

## Appendix I: Glossary of Acronyms, Entities and Terms (DRAFT, 4/16/2009)

- *APWG*: "The Anti-Phishing Working Group (APWG) is the global pan-industrial and law enforcement association focused on eliminating the fraud and identity theft that result from phishing, pharming and email spoofing of all types." See <http://www.antiphishing.org/>
- *ARIN*: "Applying the principles of stewardship, ARIN, a nonprofit corporation, allocates Internet Protocol resources; develops consensus-based policies; and facilitates the advancement of the Internet through information and educational outreach." "ARIN manages the distribution of Internet number resources (IPv4 and IPv6 address space and Autonomous System Numbers) in Canada, many Caribbean and North American islands, and the United States. ARIN is one of five Regional Internet Registries (RIRs) in the world." See <https://www.arin.net/>
- *Canarie*: "CANARIE Inc., based in Ottawa, is Canada's advanced network organization. It facilitates the development and use of its network as well as the advanced products, applications and services that run on it. The CANARIE Network serves universities, colleges, schools, government labs, research institutes, hospitals and other organizations in a wide variety of fields in both the public and private sectors." See <http://www.canarie.ca/>
- *Carriers*: large facilities-based network providers such as Abovenet, AOL, AT&T, Bell Canada, British Telecom, Charter, Cogent, Comcast, Deutsche Telecom, Global Crossing, Level3, NTT/Verio, Qwest, Road Runner, Sprint, Telia, Verizon and XO. Carriers are sometimes popularly called "network backbone operators."
- *Dante*: "DANTE (Delivery of Advanced Network Technology to Europe) plans, builds and operates advanced networks for research and education. It is owned by European NRENs (national research and education networks), and works in partnership with them and in cooperation with the European Commission. DANTE provides the data communications infrastructure essential to the development of the global research community." See <http://www.dante.net/>
- *DICE*: this acronym is formed from the names of four leading high performance networks: Dante, Internet2, Canarie and ESNet, and represents an ongoing collaboration between those entities on issues of common interest and concern.
- *ECPA*: Electronic Communications Privacy Act, 18 USC 2510. See <http://www.law.cornell.edu/uscode/18/2510.html>
- *EDUCAUSE*: "a nonprofit association whose mission is to advance higher education by promoting the intelligent use of information technology." See <http://www.educause.edu/>
- *FERPA*: Family Educational Rights and Privacy Act, 20 USC 1232g. See <http://www.ed.gov/policy/gen/guid/fpco/ferpa/index.html>
- *GENI*: "The Global Environment for Network Innovations (GENI) is an experimental suite of infrastructure designed to support Network Science and Engineering experiments ranging from new research in network and distributed system design to the theoretical underpinnings of network science, network policy and economics, societal values, and the dynamic interactions of the physical and social spheres with communications networks. [...] Researchers will be able to build their own new versions of the "net" or to study the "net" in ways that are not possible today. Compatibility with the Internet is NOT required. The purpose of GENI is to give researchers the opportunity to experiment unfettered by assumptions or requirements and to support those experiments at a large scale with real user populations." See <http://www.geni.net/>
- *GLIF*: "GLIF, the Global Lambda Integrated Facility, is an international virtual organization that

promotes the paradigm of lambda networking. GLIF provides lambdas internationally as an integrated facility to support data-intensive scientific research, and supports middleware development for lambda networking. It brings together some of the world's premier networking engineers who are working together to develop an international infrastructure by identifying equipment, connection requirements, and necessary engineering functions and services. The GLIF participants are National Research and Education Networks (NRENs), consortia and institutions working with lambdas. Administrative support is provided by TERENA with financial support from sponsoring organisations." See <http://www.glif.is/>

- *Grid*: CERN defines a grid as, "a service for sharing computer power and data storage capacity over the Internet."
- *IANA*: "The Internet Assigned Numbers Authority (IANA) is responsible for the global coordination of the DNS Root, IP addressing, and other Internet protocol resources." See <http://www.iana.org/>
- *ICANN*: "To reach another person on the Internet you have to type an address into your computer - a name or a number. That address has to be unique so computers know where to find each other. ICANN coordinates these unique identifiers across the world. Without that coordination we wouldn't have one global Internet." See <http://www.icann.org/>
- *IETF*: "The Internet Engineering Task Force (IETF) is a large open international community of network designers, operators, vendors, and researchers concerned with the evolution of the Internet architecture and the smooth operation of the Internet. It is open to any interested individual. [...] The actual technical work of the IETF is done in its working groups, which are organized by topic into several areas (e.g., routing, transport, security, etc.). Much of the work is handled via mailing lists. The IETF holds meetings three times per year." See <http://www.ietf.org/>
- *InfraGard*: "InfraGard is a Federal Bureau of Investigation (FBI) program that began in the Cleveland Field Office in 1996. It was a local effort to gain support from the information technology industry and academia for the FBI's investigative efforts in the cyber arena. The program expanded to other FBI Field Offices, and in 1998 the FBI assigned national program responsibility for InfraGard to the former National Infrastructure Protection Center (NIPC) and to the Cyber Division in 2003. InfraGard and the FBI have developed a relationship of trust and credibility in the exchange of information concerning various terrorism, intelligence, criminal, and security matters." See <http://www.infragard.net/>
- *ISOC*: "The Internet Society is an independent international nonprofit organisation founded in 1992 to provide leadership in Internet related standards, education, and policy around the world." See <http://www.isoc.org/>
- *lambdas*: A lambda is a wavelength or "color" of light. The capacity of fiber optic cables can be multiplied by passing network traffic across that fiber on multiple independent wavelengths, or lambdas, using a technique known as wave division multiplexing.
- *MAAWG*: "The purpose of MAAWG is to bring the messaging industry together to work collaboratively and successfully address forms of messaging abuse such as messaging spam, virus attacks, denial-of-service attacks, and other forms of abuse. To accomplish this, MAAWG is developing initiatives in the three areas needed to resolve the messaging abuse problem: Collaboration, Technology, and Public Policy." See <http://www.maawg.org/>
- *NANOG*: The North American Network Operators' Group (NANOG) is an "educational and operational forum for the coordination and dissemination of technical information related to backbone/enterprise networking technologies and operational practices." See <http://www.nanog.org/>
- *NCO and NITRD*: "The National Coordination Office (NCO) for Networking and Information

Technology Research and Development (NITRD) supports the planning, budget, and assessment activities for the Federal government's NITRD Program. The NITRD Program, chartered by Federal law, is the primary mechanism by which the Government coordinates its unclassified networking and information technology (IT) research and development (R&D) investments. Thirteen Federal agencies, including all of the large science and technology agencies, are formal members of the NITRD Program, whose combined 2007 IT R&D budgets totaled more than \$3 billion. Many other Federal organizations also participate in NITRD activities." See <http://www.nitrd.gov/>

- *Open Science Grid (OSG)*: "OSG brings together computing and storage resources from campuses and research communities into a common, shared grid infrastructure over research networks via a common set of middleware. OSG offers participating research communities low-threshold access to more resources than they could afford individually, via a combination of dedicated, scheduled and opportunistic alternatives. OSG is a consortium of software, service and resource providers and researchers, from universities, national laboratories and computing centers across the U.S., who together build and operate the OSG project. The project is funded by the NSF and DOE, and provides staff for managing various aspects of the OSG." See <http://www.opensciencegrid.org/>
- *REN-ISAC*: "Supported by Indiana University and through relationship with EDUCAUSE and Internet2, the REN-ISAC is an integral part of higher education's strategy to improve network security through information collection, analysis and dissemination, early warning, and response -- specifically designed to support the unique environment and needs of organizations connected to served higher education and research networks; and supports efforts to protect the national cyber infrastructure by participating in the formal U.S. ISAC structure. The REN-ISAC receives, analyzes and acts on operational, threat, warning and actual attack information derived from network instrumentation and information sharing relationships [...]" See <http://www.ren-isac.net/>
- *Salsa*: "Salsa is an oversight group consisting of technical representatives from the higher education community who will advise on leading edge technology issues, provide prioritization, and set directions in the security space. Salsa is affiliated with the EDUCAUSE/Internet2 Computer and Network Security Task Force, but is independent of both organizations. Salsa will be future-oriented and state-of-the-art in nature, focusing on high performance and advanced networks." See <http://security.internet2.edu/salsa/>
- *TERENA*: "TERENA offers a forum to collaborate, innovate and share knowledge in order to foster the development of Internet technology, infrastructure and services to be used by the research and education community." See <http://www.terena.org/>