

# Questions for the Workshop

## Community

- How can we build a community of developers?
  - What are the career path issues?
  - What qualifications do we need to succeed?
  - How can we sustain developer careers on grants that fund non-integral personnel lines? (and how can we avoid losing talented developers in the face of this challenge?)
  - How can we work with industrial contributions to our efforts? Can we define integration points for other (perhaps closed-source) industrial/proprietary components?
- How can we build a community of users and/or adopters of our software?
  - How can we understand our user's needs?
  - How do we ensure we deliver what users need?
  - How can we assure continued existence and support for our user community?
  - What role can industry play in adopting our capabilities?
  - How can we work with international partners to adopt our software?
  - What role can other agencies (and agency projects) play in building a community of users/adopters?
- How can we build a community of support organizations?
  - How can we work with integrating organizations (such as Extreme Digital) to help support our software?
  - How can we work with Resource providers to help support our software?
  - What role can campus organizations play in supporting our software?

## Distribution and Licensing

- What are the licensing models adopted by our various projects?
- Do any of the projects have relationships with larger open source organizations, and thereby benefit from their distribution mechanisms (and potentially from their intellectual property offices, etc)?
  - If so, how do you manage distribution of project contributions that are not accepted by the core open source package distribution?
- What relationships should we encourage with other possible distribution channels (including adoption by industry?)

## Sustainability

- How can one succeed in sustaining software (with long development timelines) in a backdrop of relatively short funding timelines?
- What role should larger organizations (integrating organizations, open source software foundations, SI2 institutes (not funded yet), etc) play in software sustainability?
- What is the proper role of standards, frameworks, etc in positively impacting sustainability?

## Innovation

- How can one encourage innovation despite standards, frameworks etc?
- What roles do the SSE and SSI elements (our projects!) of SI2 play in software innovation today?
  - What roles *should* SSE and SSI play in fostering innovation today?
- What are effective mechanisms for bringing innovative, grass-roots ideas into the software ecosystem?
- What are effective ways to embrace disruptive technologies and thrive for doing so?

## Requirements Gathering/User Engagement

- What are the mechanisms used today to gather and understand user requirements?
  - How effective are these mechanisms?
- Are there any potential benefits from working with the Extreme Digital requirements gathering/management efforts?

## Integration

- What are the integration models used in our SI2 projects? What are their pros and cons?
- What are attractive/effective integration/docking/affiliation points amongst the SI2 projects?
- How do we foster integration and affiliation with other software efforts?
- What are good mechanisms to provide integration points for proprietary software?
- What can we learn on how to push our integration to better levels? Are there high-level interfaces we should be considering? Service interfaces?

## Software Engineering

- How many projects benefit from engineering requirements flowing down from a larger organization (such as eclipse.org, apache.org)?
- What are some best practices in build, test, verification, validation of our software?
- What tooling is effective in promoting good software engineering practices?

## Education/Outreach/Training

- What are our projects doing for project-specific training?
- How can we best connect to other training efforts?
- What constitutes effective connections to curricula for our projects?
- How can we succeed in bringing underrepresented groups into our efforts in as many roles as possible?

- Given limited funding, resources, etc for each project, how can we best maximize our impact?
- What do we need from other CIF elements (yet to be funded)?
- What are effective mechanisms to encourage/nurture programs and funded activities that complement and reinforce each other?
- How can we encourage exploratory, innovative new projects that help move our community forward and pave the way into previously uncharted software territory?