

CCRTS 2006

The State of the Art and the State of the Practice
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***Maintaining Situational Awareness in Large,
Complex Organizations***

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Background

Space and Naval Warfare Systems Center, San Diego

- C4ISR research and development facility
- Over 3,500 civilian and military personnel
- \$1.4 billion budget
- Functions as a working capital fund

Presentation Objectives

- Address theory of environmental scanning
- Analyze methodology used at SSC San Diego

Introduction: Outline of Presentation

- Establishment of the Decision Support Group
- Goals of the Decision Support Group
- The Challenge of Providing Information
- Theory of Environmental Scanning
- Environmental Scanning at SSC San Diego
- Case Study: Technology
- Overall Recommendations

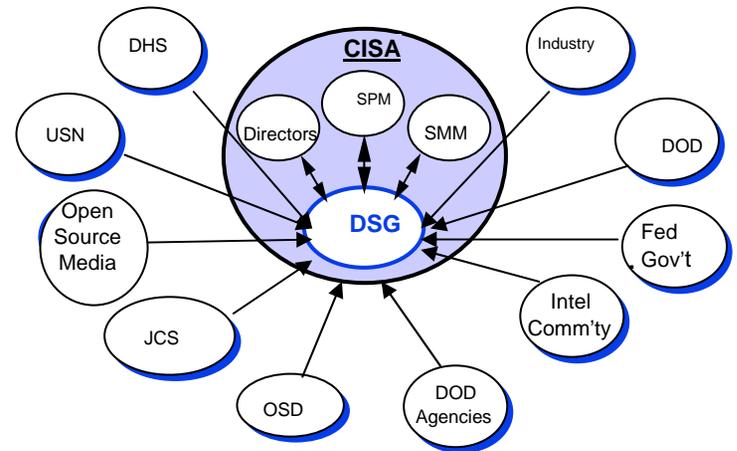
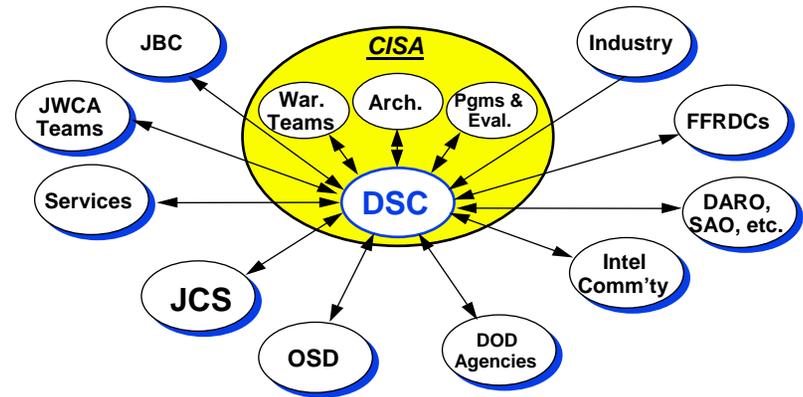
Objective, Challenge, Approach

- **Objective:** Provide situational and strategic awareness to leadership of a complex organization
- **Why:** Avoid strategic surprise, facilitate strategic planning, ensure strategic relevance
- **Key Challenge:** Turn large amounts of information and data into knowledge
- **How:** Environmental Scanning
- **Who:** Decision Support Group

Establishing the DSG

- Experience of Decision Support Center (DSC)
 - Build a network of information

- Key Factors:
 - Management Commitment
 - Talent Search
 - Build a process to search, analyze, and present information



Decision Support Group

- Collaborative team of analysts
- Provides situational awareness to leadership of:
 - SSC SD at monthly Strategic Planning Meetings
 - SPAWAR HQ at quarterly Strategic Management Meetings
- Draw information from several sources:
 - Web-based
 - Hard copy
 - Conferences
 - Community of Interest
- Primary tool: Environmental Scan

Annual Iterative Tasks

RED - Events

BLUE – Core Products

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SPM	SPM	SPM									
SPM agenda	SPM agenda	SPM agenda									
ES	ES	ES									
All Hands E-mail			All Hands E-mail			All Hands E-mail			All Hands E-mail		
Tech Board						Tech Board					

- DSG briefs Environmental Scan at monthly Strategic Planning Meetings (SPMs)
- Assumes a key role in strategic planning process at SSC San Diego

BROWN - Framework RED - Red BLUE - Core Products GREEN - Ongoing Processes

Strategic Plan, Yearly Calendar and Balanced Scorecard

ONGOING PROCESSES

- BSC/SPM/Tech Board/
event organizer
- Analysis and Research
- Bring in external speakers
- Departmental reviews
- Liaison with Center groups
- Liaison with outside entities
- Organize and facilitate
meetings

EVENTS

- NWC visits
- Center-wide
meetings
- Outside meetings,
conferences

CORE PRODUCTS

- Center Overview
- Center Vision
- Action/Decision Web Tool
- ES Websites
- Analysis products
- Action Items
- Minutes
- Briefs delivered by Center
Leadership

Challenge of Providing Information

- Information Overload
- Use of Best Practices
 - Analyst must ask two questions
 - What information is required?
 - How can it be determined it has been acquired?
 - Research Process
 - Broad-based survey
 - Define the problem and break into parts
 - Determine if the information is obtainable
 - Environmental Scanning

Environmental Scanning: Theory

- *Defined:* Internal communication of external information about issues that may influence an organizations' decision-making process and used to maintain competitive advantage
 - Events, trends, relationships
 - Evaluate strengths and weaknesses
- *Five Step Process:*
 - Gather the data
 - Scan the data
 - Analyze the data and convert it to information
 - Communicate the information and results
 - Make informed decisions

Environmental Scanning: at SSC San Diego

- Identify the information needs of organization
 - Support the vision of SSC SD is to be preeminent provider of C4ISR technology to the warfighter
- Scanning the pool of resources used by DSG
 - Newspapers, press releases, government publications
 - Organize according to eight categories
- Analyze and Transform Data
- Communicate information through Environmental Scan
- Present Environmental Scan at strategic planning meetings





Environmental Scanning: at SSC San Diego



Category	Definition/Purpose of Category
Top-Down Strategy	High level strategy of the federal government and current geopolitical environment
Transformation Update	Priority of the Secretary of Defense is to transform the Department of Defense (DoD) from Cold War characteristics to a streamline agency
Requirements Changes	Policies, directives, and trends that affect, or have the possibility of impacting, the technological, organizational, and budgetary requirements of the military services, and the effect these will have on work at SSC SD
Budget Update	Monitoring current status of federal budget
Defense Infrastructure	Sublevels of the DoD and tacks the current events of such offices as the Joint Chiefs of Staff
Technology Trends	Tracking the technology trends in industry, specific emerging technologies designed for the military
Personnel/Organizational Changes	Reporting on new appointments to offices, changes in command, etc.
Quickhitters	Potpourri category to supply information deemed significant to leadership but which does not fit in any other category

Environmental Scanning Case Study: Technology

- Build pool of resources from different sectors

Sector	Resource
US Navy	Naval War College Strategic Studies Group Office of Naval Research Science and Technology Focus
Department of Defense/Military	Defense Science Board Office of Force Transformation (DoD) DARPA
Government	CENDI CIA/NCI publications
Academia	Peer Review Journals MIT Technology Review Journal
Consulting Firms/Think Tanks	Battelle Technology Forecasts National Defense Industrial Association Government Electronics and Information Association
Open Media	Wired Magazine C4ISR Journal
Other	E-mail distribution from “news trackers” in Industry

Environmental Scanning Case Study: Technology

- Organize information according to departments
 - Command and Control
 - Intelligence, Surveillance and Reconnaissance
 - Communications
 - Navigation and Applied Sciences
 - Fleet Engineering
- Scan the information
 - Retain useful and relevant data
 - Periodicity of scan varies

Environmental Scanning Case Study: Technology

- Analyze information
 - Determine how information aligns with work at Center
 - Flag key technological developments and trends
 - Identify business development opportunities
- Communicate information and results via:
 - Environmental Scan
 - Internal website
- Follow up on requests for additional information

Closing Thoughts

- Enhancing situational awareness not a trivial undertaking
 - Environmental scanning demands time and attention
 - Information overload remains a key challenge
- DSG experience remains a work-in-progress
 - Constant assessment of performance
 - Periodic review of methodology
 - Strive for continuous learning
- Environmental scan a tool tailorable to different organizations
- A collaborative group of analysts represents one approach

Overall Recommendations

- Commitment from top management
- Talent search for members with broad background
- Establish a process to:
 - Search for information
 - Analyze information
 - Present information
- Set up a “help desk” function
- Keep group intact over time to ensure unit cohesion