The GPO Solicitation Process

For discussion; feedback encouraged.

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Eligibility

- Organizations allowed
  - Academic, non-profit, for-profit, or individual
  - Strongly encourage academic / industrial teams, with academic organization as lead
  - Talk to GPO if you have questions

- Limitations on PIs etc
  - PI may be PI on only 1 proposal, but may appear on other proposals as senior personnel
  - No limit on number of PIs / proposal

Subcontracts are <u>NOT</u> Research Grants

- Emphasis on concrete, near-term results

- Proposal must have technical merit, realism for management approach, and practical understanding of the effort.

- Specific deliverables and associated milestones must be clearly described.

- Funded efforts will receiving ongoing but lightweight review for GENI-relevant progress

- Efforts with ongoing inability to make progress will be terminated

Intellectual Property Rights (IPR)

- All proposals must choose <u>one</u> of the following GENI IPR licenses and state so explicitly:
  - a) "This work is public, released for any use"
  - b) "We claim intellectual property in this work"
- For a) public availability
  - Work is given to the public domain
  - No restrictions on how it may be used
- For b) intellectual property claimed
  - No fee & no restrictions on use <u>within the GENI context</u>
  - Rights outside that context are reserved (e.g. commercial rights)
- You will sign the corresponding GENI IPR license as part of the subcontract award process; draft licenses will be posted soon
- Reviewers will give preference to "public" license work

Dec. 17, 2007 Monday	Solicitation issues on geni.net
Feb. 15, 2008 Friday	Proposals due, 5 PM your local time
May 15, 2008 Thursday	Winners notified
After contract negotiations	Subcontract funds arrive

Main Goals for this Solicitation
(Which Risks are We Reducing?)

- **Architecture & requirements development**. Create/improve designs for areas including instrumentation, security (identity, authentication, and authorization mappings to existing technologies), resource description and discovery, federation, and user opt-in. Analyses and some prototyping in these areas will be useful.

- **Slicing as a basic construct, employed end-to-end across a range of technologies.** Here near-term, working demonstrations of the relevant GENI subsystems and trial integrations will be particularly useful, as will early demonstrations of instrumentation in a sliced environment.

- **Developing a practical approach for administrative and operational control** that addresses the needs of cooperative facility hosts (e.g., universities); federated, interconnected facilities (e.g., non-NSF GENI facilities); subcontracted facilities (e.g., optical networks or co-location facilities); and a GENI Network Operations Center.

Possible Proposals for this Solicitation
(What kinds of things might you bid?)

- **For: Architecture & requirements development**.
  - You might bid: '**Analysis**' proposals for writing papers on architecture or requirements, buying time to participate in working groups, etc.

- **For: Slicing as a basic construct, employed end-to-end across a range of technologies.**
  - You might bid: '**Prototyping**' and '**integration**' proposals for demonstrating GENI-compatible subsystems in the 12-month timeframe. It would be extremely helpful if these could include integration of multiple kinds of subsystems, and/or very early field demonstrations.

- **For: Developing a practical approach for administrative and operational control.**
  - You might bid: '**Analysis**' proposals to suggest approaches and perhaps buy time to participate in the relevant working group, and '**integration**' proposals that operate very early GENI prototypes to discover issues & report results into working group.

Types of Subcontracts

Type of Work	Duration	Suggested Total Value	Est. # Contracts
Analyses, papers, participation in working groups	3 to 24 months	Up to $30 K	25
Prototypes (*)	12 to 24 months	Up to $750 K	15
Integration Trials	24 months	Up to $950 K	4

(*) Suggest that requested funding level does not exceed about $375 K / year for the largest prototyping efforts unless you have a really, really compelling idea.

Small subcontracts (analyses, etc.) will be reviewed by GPO internally; proposals for prototypes and integration trials will receive external panel peer review.

Proposal Format and Contents

- Similar to the principal NSF proposal sections (bio's, project description, budget)

- Short project description section
  - 1 page <u>max</u>, for value < $30 K
  - 5 page <u>max</u>, for value < $100 K
  - 10 page <u>max</u> otherwise (shorter is GOOD)

- Short but concrete budget for work & deliverables

- Required: PDF, 10+ point type, 1 inch margins

All Proposals must include

- Concrete deliverables (list them explicitly)
- Concrete schedules, with explicit milestones keyed to presentations and demonstrations at GENI Engineering Conferences (4 month intervals)
- Credible budget, directly linked to deliverables and schedule
- Agreement to either of the 2 GENI IPR Licenses (public, restricted)
- Participation in GENI Working Groups
- Travel to GENI Engineering Conferences, with participation in project progress reviews at these conferences
- A credible plan for broader impact, e.g., active collaboration with under-represented institutions, industrial interns, preparation of educational materials, etc.
- Quarterly reports, including copyright-free images and description of work performed (suitable for publication on web, in brochures, etc.)

Budget Justification – Cost reasonableness and realism

The objective of this criterion is to establish that the proposed costs are reasonable and realistic for the technical and management approach offered. A secondary goal is to assess the proposer's practical understanding of the effort. The technical effort estimate should be broken down to the design, development, integration, test and bug fixing, and method used for the estimation.

Subcontracts will be made based on the overall best value to the GENI Project and the community. The GPO may fund only certain aspects of proposals, if the proposal as a whole does not provide sufficient value for funding.

Budgetary submission should be by quarter and by year including but not limited to the following:

- Labor
- Equipment
- Travel
- Materials & supplies
- Other direct cost
- Overhead is disallowed for academic institutions
- Fee proposed if any (maximum fee is 5%)

Proposal Submission & Review (1/2)

- Prototyping and integration proposals will be peer-reviewed, following a process much like conference paper reviews
- Final decision by GPO with NSF concurrence

- Reviewer Selection
  - GPO internally reviews small proposals ($10-30K); review panels used for all larger proposals
  - Reviewers solicited through GSC, WGs, community, etc.
  - GPO (+NSF) vets review group for balance
  - Conflict of interest rules exactly per NSF
  - Reviewers sign 1-page GPO contract saying "no conflict of interest," confidentiality; receive $200 when reviews complete.

Proposal Submission & Review (2/2)

- Mechanics of the Panel Reviews (at home, no travel)
  - Reviewers download proposals from geni.net, self-check for conflicts of interest
  - Reviewers complete review forms on geni.net
  - A (yes 5%), B (maybe 20%), C (no 75%)
  - Rankings of proposals in A and B categories
  - Review panels, organized by GPO staff, meet by telecon to merge reviews into final panel review with rankings

- Subcontract Awards
  - GPO makes funding decisions based on rankings, in consultation with NSF
  - All awards (PIs, institutions, amounts) published on geni.net within 1 month of contract negotiation completed

Merit Review Criteria (a)

- Intellectual Merit (no ordering):
  - Relevance to GENI Risk Reduction
  - Best Value – includes high impact, enables broad range of research, meets near-term goals for integration & trials, etc.
  - Type of IP license (*public* better than *restricted*)
  - Cost and schedule realism
  - Probability of success and high impact

Merit Review Criteria (b)

- Broader Impact (no ordering):
  - Academic / industrial team
  - Active involvement of under-represented institutions, geographic areas, etc.
  - Active involvement of under-represented communities
  - Additional mechanisms, e.g., involvement of high schools, interns, etc.

Questions ? Concerns ?

Suggestions for Improvement ?

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