

DOD NSA ACS Program Introduction for HEC FSIO 2007

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ACS Program - Overview

- To assist the NSA in its computational mission, the ACS program intends to promote ideation through workshops, announcements, talks and publications.
- ACS will develop the Center for Exceptional Computing to foster technology breakthroughs that will make a difference for the NSA and the Nation

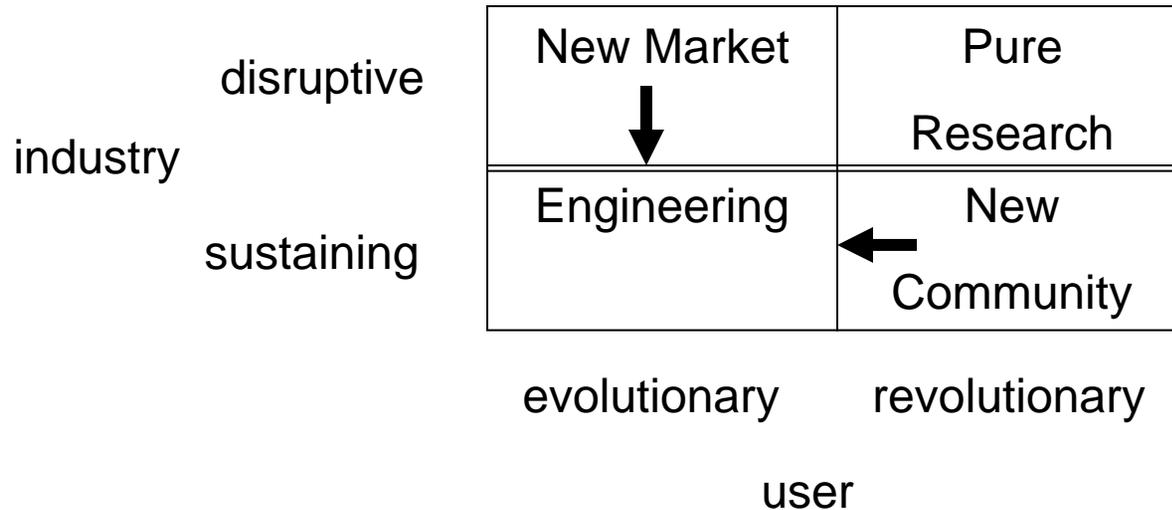
ACS Program - Organization (in transition)

- Program lead – Gary Hughes NSA
- Ideation – Marilyn Carter NSA
- Technical Thrusts
 - Power – Dave Prucnal NSA
 - Resilience – Karl Heinz Winkler LANL, Carl Gilbert NSA
 - Productivity – Thomas Sterling LSU, Trina Park NSA
 - FSIO – Gary Grider LANL
 - On Chip I/O – Kevin Martin GT
 - Interconnect – Karen Bergman Columbia, Jim Tomkins Sandia

ACS Program - Projects/Pilots

- Types
 - End to end - demonstration, take incumbent to candidate technologies - multi-thrust integrations
 - via BAA
 - Thrust Centric - breakthroughs in the parts
 - via BAA
- Duration
 - 1-2 years
 - Take ideas as quickly as possible to tipping point – success or failure – both ok – but do it quickly
- Relevance
 - Must be relevant to NSA HEC needs
 - Relevance through participation (NSA people involved in the projects)

ACS Program - Focus



- ACS seeks ideas that are
 - evolutionary and disruptive
 - revolutionary and sustaining

ACS Program - Center for Exceptional Computing

- A place to collaborate
 - NSA scientists available for collaboration
 - University and Industry people on sabbaticals
- An opportunity to lead
 - Seeking IPA's to take on thrust leadership/project leadership roles for medium term time frames
- A place to try things you can't elsewhere
 - Internal NSA sabbaticals
 - University and Industry sabbaticals
 - Lower risks to pursue breakthroughs (safe havens)
 - Equipment to pursue ideas

Things we could use your input on!

- What would make the CEC a place you would want to come to?
- What things would make it difficult for you to want to come?
 - IP issues/proprietary issues
 - Taking top academics out of publication mode, etc.
- What common equipment should we have in the CEC?
- What are the evolutionary/disruptive and the revolutionary/sustaining gaps/opportunities?
- In a perfect world, what would you like to see happen to help fill in the pipeline of ideas to use?

An Invitation

- If you are interested in being an IPA, thrust leader, lead scientist on a project, etc.
- If you are interested in a sabbatical
- If you are interested in collaborating with NSA scientists
- If you have evolutionary/disruptive and/or revolutionary/sustaining ideas you are passionate about pursuing
- Contact me or anyone in the NSA ACS Program ggrider@lanl.gov