Report

- Rough out the overall outline of the report
  - Introduction (likely last section to be written)
    - Define area and scope (Programming Environments and Abstractions for Data Centric Computing)
    - Opportunities presented by research in data locality for programming systems
    - Key overarching findings & recommendations
  - Background:
    - John: Architecture
    - Thomas: Apps
    - Torsten: Middleware/Tools
  - Area1: Motivating Applications and application requirements

    Anshu and Frank

  - Area2: Data Structure and Layout Abstractions

    Didem and Mauro

  - Area3: Language, Tool, and Compiler Support

    Paul and Naoya

  - Area4: Data Locality in Tasking Models

    Hatem and Jesus

  - Area5: System-Scale Data Locality and Management

    Satoshi and Torsten

  - Conclusion: What are our next steps

Location

- Google Doc? (please no)
- SVN or GIT Repository? (preferred… can get you accounts on mic.lbl.gov)
- github

Timeline

- **May 15**: 2 weeks for rough outline (confer with your team to have meetings or email to converging rough outline)

- **June 1**: 2 weeks for detailed outline (complete content as bullets)
- **July 1:** 4 weeks after that for converting detailed outline into prose
- **August 1:** Workshop organizers and leads will polish and finalize report
- **Release:** sometime in August
  - (*DOE wants to be involved in release… help us to find other agencies and countries that would like to be partners in a co-release*)
- June 11-12 is G-8 and August is meeting in China, good targets for the report

Content

- Break up into groups for planning
  - Get contact info of your session leads
- **Prepare an outline for each of your areas**
  - Section leads are responsible for organizing content and writing for workshop report sections
    - Gather input from participants in your area, but you get final definition of the section outline.
    - You also get responsibility to ensure writing is completed.
  - Synthesizing across all the talks in your session
    - Focus on data locality
    - The limits on locality from apps perspective: trade-offs

- **General Principles for content in the section (general points to hit)**
  - **Define your Area**
    - Create definition of your research area
    - Describe key concepts that define your area or that were uncovered during the course of conversation
    - A few examples of work in that area (can refer back to talks on website, but no need to recount entire talk)
  - **Findings**:
    - Describe points/observations/discoveries/challenges/issues uncovered in the session
      - Distill into summary (major discoveries)
      - can refer back to presentations for details
      - Can also use data from panel discussions
    - Identify areas of agreement
      - Common approaches

- Common concerns
  - Identify areas of disagreement
    - what is the substantive cause of the disagreement (document)
    - What metrics/information/research are needed to compare/resolve
  - Identify Gaps
    - What is missing?
- **Recommendations**
  - Opportunities for standardization of mature technologies where the is substantial agreement or commonality
    - Have we met the necessary conditions for standardization (is the area well enough understood, are the elements of existing implementations sufficiently similar, are the benefits clearly demonstrated, is there a user community?)
    - What should we standardize? (Low-hanging fruit)
    - How can we influence standards committees? (e.g. C++17 standards committee?)
  - Define research agenda for new ideas or areas where there is insufficient information to choose a final implementation (What areas need more research?)
    - identify research thrust
    - what are the opportunities
    - what needs to be done
    - What needs to be prioritized?
    - What resources would be required (estimate size/complexity of the problem if you can)
  - How do we create a user community? (bonus question)