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Good Read: Data Grids, Collections, and Grid Bricks

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Rajasekar, A., M. Wan, R. Moore, G. Kremenek, and T. Guptil, 2001. Data Grids, Collections, and Grid Bricks. in 20th IEEE/11th NASA Goddard Conference on Mass Storage Systems & Technologies, San Diego, April, 2001. (http://www.npaci.edu/dice/srb/Pappres/Pappres.html)

This article provides a peek under the hood of the San Diego Supercomputer Center system that is providing distributed archival storage to scientific communities. The SDSC 'data grid' federates access to a network of diverse but linked storage systems and involves both the Storage Resource Broker (SRB) and the Metacat System. Such a system hides the infrastructure dependencies that arise in establishing user administration while also providing public access to multiple data collections. The design for the grid scales modularly through the use of grid bricks, where each grid brick is a terabyte array of disk drives that create ready access by storing one collection. The scalability technique involves replication of a service by copying both programs and data. Grid bricks are in use at SDSC, under the SRB data management system, serving in the dual roles of primary access and/or back up storage.

At the NPACI URL two related papers can be found: 'MySRB and SRB - Components of a data grid' (Rajasekar et al, 2002) and 'Storage Resource Broker - Managing distributed data in a grid' (Rajasekar et al, submitted). The grid brick concept grows from the disk farm and cyber brick language laid out in Devlin et al, 2002 (http://www.clustercomputing.org/content/tfcc-4-1-gray.html)

Good Read: The Dry and the Wet

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Joseph Goguen, "The Dry and the Wet", in Information Systems Concepts, eds. Eckhard Falkenberg, Colette Rolland and El-Sayed Nasr-El-Dein, eds. Elsevier North-Holland, 1992, pp 1-17.

This is a somewhat older piece (first published 1992) that nevertheless raises questions dear to the heart of LTER information managers. The paper points out challenges and outlines strategies for addressing long-standing tensions between 'formal, context-insensitive information' and 'informal, situated information' - the dry and the wet - in the design and maintenance of complex systems. Goguen argues that failures to address this divide (and the general failure to account for the social lives of technology 'in the wild') play an important part in the surprisingly high failure rate reported by complex system developers. The paper provides a good and accessible overview of the field of Requirements Engineering from one of the leading figures in the field. For links to this and other pieces on similar themes, check out Goguen's website at: http://www.cs.ucsd.edu/users/goguen/.