

# Software Development for CI and Strategic Technology for CI Programs in 2010

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# Quick Follow From Yesterday

- ❖ “Free as in puppy”
  - Neil Chue Hong at the March 2009 Software Sustainability workshop, by way of Scott McNealy
  - <http://cissoftwaresustainability.iu-pti.org/>
- ❖ The big dog was mine - Benjamin
- ❖ Small for a GP





# Why Update Programs?

- ❖ We're learning
- ❖ You're learning
- ❖ SDCI – focus area shifts, need for underlying themes
- ❖ STCI – more careful wording to explain the kinds of proposals we hoped to receive
- ❖ In both cases, expanding what we need for production infrastructure



# SDCI 2007

- ❖ Three focus areas
  - HPC, Data, and Middleware
- ❖ Two types of proposals
  - New development
    - Show compelling case for new software development
  - Improvement and Support
    - Original software must have a track record of use and impact



# SDCI 2010

- ❖ Similar in spirit to SDCI 2007
  - Support multiple application domains and large-scale end user communities
- ❖ 2 Categories
  - New
  - Improvement and support
- ❖ Use of previous SDCI and STCI software is strongly encouraged



# 3 Cross-Cutting Themes

- ❖ Sustainability
  - Prove that the software will exist beyond the end of this proposal
- ❖ CI Software Self-Manageability
  - Insulate end-user from the complexities and failures of applications, platforms, and cross-platform interactions
- ❖ CI Software Power/Energy Efficiency
  - Mechanisms to support application/system-aware management
- ❖ Proposals should address one throughout



# 5 Software Focus Areas

- ❖ HPC
  - Debug, Fault Tol, Perf Tuning, Migration
- ❖ Data
  - Doc/metadata, security/protection, data transport/mgmt, data analysis and viz
- ❖ Network
  - e2e perf, nw tools, testing, co-alloc
- ❖ Middleware
  - instr access, monitoring/mngt/test, user interfaces/accessibility, bridging
- ❖ CyberSecurity
- ❖ As a proposer, you need to address which focus area and subarea you're addressing



# Requirements

- ❖ Identification of the software focus area and category in title
- ❖ Support for at least one cross-cutting issue
- ❖ Identification of multiple application areas
- ❖ Description of how the proposed approach compares to alternative or existing approaches
- ❖ Outreach and education plan
- ❖ Discussion of the software's potential use by broader communities
- ❖ Metrics of success for
  - Software developed
  - End user involvement
  - Definition of "working prototype"





# Req'ts continued

- ❖ Description of the engineering process used for
  - Design, development, and release of the software
  - Deployments and associated outreach to the end user community
  - Interoperability with widely use tools by the community
  - Evaluation plan that involves end users.
- ❖ Use of the NMI Build and Test services
- ❖ A sustainability plan beyond the lifetime of the award
- ❖ Identification of the open source license



# Supplementary Documents

- ❖ Post-Doc Mentoring Plan
- ❖ List of all organizations involved in the project;
- ❖ Single, alphabetically ordered list of all collaborators
  - One list, one alphabetical list for everyone
- ❖ Letters of commitment from individuals who are from organizations involved in the project in a senior capacity, or from authorized representatives of institutions or organizations collaborating with the lead institution
- ❖ Letters of commitment NOT letters of support
- ❖ If an Improvement proposal, also a WBS



# And do the basics

- ❖ 1 page summary, mentioning intellectual merit and broader impact
- ❖ Project narrative has to include previous work
- ❖ Font sizes
  - No more than 6 lines of text within a vertical inch
  - Margins, in all directions, must be at least an inch
  - Too small WILL be returned without review
- ❖ Double check your budget
- ❖ Proofread for grammar and typos
- ❖ Get them in on time (Feb 26, 2010)



# SDCI Final Thoughts

- ❖ Please read the solicitation
- ❖ Please read it again before calling us
- ❖ In fact, instead of calling, send email
  - Most of the team is out of the office a lot
  - Use the mailing alias so we can share the load
- ❖ Calls are **EXTREMELY** unlikely to be answered as quickly as you'd like
  - We're trying to respond within a day to these questions



# Strategic Technologies for Cyberinfrastructure: STCI

- ❖ Support work leading to the development and/or demonstration of innovative cyberinfrastructure services
- ❖ Broadly defined
- ❖ Fill gaps left by other programs and solicitations



# STCI 2010

- ❖ Basic concept the same
- ❖ Review criteria:
  - A clearly identified need not addressed elsewhere
  - A potential for significant impact across multiple disciplines.
  - A potential for generating outcomes of interest to a broad range of communities
  - A list of tangible success metrics
  - Explanation as to why the project is not suitable for other NSF programs
  - A demonstration of strong support from within the science and engineering community



# Proposals should address (where appropriate)

- ❖ End user involvement
- ❖ Issues of sustainability, self-management, and energy efficiency
- ❖ Data management plan
- ❖ Open source licensing
- ❖ Production development, deployment, and continuing support
  - project management plan
  - testing approach



## STCI cont.

- ❖ Declined proposals must be significantly updated before resubmission
- ❖ Investigators are strongly encouraged to discuss their ideas with POs
- ❖ First target date April 21, 2010
  - Second Thursday of August and Feb following





# More Information

## More Information

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