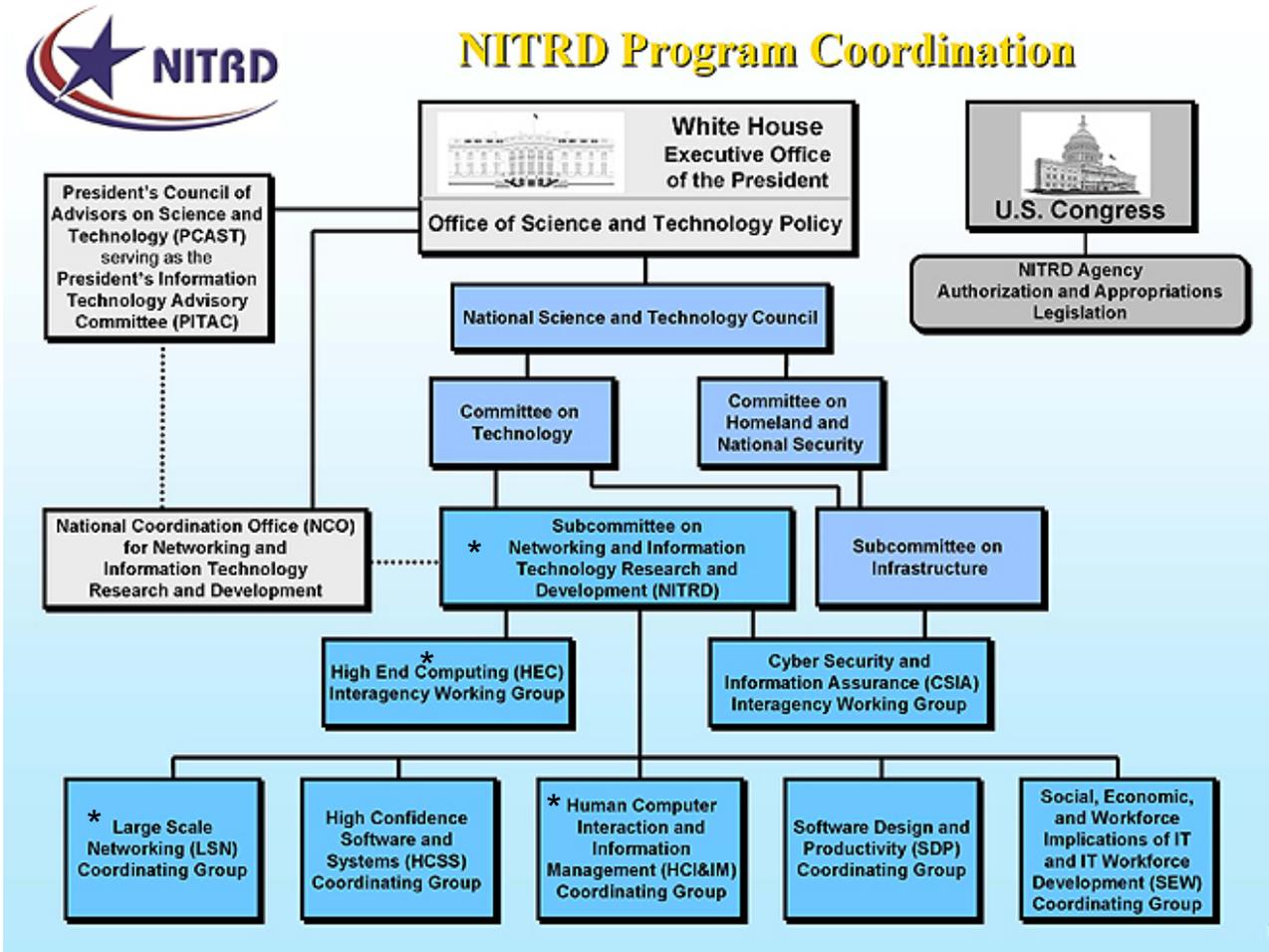# Networking and Information Technology
Research and Development

NOAA is an active participant in the National Information Technology Research and Development program and its predecessor programs, the HPCC and Information Technology for the 21st Century (IT2) Initiatives, both as a user of high end computing, with its global change and weather forecasting modeling applications, and as a proponent of expanded information dissemination through the Internet. Interagency HPCC and IT2 activities are coordinated by the Information Technology R&D Working Group of the NSTC Committee on Technology. NOAA's primary role in the national program is as an early adopter of advanced technology.

NOAA provides real-world testing of advanced concepts such as scalable parallel computing, high-bandwidth networking, and advanced information and dissemination technologies. As organizations such as DARPA, NSF, DOE and NASA develop new technologies, NOAA adopts those that are most promising for its mission. HPCC tests the technologies, collaborates on the development and refinement of the most promising, and moves them into operations for the early protection of life and property and in support of other NOAA goals.

http://www.nitrd.gov/

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NITRD Program Coordination

* NOAA Participation
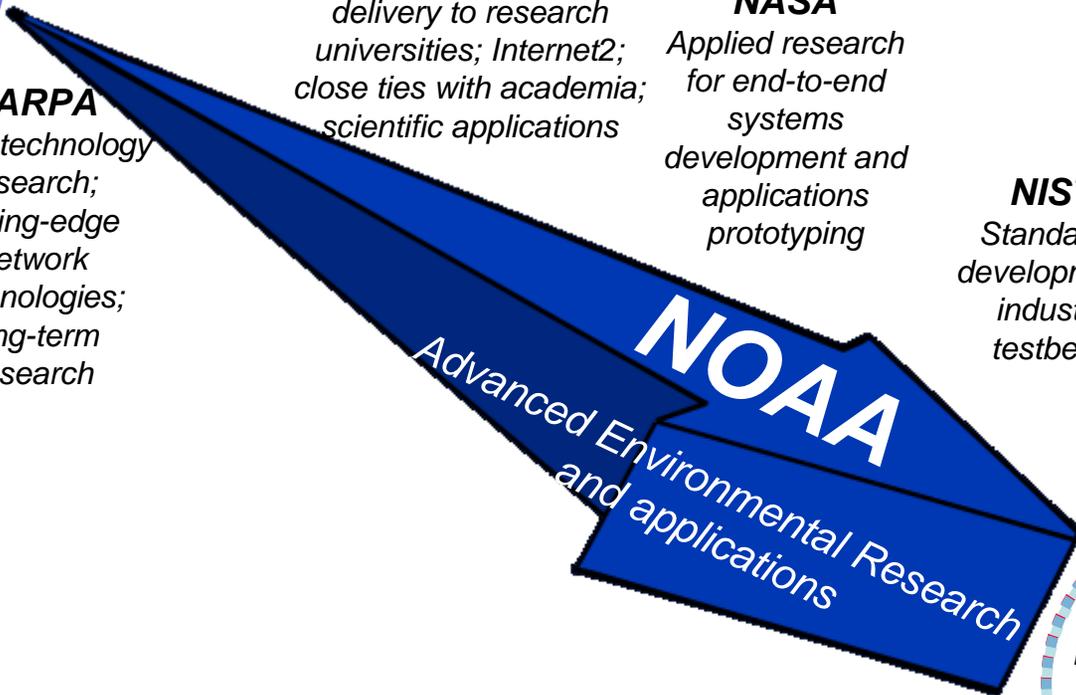
NOAA's Relationships with Other Agencies

Advanced Information Technology R&D

DARPA
Basic technology research; cutting-edge network technologies; long-term research

NSF
Connectivity & technology delivery to research universities; Internet2; close ties with academia; scientific applications

NASA
Applied research for end-to-end systems development and applications prototyping

NIST
Standards development; industry testbeds

NOAA

Advanced Environmental Research and applications

Advanced products and services delivered to users

NITRD Reports & Outcomes

Next Generation Internet (NGI):

- Early involvement in this activity led to NOAA's participation in Internet -2.

- NOAA representative was a co-author of the NITRD NGI report

IT-squared (Information Technology for the Twenty-first Century):

- NOAA's participation in this activity led the to Research Supercomputing line and a budget increase of $7.5M (which has now grown to $10.3M).

- NOAA representative was a co-author of the NITRD IT for the 21st Century report

High-End Computing Revitalization Task Force (HECTRF):

- Led to the leadership class systems which have resulted in several million CPU hours of time for NOAA through the DOE INCITE program and NASA's Columbia System.

- Most recently 2 million hours through the INCITE program for the 20th Century Reanalysis Project to develop the first complete 20th Century database of global weather maps.

- NOAA representative was a co-author of the of the HECTRF Report and also served as a co-chair of one chapter in the report.