Glossary

AFRL - DoD's Air Force Research Laboratory

AHRQ - HHS's Agency for Healthcare Research and Quality

ANL - DOE's Argonne National Laboratory

ARC - NASA's Ames Research Center

ARDA - Advanced Research and Development Activity (superseded by the Disruptive Technology Office)

ARL - DoD's Army Research Laboratory

ARO - DoD's Army Research Office

ARSC - Arctic Region Supercomputing Center

ASC - DOE/NNSA's Advanced Simulation and Computing program (formerly ASCI, for Accelerated Strategic Computing Initiative)

BIRN - NIH's Biomedical Informatics Research Network

Black Widow - NSA-supported next-generation system in the massively parallel, vector-processing system line

BLAS - Basic linear algebra subroutine

BlueGene - A vendor supercomputing project dedicated to building a new family of supercomputers

BlueGene/L - Scalable experimental new supercomputing system being developed in partnership with DOE/SC and DOE/NNSA; expected to achieve 300-teraflops+ processing speeds

BlueGene/P - The next generation in the BlueGene line after BlueGene/L

BlueGene/Q - Latest-generation BlueGene architecture

CaBIG - NIH's cancer Biomedical Informatics Grid

CAIDA - Cooperative Association for Internet Data Analysis

CAREER - NSF's Faculty Early Career Development Program

CDI – NSF's Cyber-enabled Discovery and Innovation program

CENIC - Corporation for Network Initiatives in California

CENTCOM - DoD's United States Central Command

CERDEC – U.S. Army's Communications-Electronics Research, Development, and Engineering Center

CG - Coordinating Group

CHEETAH - NSF's Circuit-switched High-speed End-to-End ArcHitecture network

CIO - Chief information officer

CMS - HHS's Centers for Medicare and Medicaid Services

CoPs - Communities of practice

COTS – Commercial-off-the-shelf

CPS – Cyber-physical systems

CREATE – OSD's Computational Research and Engineering Acquisition Tools and Environments program

CSIA - Cyber Security and Information Assurance, one of NITRD's eight Program Component Areas

DARPA - DoD's Defense Advanced Research Projects Agency

DDR&E - OSD's Director of Defense Research and Engineering

DETER - NSF- and DHS-initiated cyber DEfense Technology Experimental Research network

DHS - Department of Homeland Security

DLI - DoD's Defense Language Institute

DNS - Domain Name System

DNSSEC - Domain Name System Security protocol

DOC - Department of Commerce

DoD - Department of Defense

DOE - Department of Energy

DOE/NNSA - DOE/National Nuclear Security Administration

DOE (OE) - DOE's Office of Electricity Delivery and Energy Reliability

DOE/SC - DOE's Office of Science

DOT - Department of Transportation

DRAGON - NSF's Dynamic Resource Allocation (via GMPLS) Optical Network

DTO - Disruptive Technology Office (formerly ARDA)

Educause - Non-profit organization promoting advancement of IT in higher education

Eldorado - NSA-supported multithreaded system

EPA - Environmental Protection Agency

ESnet - DOE/SC's Energy Sciences network

ESSC - DOE/SC's Energy Sciences network (ESnet) Steering Committee

FAA - DOT's Federal Aviation Administration

FAST-OS – Forum to Address Scalable Technology for runtime and Operating Systems

FBI - Federal Bureau of Investigation

FCSSI - Flight Critical Systems Software Initiative

FDA - HHS's Food and Drug Administration

FIU - Florida International University

FY - Fiscal Year

GALE - DARPA's Global Autonomous Language Exploitation program

GENI - NSF's Global Environment for Network Investigations

GEOSS - Global Earth Observation System of Systems, a cooperative effort of 34 nations, including the U.S., and 25 international organizations to develop a comprehensive, coordinated, and sustained Earth observation system

GMPLS - Generalized MultiProtocol Label Switching

GSA - General Services Administration

GSFC - NASA's Goddard Space Flight Center

HCI&IM - Human-Computer Interaction and Information Management, one of NITRD's eight Program Component Areas

HCSS - High Confidence Software and Systems, one of NITRD's eight Program Component Areas

HEC - High-end computing

HEC I&A - HEC Infrastructure and Applications, one of NITRD's eight Program Component Areas

HEC R&D - HEC Research and Development, one of NITRD's eight Program Component Areas

HECRTF - High-End Computing Revitalization Task Force

HEC-URA - HEC University Research Activity, jointly funded by multiple NITRD agencies

HHS - Department of Health and Human Services

HPCMP - OSD's High Performance Computing Modernization Program

HPCS - DARPA's High Productivity Computing Systems program

IM – Information management

INCITE - DOE/SC's Innovative and Novel Computational Impact on Theory and Experiment program

IETF - Internet Engineering Task Force

InfiniBand - A high-speed serial computer bus, intended for both internal and external connections

INFOSEC – Information security

Internet2 – Higher-education consortium for advanced networking and applications deployment in academic institutions

I/O - Input/output

IP - Internet Protocol

IPsec - IP security protocol

IPv6 - Internet protocol, version 6

ISI - Information Sciences Institute

IT - Information technology

IT R&D - Information technology research and development

IWG - Interagency Working Group

JET - LSN's Joint Engineering Team

JETnets - Federal research networks supporting networking researchers and advanced applications development

LANL - DOE's Los Alamos National Laboratory

LBNL - DOE's Lawrence-Berkeley National Laboratory

LCF - DOE's Leadership Computing Facility

LSN - Large Scale Networking, one of NITRD's eight Program Component Areas

MAGIC - LSN's Middleware and Grid Infrastructure Coordination team

MAN - Metropolitan area network

MAX - Mid-Atlantic eXchange

MCNC - Microelectronics Center of North Carolina

MIDAS - NIH's Modeling of Infectious Disease Agents Study

MPI - Message-passing interface

MTU - Maximum transmission unit

MURI - Multidisciplinary University Research Initiative

MW - Middleware

NA - National Academies

NARA - National Archives and Records Administration

NASA - National Aeronautics and Space Administration

NationalLambda Rail - Consortium of organizations working to provide an optical network for research

NCAR - NSF-supported National Center for Atmospheric Research

NCBC - NIH's National Centers for Biomedical Computing

NCLS - NASA's National Leadership Computing System

NCO - National Coordination Office for NITRD

NERSC - DOE/SC's National Energy Research Scientific Computing Center

NERSC-5 - DOE/SC NERSC's next-generation platform

NGATS - Federal government's Next-Generation Air Transportation System

NIH - HHS's National Institutes of Health

NIST - National Institute of Standards and Technology

NITRD - Networking and Information Technology Research and Development

NLANR - NSF-supported National Laboratory for Applied Network Research

NLM - NIH's National Library of Medicine

NOAA - National Oceanic and Atmospheric Administration

NRL - DoD's Naval Research Laboratory

NRT - LSN's Networking Research Team

NSA - National Security Agency

NSF - National Science Foundation

NSTC - National Science and Technology Council

OMB - White House Office of Management and Budget

OMNInet - Large-scale metro optical network testbed supported by national labs, universities, Canadian organizations, and vendor partners

ONR - DoD's Office of Naval Research

ONT - Optical networking testbed

OptiPuter - NSF-funded five-year project to interconnect distributed storage, computing, and visualization resources using photonic networks

ORNL - DOE's Oak Ridge National Laboratory

OS - Operating system

OSD - Office of the Secretary of Defense

OSTP - White House Office of Science and Technology Policy

PCA - Program Component Area

PF – Petaflop(s), a thousand teraflops

PI - Principal investigator

PNL - DOE's Pacific Northwest Laboratory

PREDICT - DHS's Protected Repository for the Defense of Infrastructure Against Cyber Threats

PSC - NSF-supported Pittsburgh Supercomputing Center

QoS - Quality of service

R&D - Research and development

RF - Radio frequency

ROM - Read-only memory

RTOS - Real-time operating system

S-ACARS - Secure-Aircraft Communication Addressing and Reporting System

SAST - Systems Administrator Simulation Trainer

SBIR - Federal Small Business Innovation Research program

SC - DOE's Office of Science

SCADA - Supervisory control and data acquisition

SciDAC - DOE/SC's Scientific Discovery through Advanced Computing program

SDP - Software Design and Productivity, one of NITRD's eight Program Component Areas

SEW - Social, Economic, and Workforce Implications of IT and IT Workforce Development, one of NITRD's eight Program Component Areas

SpiderWeb - NIH-sponsored effort to create shared informatics infrastructure of clinical, genomic, and molecular data

StarLight - NSF-supported international optical network peering point in Chicago

State - Department of State

SUP - Secure unattended proxy

TF - Teraflop(s), a trillion floating point operations (per second)

Treasury - Department of the Treasury

TREC - Text REtrieval Conference

TRUST - NSF's Team for Research in Ubiquitous Secure Technology

TSWG - Technical Support Working Group

UCAR - University Corporation for Atmospheric Research

UIC - University of Illinois at Chicago

UIUC - University of Illinois at Urbana-Champaign

UltraScience Net - DOE/SC's experimental research network

UMd - University of Maryland

UNC - University of North Carolina

USGS - United States Geological Survey

USMC - U.S. Marine Corps

UW - University of Washington

UWisc - University of Wisconsin

VA - Department of Veterans Affairs

V&V - Verification and validation

VM - Virtual machine

VPN - Virtual private network

WAN - Wide area network

WINS - SDP's Workshop on Interoperable Software

WLAN - Wireless local area network