



# **DARPA Tech 2000**

## **Advanced Technology Office Overview**

**Dr. Thomas Meyer  
ATO Director  
September 2000**



# Focus Areas

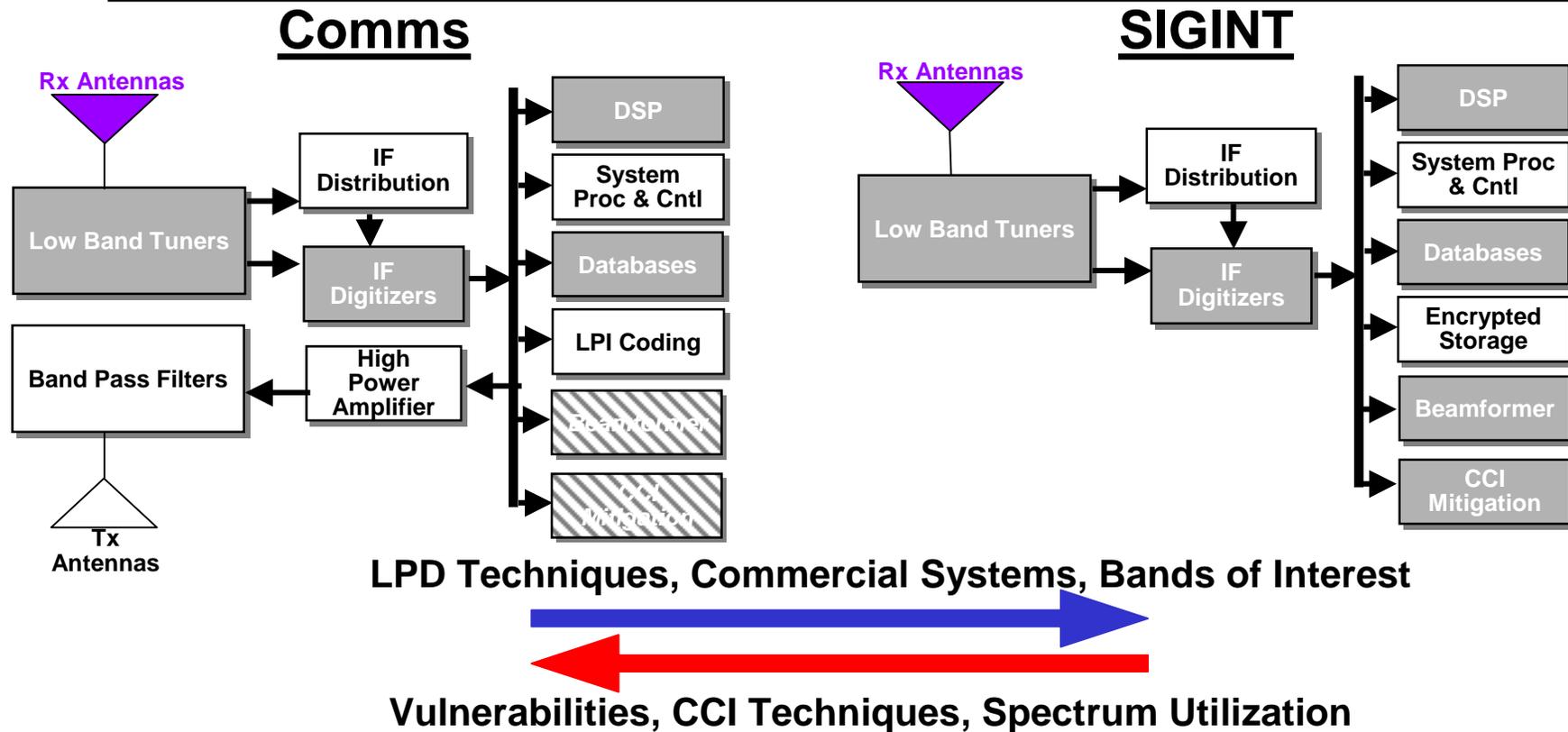
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- **Communications**
- **Maritime**
- **Early Entry/Special Operations**



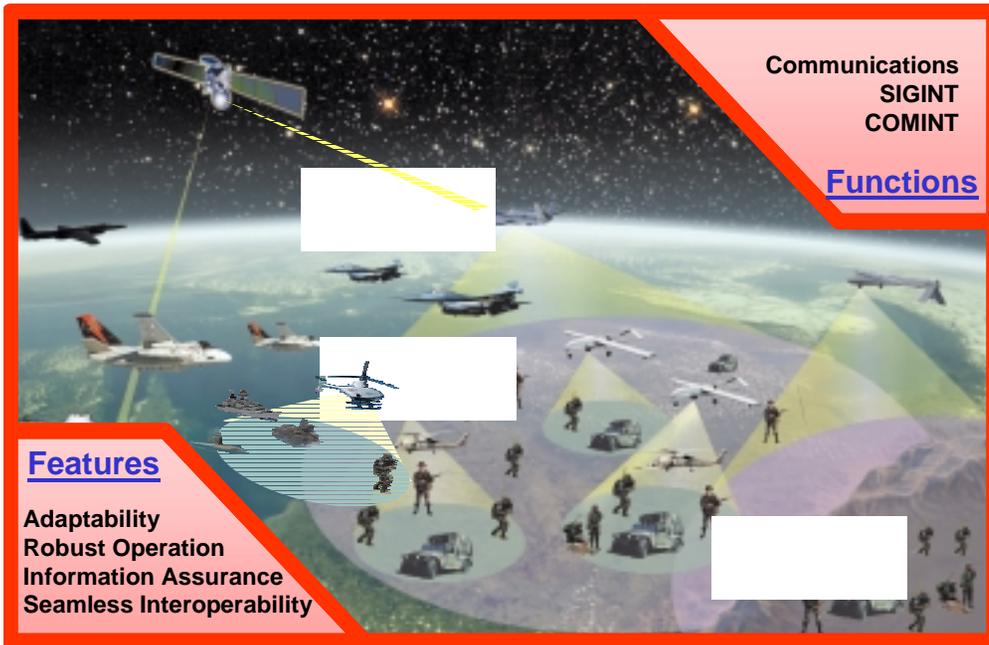
# Convergence of Comms, SIGINT, and EW



- Opportunity for multi-mission platforms
- Synergistic capabilities
  - Ex: SIGINT can find “holes” in spectrum for transmission
- Platforms can work together for “direction finding”, conduct IW, ...



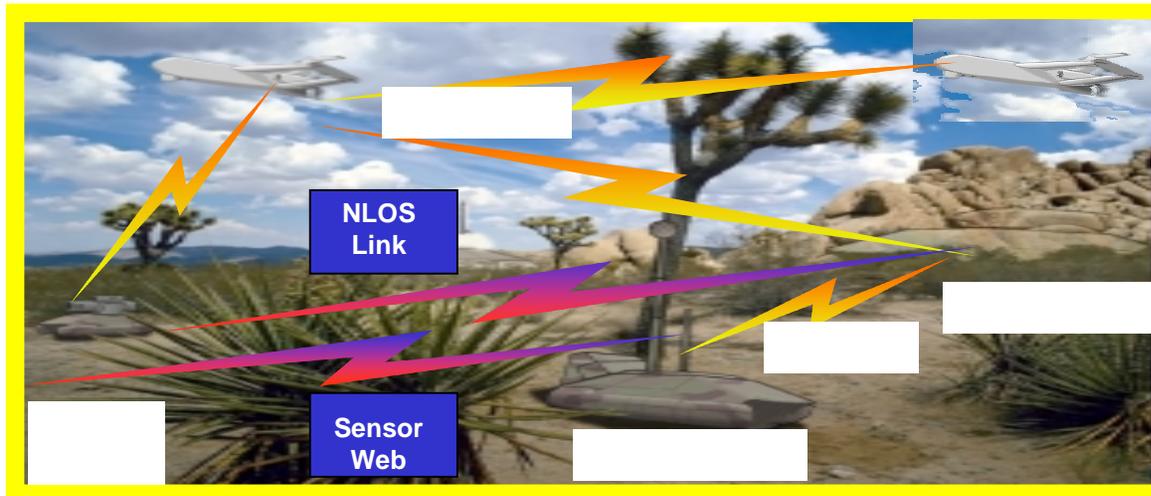
# Communications Programs



**Airborne Communications Node**



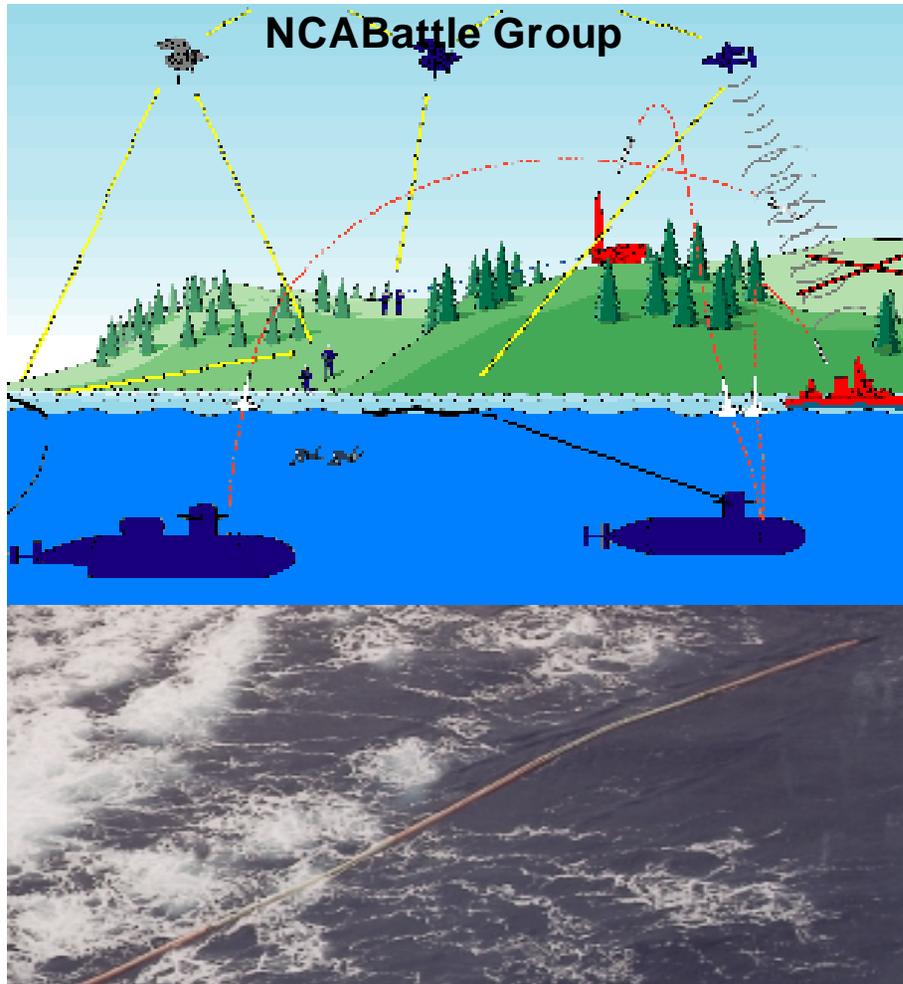
**WolfPack**



**Future Combat Systems**



# Buoyant Cable Antenna Array (BCAA)



- Joint DARPA/Navy prototype effort
- Coherently combine signals from multiple, floating, inter-connected antenna elements to provide high data-rate submarine connectivity
- Satellite-limited connectivity to a submarine at depth and speed



# Communications Challenges

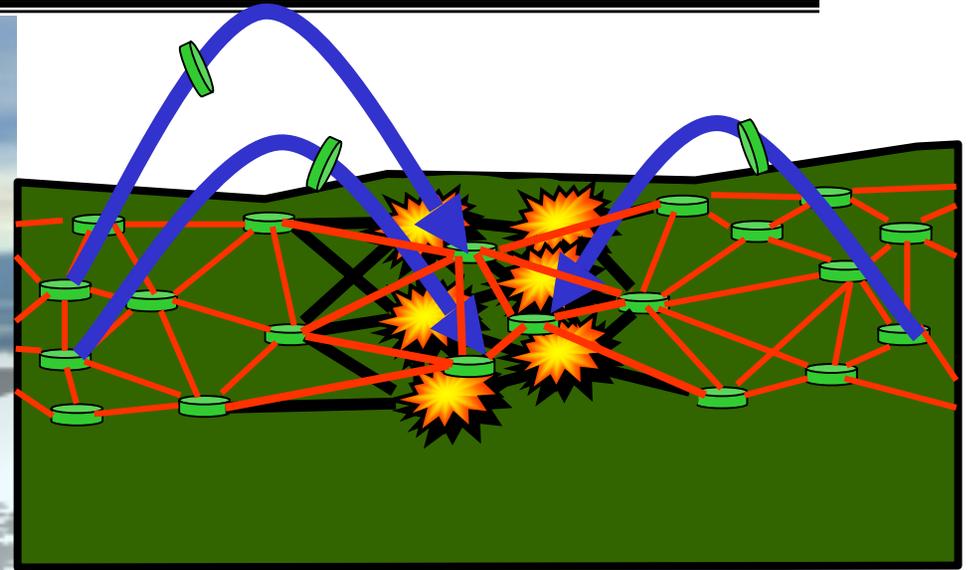
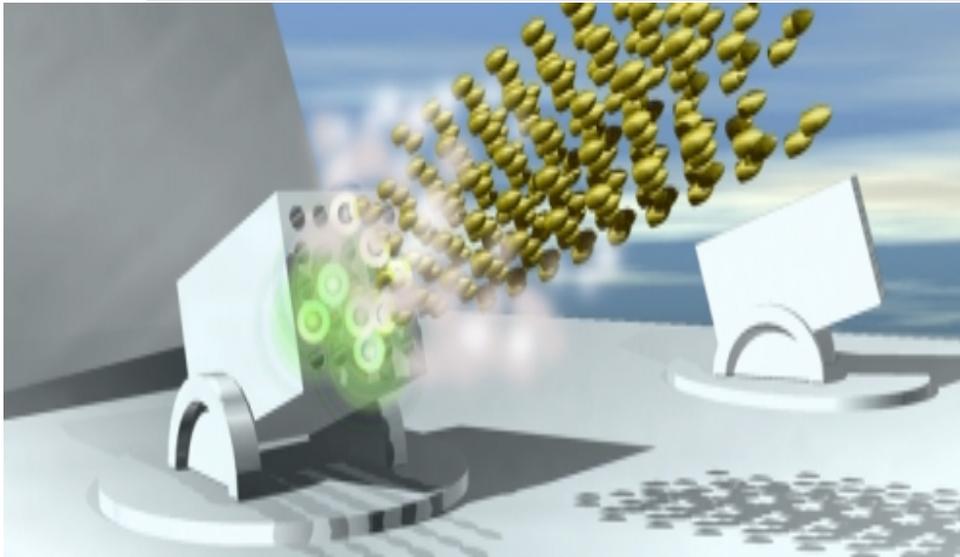
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- **Bandwidth**
- **LPD/LPI Waveforms**
- **RF Information Assurance**
- **Mobile Ad-hoc Networks**
- **Accurate Geolocation**

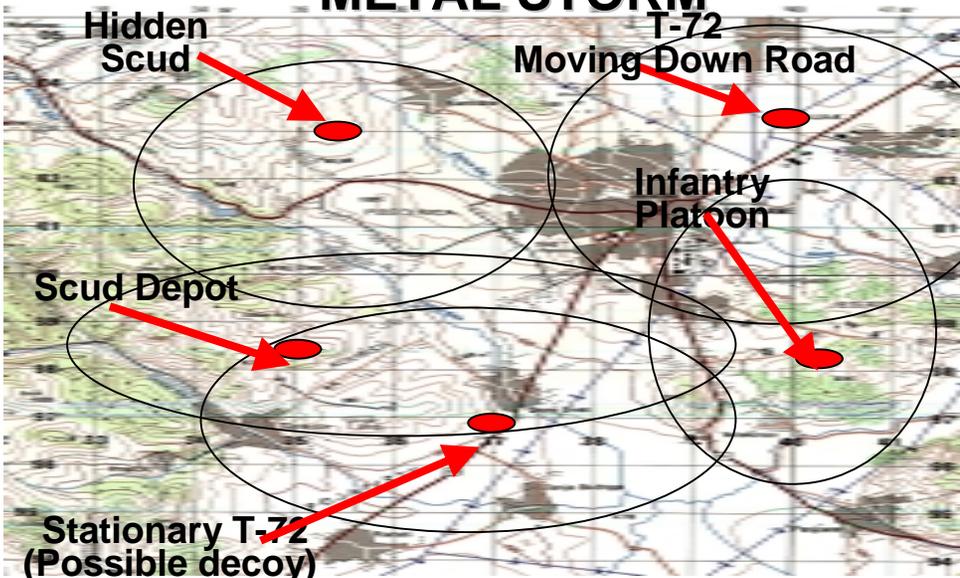


# Early Entry/Special Operations Programs



**METAL STORM**

**SELF-HEALING MINEFIELD**

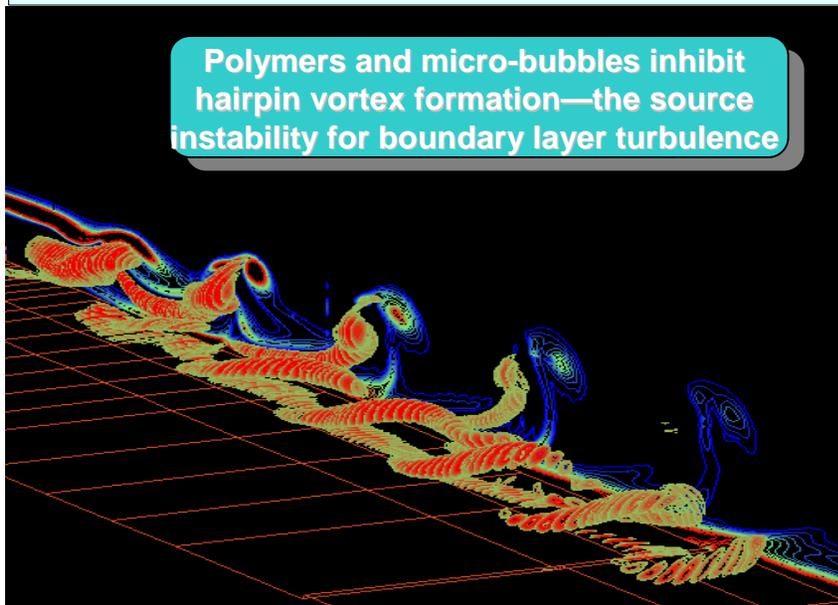
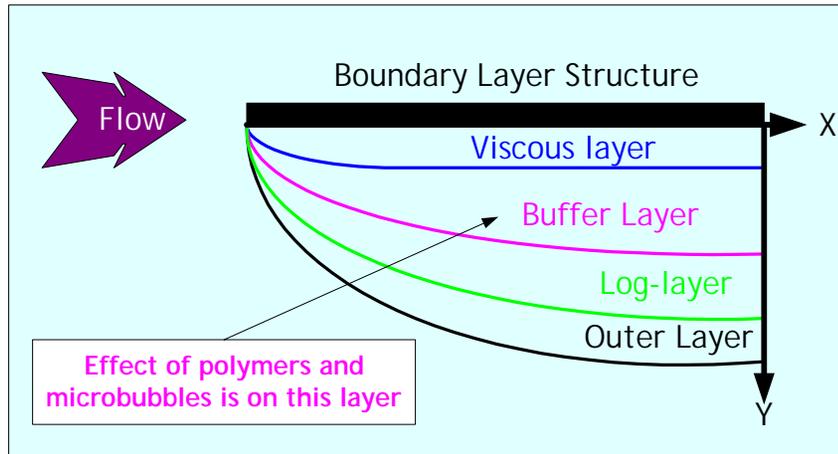


**TACTICAL SENSORS**

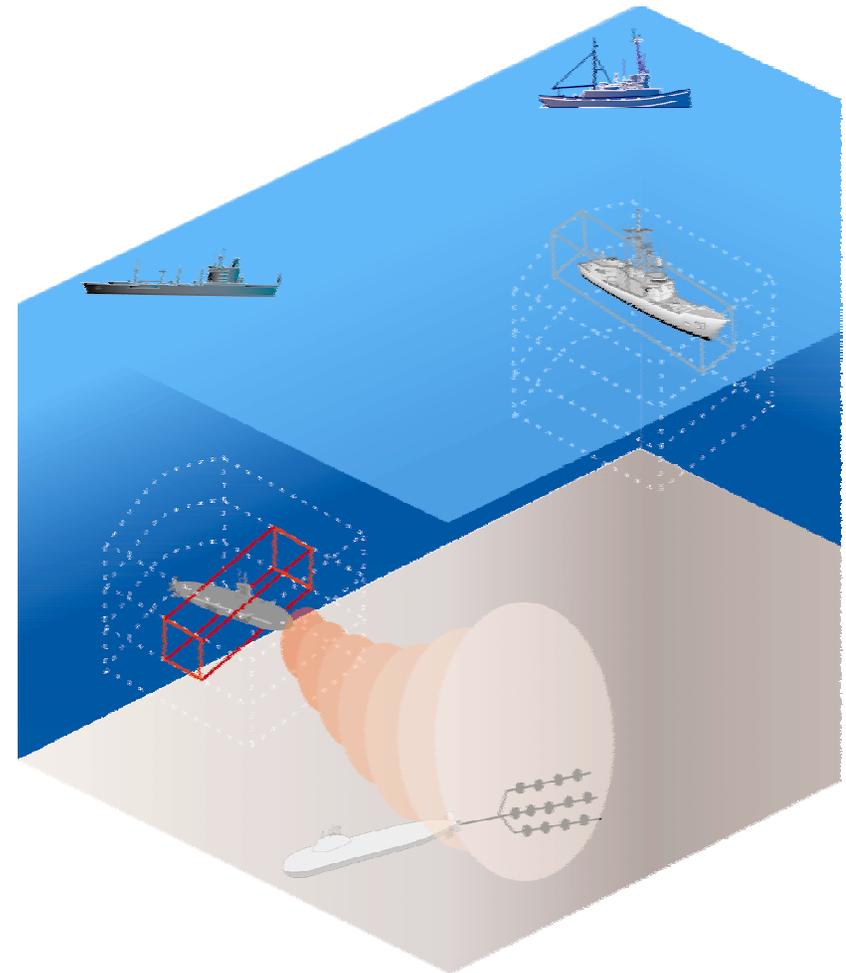
**TACTICAL MOBILE ROBOTICS**



# Maritime Programs



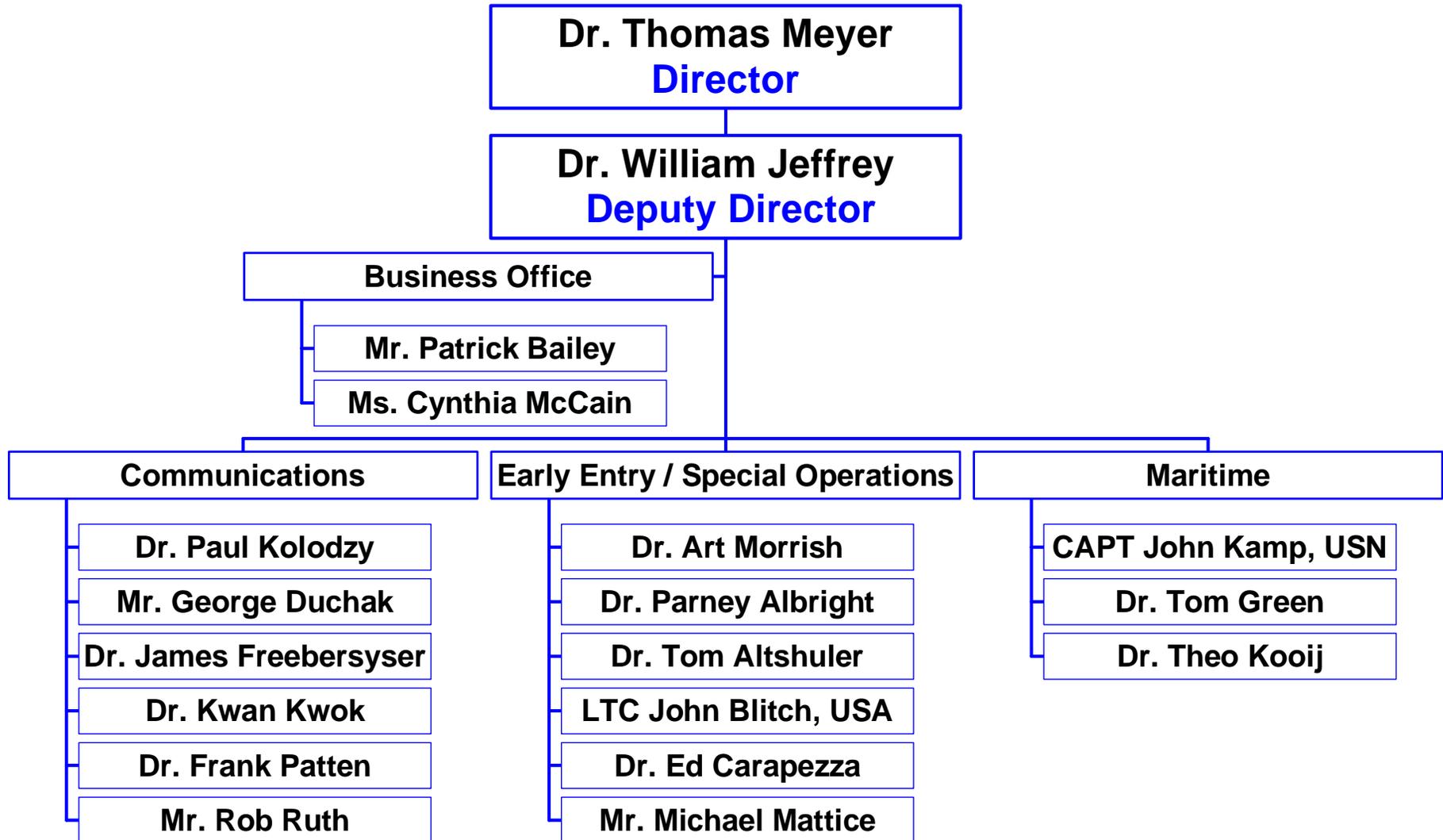
**Friction Drag Reduction**



**Robust Passive Sonar**



# ATO Staff



<http://www.darpa.mil/ato>



# Opportunities

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- **New Programmatic Opportunities**
  - **WolfPack**
  - **Future Combat Systems C3**
  - **Robust Passive Sonar**
  - **Friction Drag Reduction**
- **Advanced Technologies BAA for FY01**
  - **Looking for Great Ideas**
- **Looking for great people in all areas**