

# CCC – Opportunities for Collaborations on Visioning with Other Agencies/Int'l

Lay of the Land

US, EU, Asia Pacific

# NSF

- CISE – We have this one covered 😊
- Office of Cyber Infrastructure
- ? – are there other NSF offices who should know what we are doing?

# Who else is out there? - US

- NASA, HQ and Centers
  - Centers: Ames, Goddard, , JPL, Langley, Glenn
- DOE
  - Office of Science, HQ and Labs
    - Labs: Oak Ridge, Argonne, Berkeley, PNNL
  - NNSA, HQ and Labs
    - Labs: Los Alamos, Sandia, Livermore
- DoD, HQ and Labs
  - DARPA,
  - HPCMP
  - ONR, AFOSR, ARL
  - Labs: ARL, AFRL, ERDC, NRL, USAMRID, others ...
- NIH
- NSA

# Who else is out there? – EU, Asia/Pacific

- EU
  - Frameworks
  - e-IRG
  - OGF
  - Individual Country “NSFs”
- Asia Pacific
  - NAREGI – Japan
  - KISTI – Korea

# NASA

- Visited HQ (with Andy),
  - Mostly supercomputing (HPC applications) and traditional computational sciences
- Spoken with Ames and JPL
  - Each has “missions” that are served by computing
  - Computing research is embedded in these mission programs
- A culture w/in NASA –
  - not entrepreneurial – only a few pockets of people used to writing proposals.
  - Projects are BIG money items that come along rarely and
    - “someone else does this”
  - “visioning” time has to have a “charge code”
- Visits and discussions about CCC elicit excitement about visioning, but “the ball loses momentum in the sand” almost immediately
- Strategy with NASA and subsequent “other agencies without a proposal writing culture:
  - Engage a local champion (with a budget) to carry that ball

# DOE Office of Science

- Visited Germantown (with Andy)
  - Much HPC again – SciDAC etc.
  - However interested in broader computing and fund much interesting work in the “SC” Labs
  - A portion of the Labs have a visioning/entrepreneurial spirit
  - Worthwhile pursuing local contacts/champions at
    - Argonne, Oak Ridge, Berkeley and PNNL

# DOE - NNSA

- Primarily the nuclear weapons establishment and primarily HPC
- Mostly large long term programs, little proposal writing experience
- But an element in each Lab that competes for Office of Science and some NSF funding
  - I lump this element under DOE Office of Science

# DoD HPCMP

- Visited (with Andy)
- Almost entirely HPC applications, but interested in research aspects of algorithms, parallelization, etc.
- Labs have a character very similar to NASA
  - Not used to program development, writing proposals
  - But have some of the most interesting motivating applications
  - Have become disconnected from the academic/research community

# Other US agencies

- DARPA
  - ?? Might be best to wait for new leadership
- NIH
  - Huge, Very visible importance to the public, I suspect there exceedingly interesting problems here that warrant visioning effort (I know of several)
- NIST
  - No contacts
- ARO, AFOSR, ONR

# EU

## e-Infrastructure Reflection Group

- One of the EU planning groups for “Framework” program funds.
- Presented CCC to their annual meeting in 2008 and wrote the request for consultation, communication and common planning into their 2009 draft plan (see CCC list)
- We cannot fund their visioning (nor vice versa), but we can sponsor common events
  - They are interested and responsive (sort of)

# US -> EU Open Grid Forum

- Started as Global Grid Forum in US, but center of gravity has moved to EU.
- Still a standards-setting body in distributed scientific computing as distinct from Cloud.
- Has a significant applications expertise – therefore a reality check on distributed computing developments.
- Have briefed CCC at two OGF events.
  - They do not know how to react

# Asia/Pacific Players

- Naregi – Japan
- KISTI – Korea
  - One quick phone briefing

# NSF Office of Cyber Infrastructure

- Ed Seidel is new boss
  - I visited him with Craig Lee (OGF Chair) and introduced CCC
  - His orientation is computational sciences
  - He was receptive to (and enthusiastic about) common visioning workshops drawing together computational and computer scientists.
  - Have a draft “21<sup>st</sup> Century” paper with him on this
  - He is still getting his feet on the ground
  - *This is very fertile ground*

# Recommendations

- Concentrate on the more fertile “visioning” ground of
  - DOE Office of science, action: seek out projects
  - NSF Office of Cyber Infrastructure
  - Seek out NASA “mission oriented” computing projects
  - DoD Labs through HPCMP program
  - DoD:
    - Wait out DARPA, but keep on “to-do” list
    - Find contact to ONR, ARL, AFOSR
  - *Enlist local champions*
- Establish connection to NIH
- How important is int’l vs. US ?
  - Specific projects or just keep in touch?
  - Pursue e-IRG for joint planning/workshop?