

GENERAL/OVERVIEW

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RECOMMEND: Summary -page 8, Section 1 – Laying the Ground pages 14-20, Section 4 -Conclusions and Recommendations pages 70-74.

Secondary Readings in GENERAL/OVERVIEW

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De Roure, D., & Hendler, J. A. (2004). E-Science: the grid and the Semantic Web. *IEEE Intelligent Systems*, 19(1), 65-71.

Berman, F., Fox, G., and Hey. T., editors, *Grid Computing: Making the Global Infrastructure a Reality,* 1st Edition, John Wiley and Sons, LTD, England, 2003.

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CYBERINFRASTRUCTURE

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http://www.rcuk.ac.uk/escience/documents/report_datadeluge.pdf#search=%22data%20curation%20and%20conference%20and%20e-science%22

Almes, G., Birnholtz, J. P., Hey, T., Cummings, J., Foster, I., & Spencer, B. (2004). CSCW and cyberinfrastructure: opportunities and challenges. Computer Supported Cooperative Work Conference Proceedings, 6-10 Nov. 2004, 270-3.

Berman, F., Berman, J., C. Pancake, and Wu, L., A Process-Oriented Approach to Engineering Cyberinfrastructure,
http://director.sdsc.edu/pubs/ENG/report/EAC_CI_Report-FINAL.pdf

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National Science Foundation Cyberinfrastructure Council. (2006). NSF's Cyberinfrastructure Vision for the 21st Century Discovery National Science Foundation.
<http://www.nsf.gov/od/oci/CI-v40.pdf> – RECOMMEND: CHAPTER 1, Section I – Drivers and Opportunities, CHAPTER 3, Section III Developing a Data Cyberinfrastructure in a Complex, Global Context, CHAPTER 3, Section IV-Plan of Action, and CHAPTER 3, Section V – Conclusion.

National Science Foundation, Revolutionizing Science and Engineering Through Cyberinfrastructure: Report of the National Science Foundation Blue-Ribbon Advisory Panel on Cyberinfrastructure, (the "Atkins Report"),
<http://www.nsf.gov/cise/sci/reports/atkins.pdf>

National Science Board, Long-Lived Data Collections Enabling Research and Education in the 21st Century, the National Science Board,
<http://www.nsf.gov/pubs/2005/nsb0540/start.jsp>

National Science Foundation. Over the past three years, a number of reports on cyberinfrastructure and its impact on research and education have been compiled. Links to a sample of some of the reports are listed below.

Building a Cyberinfrastructure for the Biological Sciences; workshop held July 14-15, 2003 http://research.calit2.net/cibio/archived/CIBIO_FINAL.pdf
<http://research.calit2.net/cibio/report.htm>

CHE Cyber Chemistry Workshop; workshop held October 3-5, 2004
http://bioeng.berkeley.edu/faculty/cyber_workshop

Commission on Cyberinfrastructure for the Humanities and Social Sciences; sponsored by the American Council of Learned Societies; seven public information-gathering events held in 2004; report in preparation
<http://www.acls.org/cyberinfrastructure/cyber.htm>

Computation as a Tool for Discovery in Physics; report by the Steering Committee on Computational Physics

<http://www.nsf.gov/pubs/2002/nsf02176/start.htm>

Cyberinfrastructure for the Atmospheric Sciences in the 21st Century; workshop held June 2004 http://netstats.ucar.edu/cyrdas/report/cyrdas_report_final.pdf

Cyberinfrastructure for Engineering Design; workshop held February 28 -March 1, 2005; report in preparation

CyberInfrastructure and the Next Wave of Collaboration, D. E. Atkins, Keynote for EDUCAUSE Australasia, Auckland, New Zealand, April 5-8, 2005

Cyberinfrastructure for Engineering Research and Education; workshop held June 5 -6, 2003 <http://www.nsf.gov/eng/general/Workshop/cyberinfrastructure/index.jsp>

Cyberinfrastructure for Environmental Research and Education (2003); workshop held October 30 -November 1, 2002
<http://www.ncar.ucar.edu/cyber/cyberreport.pdf>

CyberInfrastructure (CI) for the Integrated Solid Earth Sciences (ISES) (June 2003); workshop held on March 28-29, 2003, June 2003
http://tectonics.geo.ku.edu/ises-ci/reports/ISES-CI_backup.pdf

Cyberinfrastructure and the Social Sciences (2005); workshop held March 15-17, 2005
<http://www.sdsc.edu/sbe/>

Cyberlearning Workshop Series; workshops held Fall 2004 -Spring 2005 by the Computing Research Association (CRA) and the International Society of the Learning Sciences (ISLS)
<http://www.cra.org/Activities/workshops/cyberlearning>

Final Report: NSF SBE-CISE Workshop on Cyberinfrastructure and the Social Sciences, F. Berman and H. Brady
<http://vis.sdsc.edu/sbe/reports/SBE-CISE-FINAL.pdf>

Geoinformatics: Building Cyberinfrastructure for the Earth Sciences (2004); workshop held May 14 -15, 2003; Kansas Geological Survey Report 2004-48
<http://www.geoinformatics.info/>

Geoscience Education and Cyberinfrastructure, Digital Library for Earth System Education, (2004); workshop held April 19-20, 2004
<http://www.dlese.org/documents/reports/GeoEd-CI.pdf>

Identifying Major Scientific Challenges in the Mathematical and Physical Sciences and their CyberInfrastructure Needs, workshop held April 21, 2004
<http://www.nsf.gov/attachments/100811/public/CyberscienceFinal4.pdf>

Materials Research Cyberscience enabled by Cyberinfrastructure; workshop held June 17 -19, 2004

<http://www.nsf.gov/mps/dmr/csci.pdf>

Multiscale Mathematics Initiative: A Roadmap; workshops held May 3-5, July 20-22, September 21-23, 2004

<http://www.sc.doe.gov/ascr/mics/amr/Multiscale%20Math%20Workshop%203%20%20Report%20latest%20edition.pdf>

An Operations Cyberinfrastructure: Using Cyberinfrastructure and Operations Research to Improve Productivity in American Enterprises"; workshop held August 30 -31, 2004

<http://www.optimization-online.org/OCI/OCI.doc>

<http://www.optimization-online.org/OCI/OCI.pdf>

Planning for Cyberinfrastructure Software (2005); workshop held October 5 -6, 2004

http://www.nsf.gov/od/oci/ci_workshop/index.jsp

Preparing for the Revolution: Information Technology and the Future of the Research University (2002); NRC Policy and Global Affairs, 80 pages

<http://www.nap.edu/catalog/10545.html>

Polar Science and Advanced Networking; workshop held on April 24 -26, 2003; sponsored by OPP/CISE

<http://www.polar.umcs.maine.edu/>

Research Opportunities in Cyberengineering/Cyberinfrastructure; workshop held April 22 -23, 2004

<http://129.25.60.81/%7Eworkshop/>

Revolutionizing Science and Engineering Through Cyberinfrastructure: report of the National Science Foundation Blue-Ribbon Advisory Panel on Cyberinfrastructure; Daniel E. Atkins (Chair), January 2003

<http://www.nsf.gov/od/oci/reports/atkins.pdf>

A Science-Based Case for Large-Scale Simulation; workshop held June 24-25, 2003

http://www.pnl.gov/scales/docs/volume1_72dpi.pdf

http://www.pnl.gov/scales/docs/SCaLeS_v2_draft_toc.pdf

Summit on Digital Tools for the Humanities; workshop held September 28-30, 2005

<http://www.iath.virginia.edu/dtsummit/SummitText.pdf>

Supplement to the President's Budget for FY 2006; Report by the Subcommittee on Networking and Information Technology Research and Development (NITRD), February 2005
<http://www.nitrd.gov/>

Trends in IT Infrastructure in the Ocean Sciences (2004); workshop held May 21-23, 2003
http://www.geo-prose.com/oceans_iti_trends/oceans_iti_trends_rpt.pdf

DATA

Almes, G., Birnholtz, J. P., Hey, T., Cummings, J., Foster, I., & Spencer, B. (2004). CSCW and cyberinfrastructure: opportunities and challenges. Computer Supported Cooperative Work Conference Proceedings, 6-10 Nov. 2004, 270-3.

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Szalay, A., & Gray, J. (2006). 2020 Computing: Science in an exponential world. *Nature*, 440(7083), 413-414.

Rusbridge, C., & McHugh, A. (2005). Saving for the nation. [Electronic version]. *Information Scotland*, 3(4) – see
[http://www.slainte.org.uk/publications/serials/infoscot/vol3\(4\)/vol3\(4\)article6.htm](http://www.slainte.org.uk/publications/serials/infoscot/vol3(4)/vol3(4)article6.htm)

VIRTUAL ORGANIZATIONS (secondary reading)

Camarinha-Matos, L. M. (2003). Infrastructures for virtual organizations -where we are. 2003 IEEE Conference on Emerging Technologies and Factory Automation. Proceedings, 16-19 Sept. 2003, , vol.2 405-14. RECOMMEND Section V – Support for Remote Operation and E-Science page 412.

CONFERENCE: DATA CURATION

1st Digital Curation Conference: An overview of the 1st Digital Curation Conference can be found online at <http://www.ariadne.ac.uk/issue45/dcc-1st-rpt/>.