



# **Forward Engagement Project**

Spring 2003 Panel

# Why is OTSA needed?

- Networks increase the dissemination of information in real-time, allowing for simultaneous reactions.
- The security concern: When a crisis occurs, response time is reduced as the number of reactions is compounded, creating the potential for the USG to be overwhelmed by both a crisis and the corresponding global reaction. (e.g. 1997 Asian financial crisis)
- Dealing with a networked world requires “forward engagement” by the USG, and the transformation of its structure from hierarchical to network-centric.
- OTSA is both a “forward engagement” mechanism, and a model of network-centric governance.

# **OTSA's Mission Statement**

The mission of the Office of Technological and Strategic Assessment (OTSA) is 'forward engagement'. That is, to explore long-range 'nodes'—issues where multiple themes intersect, which could have a major impact on American society and on the world in general. To determine whether such nodes could prove to be especially challenging to the security of the United States, and to improve the capacity of the United States Government to perceive and respond to the erratic onrush of these nodes.

# Possible Nodes

- Information Technology
- Water Scarcity
- Biotechnology

# Information Technology

- State Stability
- Security
- Governance

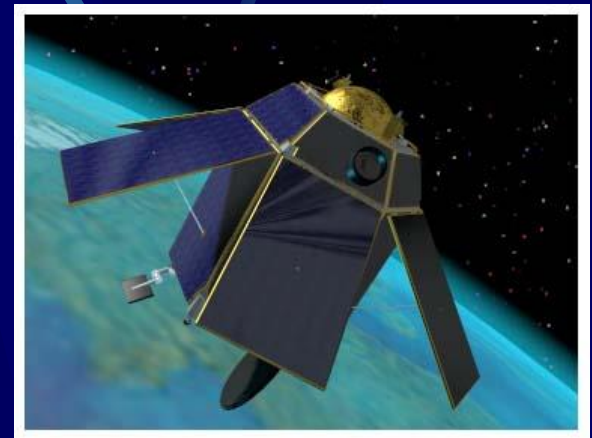
# Security Vs. Privacy

- Current Technology
  - Total Information Awareness (TIA)
  - Carnivore
- Technology Prototypes
  - Biometric Signatures
  - Microchips



# Net Centric Warfare

- Information Sharing
- Real Time Communication
- Current Technology
  - Uses in Afghanistan
  - Predator
- Space
  - National Missile Defense
  - Warfighter 1



# Techno-Terrorism

- Targets of Terrorism
  - Financial Markets
  - Space
- Homeland Terrorism
- Netwar



# Water Scarcity

- Why is water a node?
  - Intersection of several issue areas affected by shortage in water supply
- Represents environmental problem for populations and ecosystems
  - Potential to cause new regional and global conflicts.



# Water Scarcity (cont)

- 70% of the earth's surface is water, but only 3% is fresh water – almost all of that 3% is inaccessible for human use.
- By 2025 the number of countries with water stress or scarcity will rise to 54, and their populations to 4 billion people – 40% of the projected global population of 9.4 billion.
- Of the world's 734 species of endangered fish in 1996, 84% are found in freshwater environments.

# Water Scarcity Recommendations

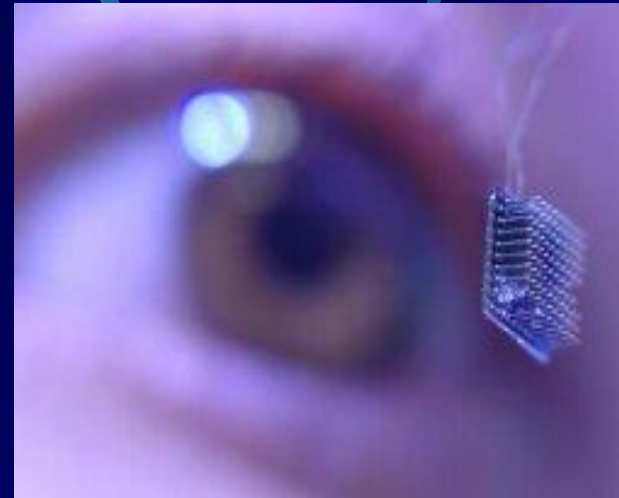
- Government and private sector computer modeling of weather patterns. Focus should be on changing rainfall patterns.
- Government support of genetically-modified crops that require less water.
- Government-funded programs to educate the public about conservation methods, such as:
  - Turning off the tap while brushing one's teeth
  - Taking showers instead of baths
  - Installing water-efficient appliances

# Water Scarcity Recommendations

- Government regulation - setting limits and imposing fines for those who abuse water resources.
- Implement emergency plans to assist areas suffering from drought.
- NGOs and Governments should help decrease the strain on water supplies in the long term by providing education and other assistance to family planning programs.

# Biotechnology

- Definition
- Assess Advances
- Recommend Policies that will:
  - Absorb technological shocks
  - Manipulate the effects



# Biotechnology

- Neuropharmacology
- Senescence (Aging)
- Genetic Engineering

# Biomechanics

- Economics
- Human nature, human rights and governance
- Security and Defense





# Science, Technology and Our Future

- The evolution of technology is as natural as evolution itself.



# The Office of Technological and Strategic Assessment

- What is OTSA?
- Who makes up OTSA?
- How and Where does OTSA work?

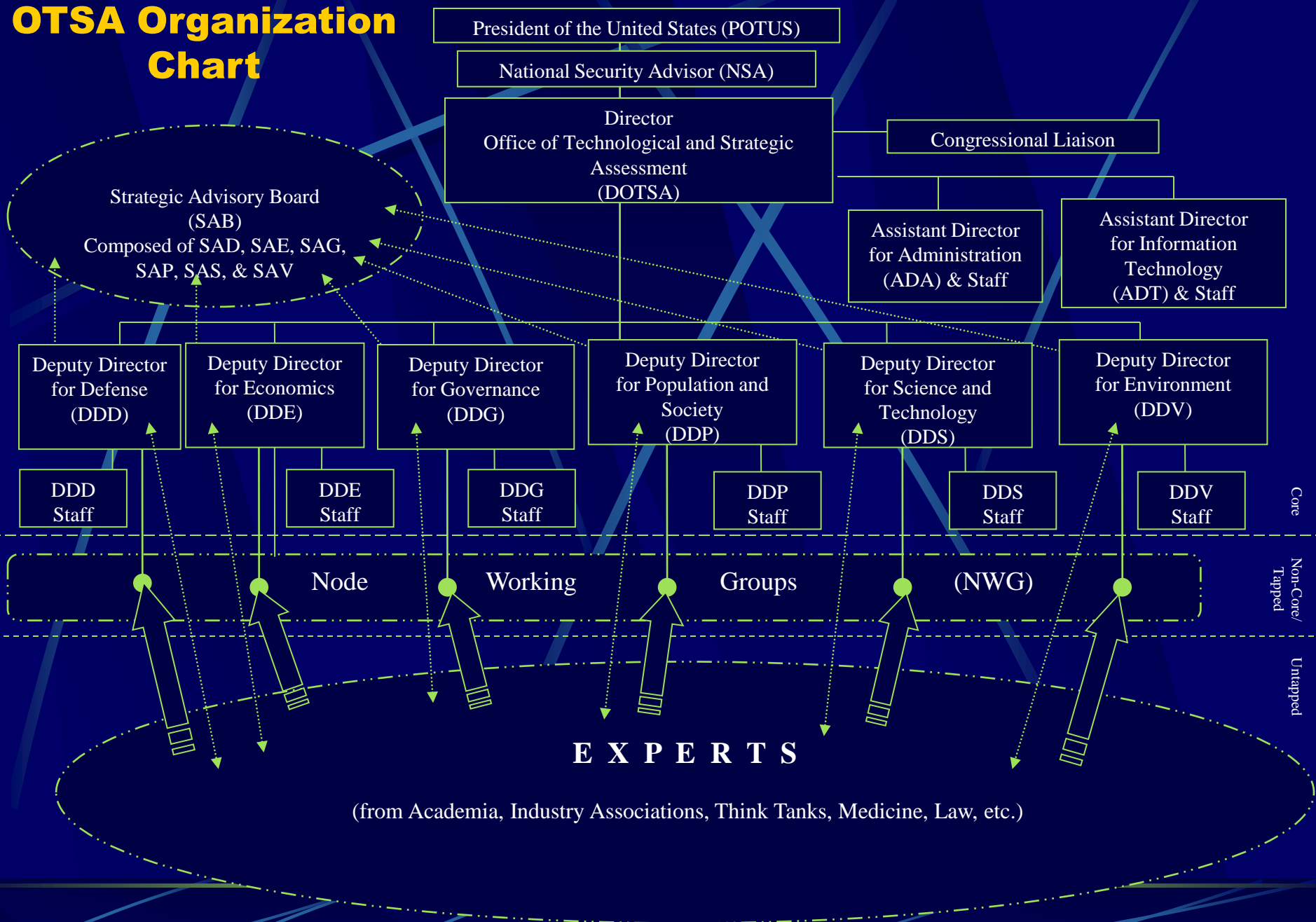
# What is OTSA?

- OTSA is an agency whose function is defined by time—25+ years in the future, rather than a “theme.” Its mission requires a network of experts from different fields to work together to identify the security implications of nodes. The synergy between different sectors and disciplines will be unique to OTSA.
- OTSA is an independent, non-partisan, Executive branch office, similar to the National Security Council.
- OTSA is a “hybrid institution,” having both a hierarchical and network structure.

# Who makes up OTSA?

- The core of OTSA consists of a Director; six Deputies—one for each theme; an Assistant Director for Information Technology; an Assistant Director for Administration; a Congressional Liaison, each with a small staff; and a Strategic Advisory Board.
- Non-core: any expert, in any field, inside or outside the USG, is considered a resource of OTSA.
- Within this vast pool of experts is the *intellectual reserve*, made up of those experts who have, or are eligible for, a USG security clearance, and thus may be tapped, based on their expertise, to be in a Node Working Group.

# OTSA Organization Chart



# How and Where does OTSA work?

- The core of OTSA identifies nodes.
- A Node Working Group (NWG) is formed to explore each node's implications, disbanding when finished.
- The National Security Advisor briefs the President on the final report of each NWG, including policy recommendations to alter the node's development.
- The inter-agency process takes charge of these recommendations, via the National Security Council.
- Core of OTSA to be located in an area such as Tyson's Corner/Dulles Corridor of Northern Virginia. Non-core experts work from wherever they are located.