Trilinos User Experience Capability Area
Bill Spotz, lead

Documentation, Examples and Tutorials (Mark Hoemmen, lead)

- **We have 3 tutorials this year!**
  - VECPAR (summer, full day!)
  - EuroTUG (summer)
  - TUG (this week)

- **New resources and tutorial materials**
  - Trilinos virtual machine / install (Jim Willenbring)
  - Paratools servers (Sameer Shende, U Oregon)
  - MueLu tutorial with its own virtual machine (Tobias Wiesner)
  - Kokkos tutorial examples (Christian Trott)
  - Anasazi examples (Alicia Klinvex) and manual (Rich Lehoucq)

- **Progress in making tutorials scalable (meaning O(1) time to prepare or hand off)**
  - **(+) More examples live in Trilinos repository**
  - **(+) Tested nightly; appear in Doxygen automatically**
  - **(-) Virtual machine / WebTrilinos prep still manual**

- **Big challenge: MPI+X**
  - Programming models and interfaces are in flux
  - Refactor (necessarily) takes time from UX

- **Think of ways to make your time scale**
  - Leverage nightly tests and other automation
  - Make examples also serve as tests
  - Build a tutorial out of examples
  - **Add searchable metadata to examples**

- **Cross-package higher-level interfaces?**
  - If I'm a new user and I want to build a preconditioner for my linear system, where do I look? Do I go straight to the packages or look in Stratimikos?

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Web Site Design (Dena Vigil, lead)

- **Trilinos.org is on-line**
  - Largely just a placeholder right now
  - Missing content

- **Plans are converging for Content Management System**
  - Thursday brown bag roundtable for data base design **(please participate!)**
  - DB relationship to canonical information in Trilinos repository
    - Policies and tools to keep information synchronized

- **Collapsible documentation for ParameterLists**
  - Automated system for dynamic content in doxygen **(demo)**
  - Infrastructure is ready for developers to start implementing
  - Instructions in doc/DocumentingParametertLists/memo

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Simplified Layers & Skins (Bill Spotz, lead)

- **Enthought SBIR**
  - Develop a distributed array capability for Python (DistArray), with a NumPy-like interface
  - Develop a protocol for copy-less conversions to data structures to and from Trilinos, PETSc, Global Arrays, etc.

- **Sandia Role: Enhance PyTrilinos to work with DistArrays**
  - New *Domi* package for distributed multi-dimensional data
  - New wrappers for Tpetra, Domi, *others to come …*
  - Employ converters to use DistArrays

- **Not much work on ForTrilinos or CTrilinos fronts**
  - Much discussion about using Stratimikos as a high-level interface
  - Registration, templates, circular dependencies…

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