CIF21 Issues

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- Given limited funding, resources, etc for each project, how can we best maximize our impact?
  - NMI B&T, eclipse.org, apache.org, others?
  - governance - apache - would like 3 projects to commit, something along those lines?
  - George Biros - is the added complexity of governance beneficial to all of the SI2 projects? projects are very diverse - not sure about the logistics -
  - governance - amber - exec committee of 6 PIs, and get together every 6 months, these people make grand scale decisions -
    - limit to 6 right now, to get a seat, someone has to leave -this has worked for 20 years, could be expanded
    - have annual developer meetings - probably about 9 or so PIs very involved in decisions on the sw
  - apache - get together in "hackathons" -
  - amber - sometimes see 3 months of work get together in an afternoon, when get the developers together -
    - funding for these sorts of hackathons can be very effective
  - flash -single institution, governance is a single institution - have contributors, policy - do with personal interactions and scripts to go through the code
    - decision making - used to have mgt group, now have a group - more democratic
    - and Anshu has veto power
    - is this documented at flash website - yes, will find the ways we interact with users,
      - mailing lists
      - tickets from users
      - tutorials
      - releases every 6-8 months
  - education - knowing what others do, successes and failures
    - wary of policy items
    - finding out what is working, what doesn't is useful -
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- What do we need from other CIF elements (yet to be funded)?
  - software institutes -what could beneefit sse, ssi
  - Anshu - today in morning a lot of discussion on education, training
    - immersion, to learn each other's language, then ideas go together -
  - second this - one way institute may work - interdiscplinary program, have more systematic best practice approach, with repositories, etc - bring people together - this immersion of over 2-3 weeks of postdocs working together are ready to go back and learn more
    - strong visitor program
  - George Biros - should have clear metrics for the outcome of the institute - expand user base, robustify sw
    - rewards can be high, but high risk - think should we focus on specific packages -
    - what about tools that go across disciplines - scidac with successful outcomes
  - look for the science problems we cannot solve now, that would need specific sw -
    - maybe don't know the algorithms
    - but there are class problems where know the algorithms, but don't have the software capability - for example, flash started out as astrophysics code - missed modules for an additional capability, need to bring this in to the code to solve the additoinal problems -
  - when talking about -focus on problem that requires that the level of integration -
    - heard other problems that would transcend making more awards - rather separately funded projects integrating together, or users working better with the development community - this transcends what SSE/SSI level -
    - look at from ecosystem - multifacet, multiscale - question - is what do you want to do that can't do at this scale that can do at another scale -
      - multiple communities, influence education
      - hardware paradigm undergoing serious change, this is a challenge -if take highly capable large code, adapatability to new environments is a challenge
        - need to go beyond this for scope of institutes, needs to be about the science and engineering
    - importance of bringing people together, immersing them together for extended period of time - this has a real impact, this is different than a grant going to a university, and maybe visit
    - how about integrating with other sw efforts in ecosystem
      - community - interface std, what found to be true, once define api as interface std, then easier for people to develop this is model for flash.
      - does institute provide interop stds?
        - definitely a large part - architecture, interop -
        - and learning about practices in the institute -
    - George - across disciplines, not sure what to say -
      - specify the modules needed -
      - can aggregate them together, to specific subprojects -
    - interesting example - in CISE - foundations, have interesting built-in structure - centers& partners - larger awards take on commitment to work with partners, and partners in turn commit to work with the centers - think about this in bio, in iplant project - have some mechanism that can other projects come in after main project is awarded, to partner with the project -
    - if you really want collaboration, need to spend time together - prac awards for blue waters
    - petaapps - took 4 years to adapt adaptive multigrid into one code, met in many places, but woudl have been great to meet at one of the centers, turn into a workshop - did make the bridge, but the benefits of what we did in other fields is not realized, as don't have a place to go to to make these connections -
    - Abani -need to make this work on a long-term, what is in it for the people putting up the sw, people consuming the sw -
      - if don't have a clear incentive, will eventually peter off -
    - center would make this happen more quickly, more often-
    - should center staff have seed money grant for each collaboration,
    - Vineet - maybe one should be focused on education and outreach
      - clearly different centers should have different foci -
    - would the centers need to be awarded to one institutions, or virtual networks, foundation type things -
    - one answer - have to be physical -

- George - what is expected -
- John - are there examples where distributed organizations may work better, developers are not concentrated - some things you can do virtually just fine -
- to what extent are sw services rather than software - iplant, for instance more services - think galaxy - something you download -curious to what extent the sw is more a set of services -
    - hosted service- can use a hosted galaxy for instance -
    - Gabrielle -what is the distinction -
    - Suresh - regarding the usage, service is easier to use - already deployed
- Cynthia - spectrum on how users will use it, may use it as service, or go beyond deployed -
    - so not such a useful distinction -
- what these things SHOULDN'T be - this is a small amount of money in a billion dollar world -
    - these are catalysts, intellection connections made -
    - won't replace, or have volumetric impact on billion dollar world -
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- What are effective mechanisms to encourage/nurture programs and funded activities that complement and reinforce each other?
    - Create effective oversight and communication bridges between the programs. This could mean having a few coordinators within each program who ensure that work isn't being duplicated, who also notice when results within their own program could benefit the other.
    - Merge them? To the extent that they *do* complement and reinforce each other, aren't they better off operating as a single unit?
    - Send any relevant broadcast communications (e.g. through mailing lists) from one program to the other so that everyone is aware of what has been accomplished in each program.
- How can we encourage exploratory, innovative new projects that help move our community forward and pave the way into previously uncharted software territory?
    - We first have to identify needs of the community that haven't been addressed. Look for people who self-identify as creative, or who are prone to the generation of multiple (but not necessarily perfect) ideas. Be open during the generation of multiple ideas about community needs and encourage and develop the sustainable ones in the end.
    - Look at historical cases to see how this was done in the past. Perhaps people who previously served as software pioneers have some insight.