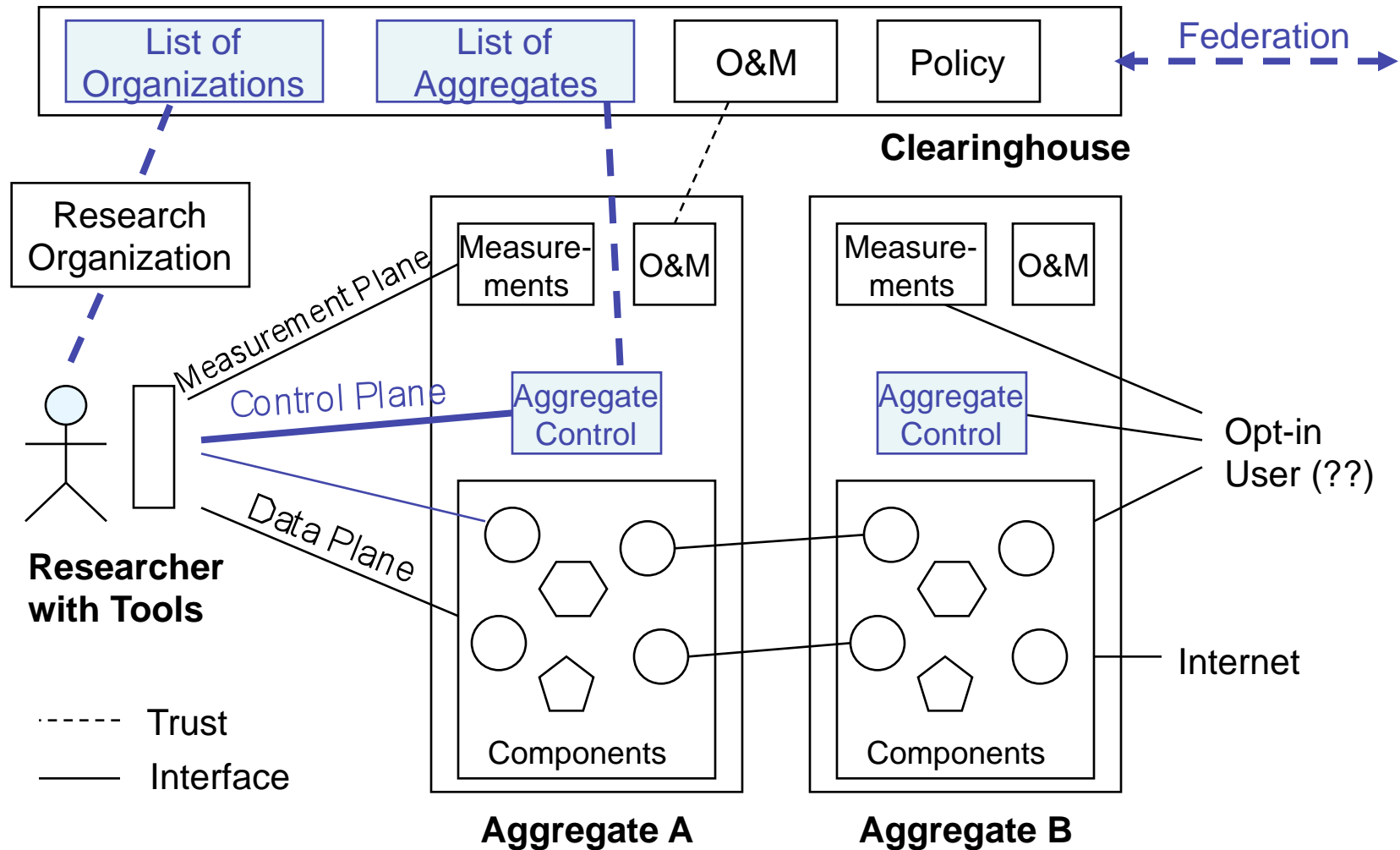


Substrate WG

- Chairs: Joe Evans, Kristin Rauschenbach, Patrick Crowley
SE: John Jacob
- Scope:
 - *What technologies should be in GENI? How will they be used?*
 - *What is the framework for evolution of substrate technologies?*
- Activities:
 - Substrate framework development
 - Candidate technology identification & tradeoffs
 - Requirements definition
 - Substrate design



Facility Control Framework WG



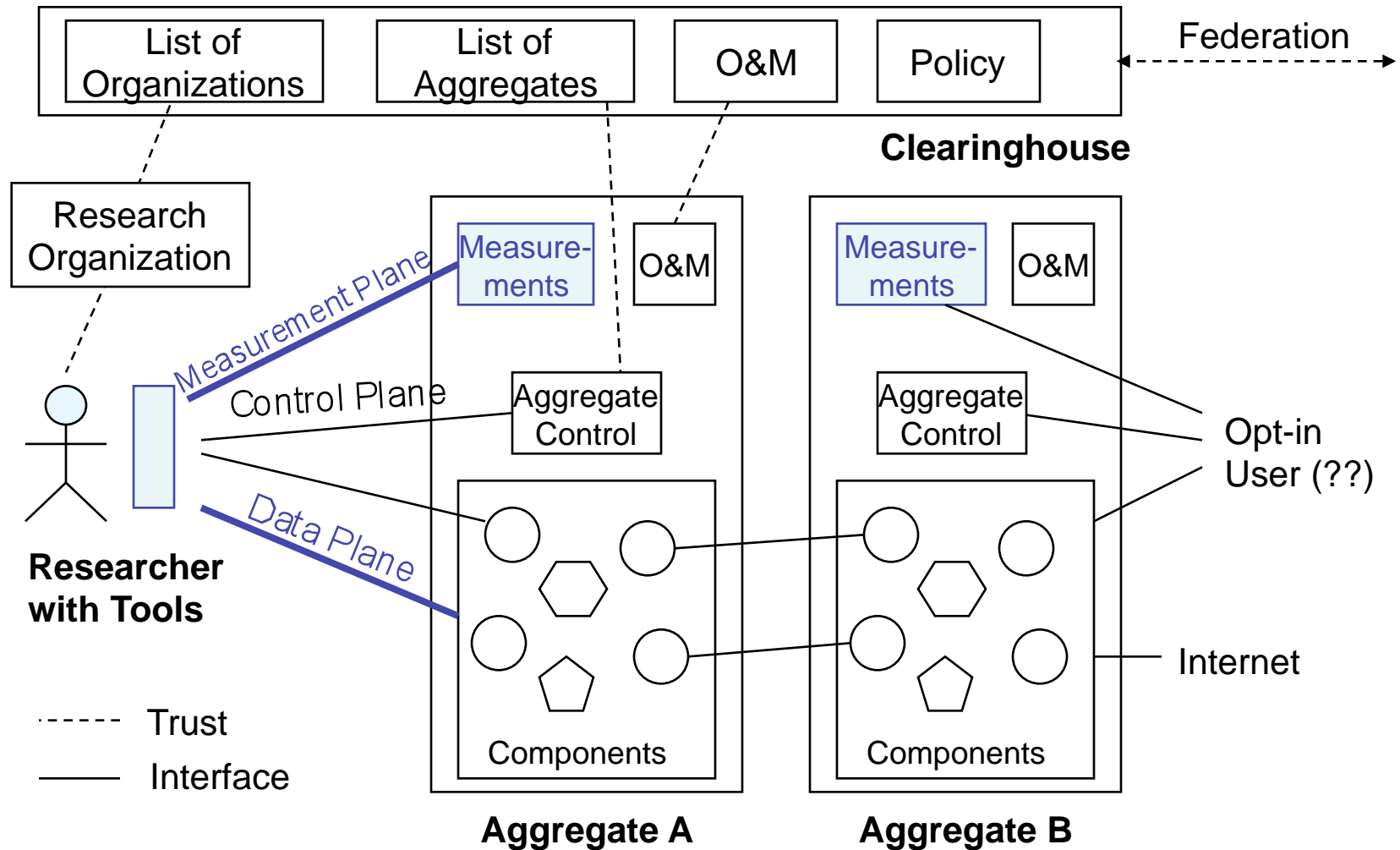


Facility Control Framework WG

- Chairs: Larry Peterson, John Wroclawski
SE: Aaron Falk
- Scope:
 - *What is universal across GENI components? How will evolution be accommodated with or without a full transition of all GENI nodes at once?*
 - component control (obtaining and managing resources)
 - slice control (interfaces and mechanisms for establishing and controlling slices)
 - access control within GENI (usage policy representation and administration mechanisms)
 - interactions external to GENI (facility federation)
 - key enablers (identity, authentication)
- Activities:
 - Define major system functions and interfaces
 - Define resource description & discovery, addressing, naming, authorization approaches
 - Define federation strategies



Experimenter Workflow & Services WG



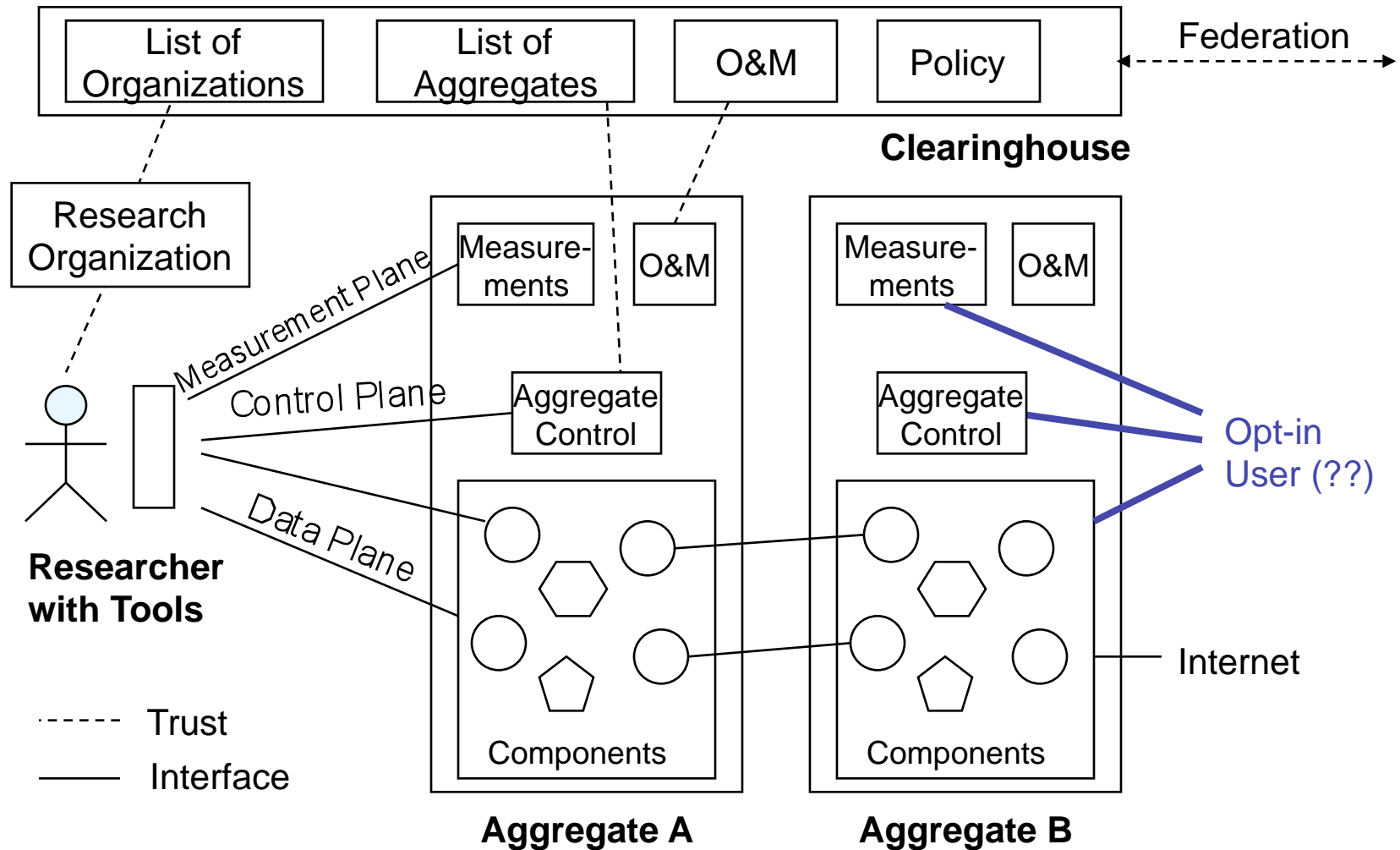


Experimenter Workflow & Services WG

- Chair: Jay Lepreau, Jeff Chase
- Scope:
 - *What do experimenter-users need from GENI? Consider planning, scheduling, running, debugging, analyzing experiments; long running experiments & how they grow; archiving data.*
- Activities:
 - Develop sample workflows, use-cases
 - Define experimenter-support services
 - Develop measurement strategies



End-User Opt-in WG



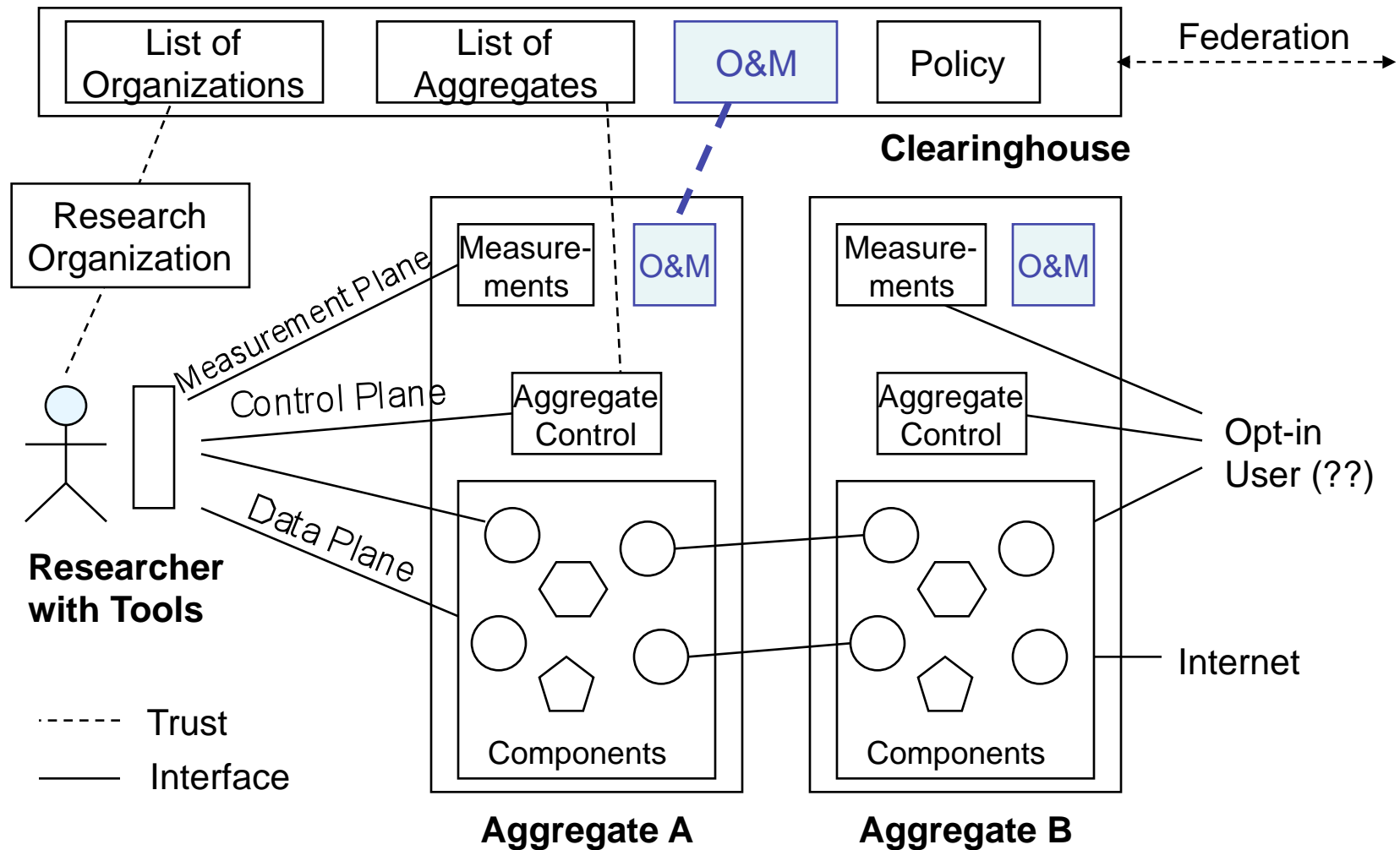


End-User Opt-in WG

- Chair: Henning Schulzrinne, Helen Nissenbaum
- Scope:
 - *How do end-users (including Internet users) participate in GENI experiments? What are the various aspects including user interfaces, scheduling, debugging, measurement, archiving data, sandboxes, etc? What are the privacy and legal issues involved in user opt-in?*
- Activities:
 - Define opt-in technology strategies
 - Catalog technical, policy issues



Operations, Management, Integration, & Security WG





Operations, Management, Integration, & Security WG

- Chair: Heidi Picher Dempsey
SE: Mike Patton
- Scope:
 - *What are the requirements for operating GENI and managing its services? What are GENI's security requirements, both from a researcher's viewpoint and from that of its operators?*
- Activities:
 - Technology Survey
 - Security Policy Recommendations
 - Long-term Operations Framework
 - Concept of Operations Documents
 - Facility Management Interface Requirements



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- <http://www.geni.net/wg>
 - WG charters, mail list coordinates
 - Process description
 - <http://groups.geni.net>
 - Collaborative environment for WGs
 - E.g., background reading recommendations, glossary, announcements, FAQs