NAVSEA
WARFARE CENTERS
PORT HUENEME

ICSTD to NSWC Dahlgren

Scenario Action:

- Realign Port Hueneme (SD) and relocate to NSWC Dahlgren

Assumptions:

- This Scenario intends to consolidate the workload that is common with specific areas of Weapons and Armament.

Recommendation:

- Realign Fleet Combat Training Center, CA (Port Hueneme Detachment, San Diego, CA), by relocating all Weapons and Armaments weapon system integration Research, Development & Acquisition, and Test & Evaluation to Naval Surface Warfare Center Dahlgren, VA.

Justification

- The Naval Surface Warfare Center, Dahlgren, VA, is a receiver specialty site for Naval surface weapons systems integration and receives a west coast site for consolidation. This construct creates an integrated W&A RDAT&E center in China Lake, CA, energetics center at Indian Head, MD, and consolidates Navy surface weapons system integration at Dahlgren, VA.

Programs

- All ICSTD Programs

(TECH0002F & TECH0018DR)

NSWC PHD DONBITs Certified Inputs

SDC Action #	FY 2009 Civilians	Rationale

- Programs **within** Missiles, Guns, or Energetics scope:
  - Standard Missile (SM) - 119
  - Evolved SeaSparrow Missile (ESSM) - 15
  - Extended Range Guided Munitions (ERGM) - 0

DCN:11708

SPAWAR

The Space & Naval Warfare Systems Command

BRAC Commission Team

Mr. Les Farrington

Mr. David Epstein

15 July 2005

Mr. Rod Smith
Deputy Commander
RDML Rodriguez
Chief Engineer
Space & Naval Warfare Systems Command

(Statement A: Approved for public release; distribution is unlimited (27 JAN 2005)

DCN:11708

SPAWAR

SPAWAR

Today's Agenda

- SPAWAR Background & Info – RDML Rodriguez
- BRAC Recommendations across SPAWAR– Rod Smith
- SPAWARSYSCEN San Diego Command Overview – RDML (Sel) Timothy Flynn
- BRAC Recommendations across SPAWARSYSCEN San Diego – Carmela Keeney
- Questions

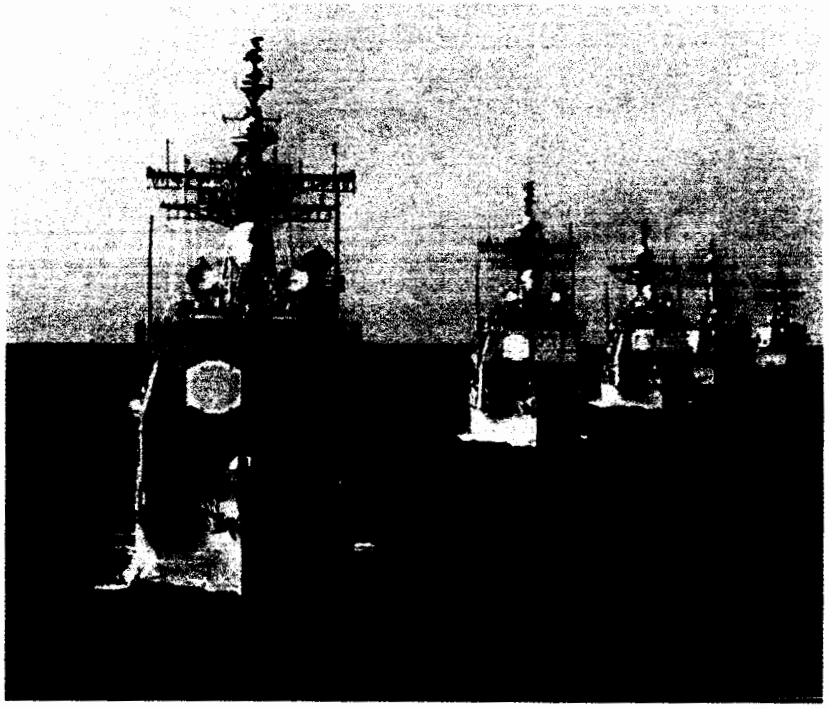
DCN:11708

SPAWAR

Space & Naval Warfare Systems Command

Who we are …

One of the Navy's three major acquisition commands with 7,600 employees



What we do…

- Partner with PEO- C4I & Space to deliver C4ISR and FORCEnet capability to the joint warfighter
- Partner with PEO-IT, DNMCI & PEO Space Systems
- Develop Navy, Joint and Coalition Interoperability
- Navy C4ISR Chief Engineer
- Navy FORCEnet Chief Architect/Assessor
- Combined TOA $4.7 Billion

DCN:11708

SPAWAR

Mission, Vision & Commitment

links together Sea Enterprise etc.

- **Mission Statement:**

  SPAWAR **Enterprise "delivers" FORCEnet – transforming information into decisive effects**

- **Vision Statement:**

  "FORCEnet is the decisive weapon for the future Force"

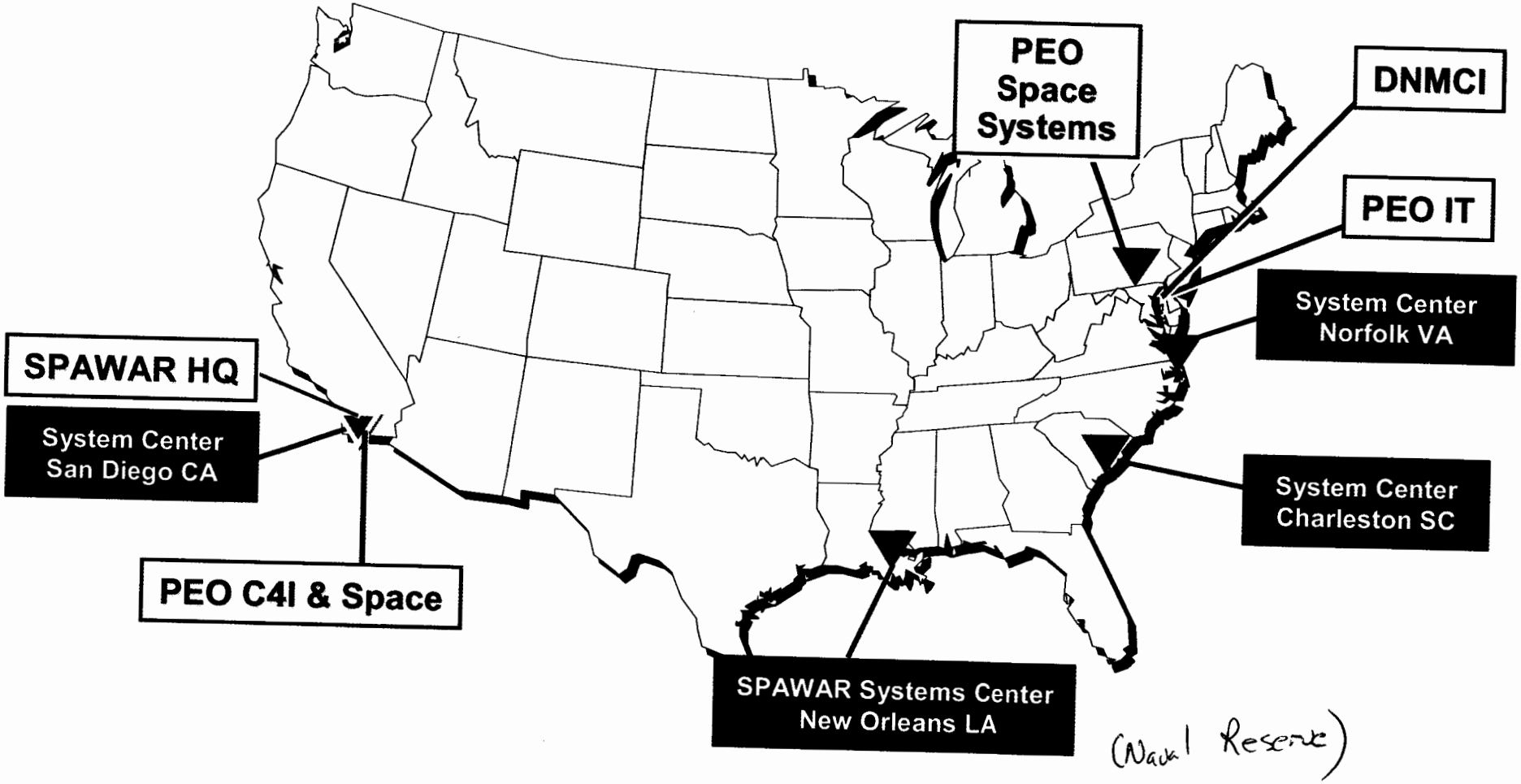
- **Commitment:**

  [illegible]

"Transforming information into decisive effects."

Forcenet selects various programs

Corporate *SPAWAR*



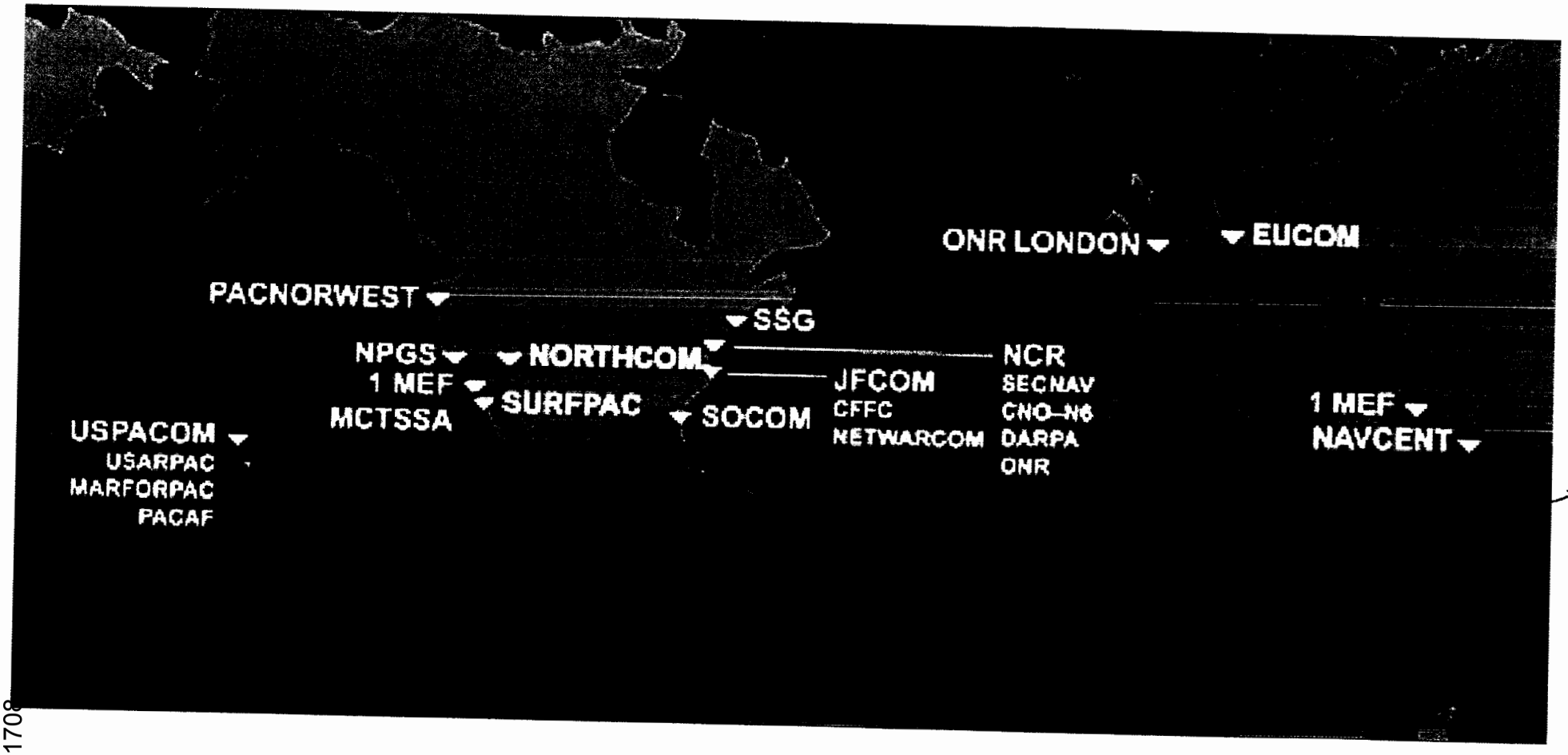
"Transforming information into decisive effects."

also PEO space systems

DCN:11708

SPAWAR

Joint Community Presence



DCN:11708

DCN:11708

SPAWAR

Joint Forces Synergy

- Army National Training Ctr.
- Fort Huachcua
- USMC Camp Pendleton
- MCAS Miramar
- 29 Palms MCAGCC
- MCAS Yuma
- China Lake Test Range
- NAS Fallon
- Pt. Mugu Test Range
- Davis Monthan AFB
- Edwards AFB
- Luke AFB
- Nellis AFB

Potential Partnering Opportunities!

"Transforming information into decisive effects."

DCN:11708

SPAWAR

The Navy's Vision

SEA POWER 21

Projecting Defensive Assurance
assure allies, deter adversaries, sustain access

Sea Shield

Innovation to the Warfighter...
rapid prototyping,
concept development,
coordinated experimentation

Sea Trial

Preparing the Warfighter...
the right skills,
in the right place,
at the right time

Sea Warrior

Resources to the Warfighter...
optimum resource allocation,
increased productivity,
enhanced procurement

Sea Enterprise

FORCEnet

Sea Strike

Projecting Offensive Power...
responsive, precise, and persistent

Sea Basing

Projecting Operational Independence...
joint power from the sea

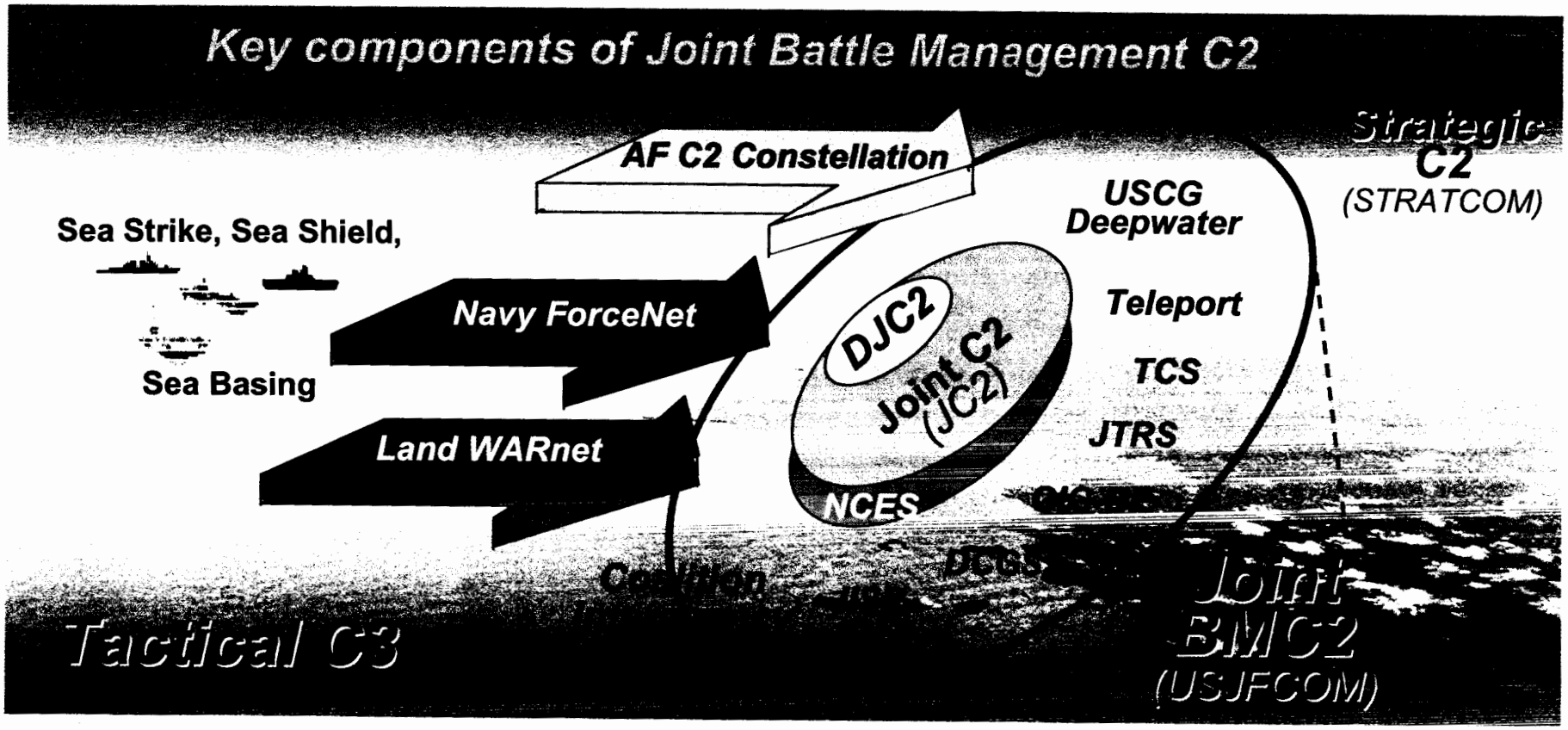
"SPAWAR is about delivering forcenet

DCN:11708

SPAWAR

FORCEnet Provides the Naval Component of the Global Information Grid (GIG)

"FORCEnet is an inherently Joint/Coalition concept, both relying on and providing essential capabilities to the Joint/Coalition community and other Services and Agencies"



Net Centric Enterprise Services

DISA Services
Some specific service needs

SPAWAR

SPAWAR Enterprise BRAC Overview

The Space & Naval Warfare Systems Command

Mr. Rod Smith
Deputy Commander
Space & Naval Warfare Systems Command

(Statement A: Approved for public release; distribution is unlimited (27 JAN 2005)

SPAWAR

Supporting the Goals of BRAC

- We responded to multiple data calls and scenarios from the Joint Cross Service Groups (JCSG) to support the DoD BRAC Goals:
  - Eliminate excess capacity
  - Rationalize our infrastructure with defense strategy
  - Reconfigure our infrastructure into one in which operational capacity maximizes both warfighting capability and efficiency
- We had the opportunity to provide alternative scenarios to optimize Navy and Joint C4ISR infrastructure

DCN:11708

SPAWAR

SPAWAR

Supporting the Goals of BRAC

- The TJCSG used an overarching strategic framework in it's recommendations
  - Provide efficiency of operations by consolidating technical facilities to enhance synergy and reduce excess capacity
  - Establish multifunctional multidisciplinary technical RDAT&E Centers of Excellence
- The TJCSG used the following to make their recommendations:
  - Current capacity, future capacity, and surge capacity in their capacity analysis
  - Military Value analysis
  - And Scenario Development and Analysis

DCN:11708

SPAWAR

Supporting the Goals of BRAC

- TJCSG process and construct resulted in "Centers of Excellences" for:
  - Sub-surface sensors – Newport
  - Surface sensors – Dahlgren
  - Maritime Information Technology – San Diego

SPAWAR

Technical Scenario TECH-0042AR

[redacted]

Surface Sensors
From
SSC San Diego
SSC Charleston

To
NSWC Dahlgren

[redacted]

Sub-surface Sensors
From
SSC San Diego
SSC Charleston
NAWC(AD)
To
NUWC Newport

[redacted]

Maritime Info Systems
From
NUWC Dahlgren
NUWC Newport
NSWC Port Hueneme
To
SSC San Diego

[redacted]

SPAWAR
Alternative

DCN:11708

Space Warfare Systems Center

SPAWAR

Technical Scenario TECH-0008K

- Key tenants of scenario development:
  - SPAWARSYSCEN Atlantic/Pacific plan not intended to be a two-site solution but a:
    - We aligned capabilities in Norfolk to support the Fleet, JFCOM, CFFC, and NETWARCOM
    - Centralization of Command authority into two geographic locations providing increased responsiveness to the fleet and maximizing return on equity of engineering infrastructure.
    - Reduces infrastructure through this action

SPAWAR

Technical Scenario TECH-0008K

- **Scenario outcome:**
  - Enterprise critical capacity and capabilities for execution of Navy and joint C4ISR missions and FORCEnet implementation.
    - We consolidated activities
    - We maintain critical infrastructure and human capital
    - We improve our customer support to the fleet
    - We reduce billets and infrastructure costs
    - We reduce leased spaces
  - Increases responsiveness to the fleet and maximizing return on equity of engineering infrastructure.
  - Strengths Norfolk presence
    - Primary customers: JFCOM, NETWARCOM and CFFC
  - Consolidates Washington DC presence
  - Consolidates East Coast activities
    - Eliminates 2 Echelon III commands

      Norfolk + Charleston ⟹ Atlantic
  - Consolidates West Coast activities

    disestablish SSC San Diego
    create SSC Pacific

DCN:11708

DCN:11708

SPAWAR

SPAWAR Activities not affected

- SPAWAR Space Field Activity
- PEO C4I & Space (Chantilly) info systems & land-ban that support what is in space
- PEO Space Systems major space payloads (satellites)
- Systems Center New Orleans personnel, recruiting
- All OCONUS activities

DIMERS Defense Integrator Human Mgmt Resource System
Navy Standard Integrated Personnel System

JTERS – separate PEO for a DOD project – reports to DOD

DCN:11708

SPAWAR

Technical Scenario TECH-0008K Summary

Activity	Actions			Billets	
				Moved	Eliminated
SSC Charleston	Disestablish as Command	Relocate command functions to NAB Little Creek	Create SSC Atlantic	7	1
Det Jacksonville	Disestablish				34
Det Pensacola	Disestablish			21	81
Det Yorktown	Consolidate in Norfolk			9	7
Det Norfolk	Consolidate			9	114
Det Washington	Realign (104) remain				172
SSC Norfolk	Disestablish	Consolidate with SSC Atlantic			3
SSC San Diego	Disestablish as Command		Create SSC Pacific		
SSC Norfolk, Det San Diego	Disestablish	Consolidate with SSC Pacific		55	3
SSC San Diego Dets in Tidewater	Remain in place	Consolidate with SSC Atlantic		45	
NCTSI	Remain in place	Consolidate with SSC Pacific		98	6

eliminates 3 echelon III

message systems

Certifies data links

Atlantic Charleston

DCN:11708

SPAWAR

Command Overview and Summary of BRAC actions

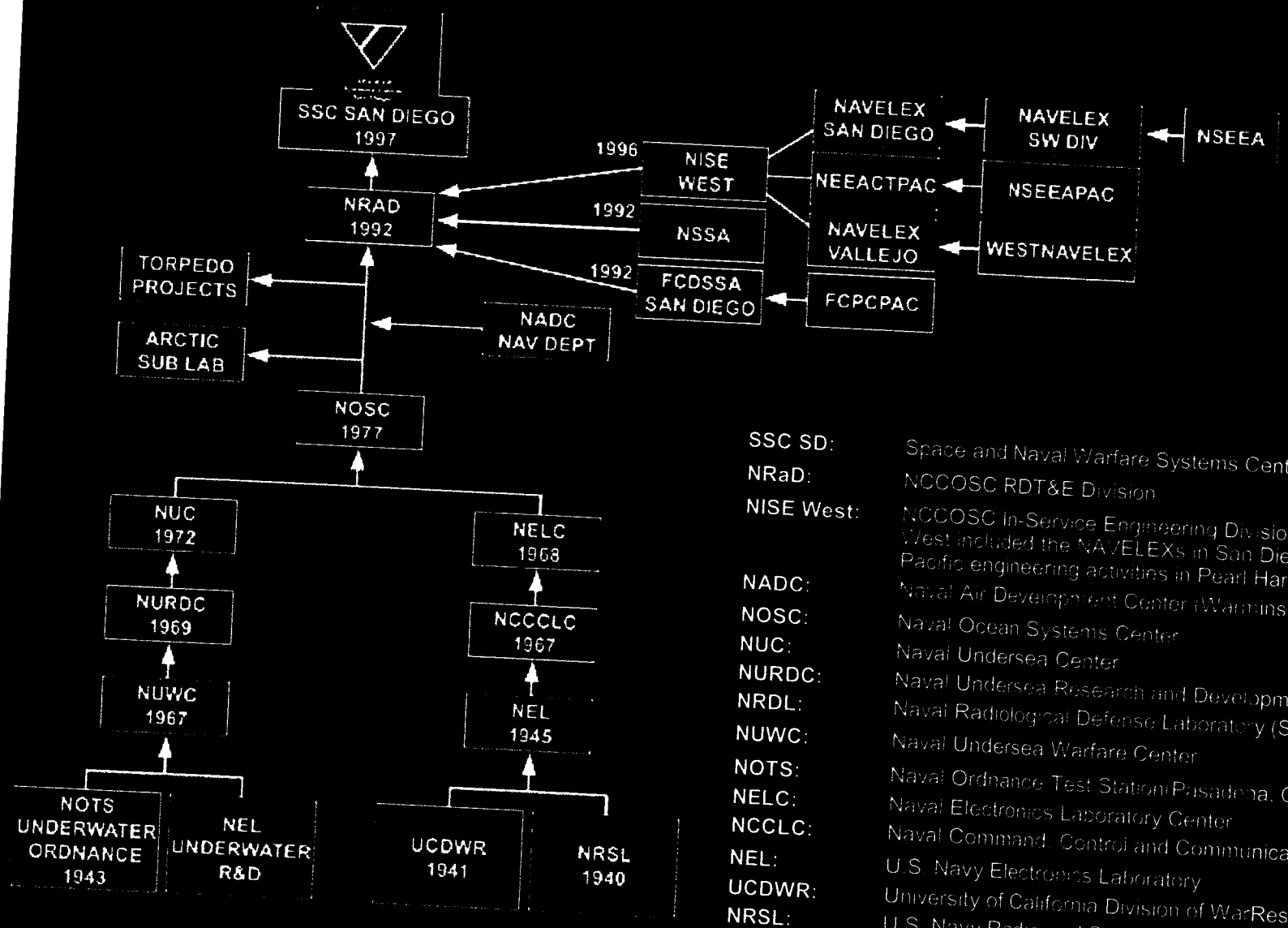
The Space & Naval Warfare Systems Center San Diego

RDML (Sel) Tim Flynn
Commanding Officer
Space & Naval Warfare Systems Center

SSC San Diego
COMMAND OVERVIEW

DCN-11708

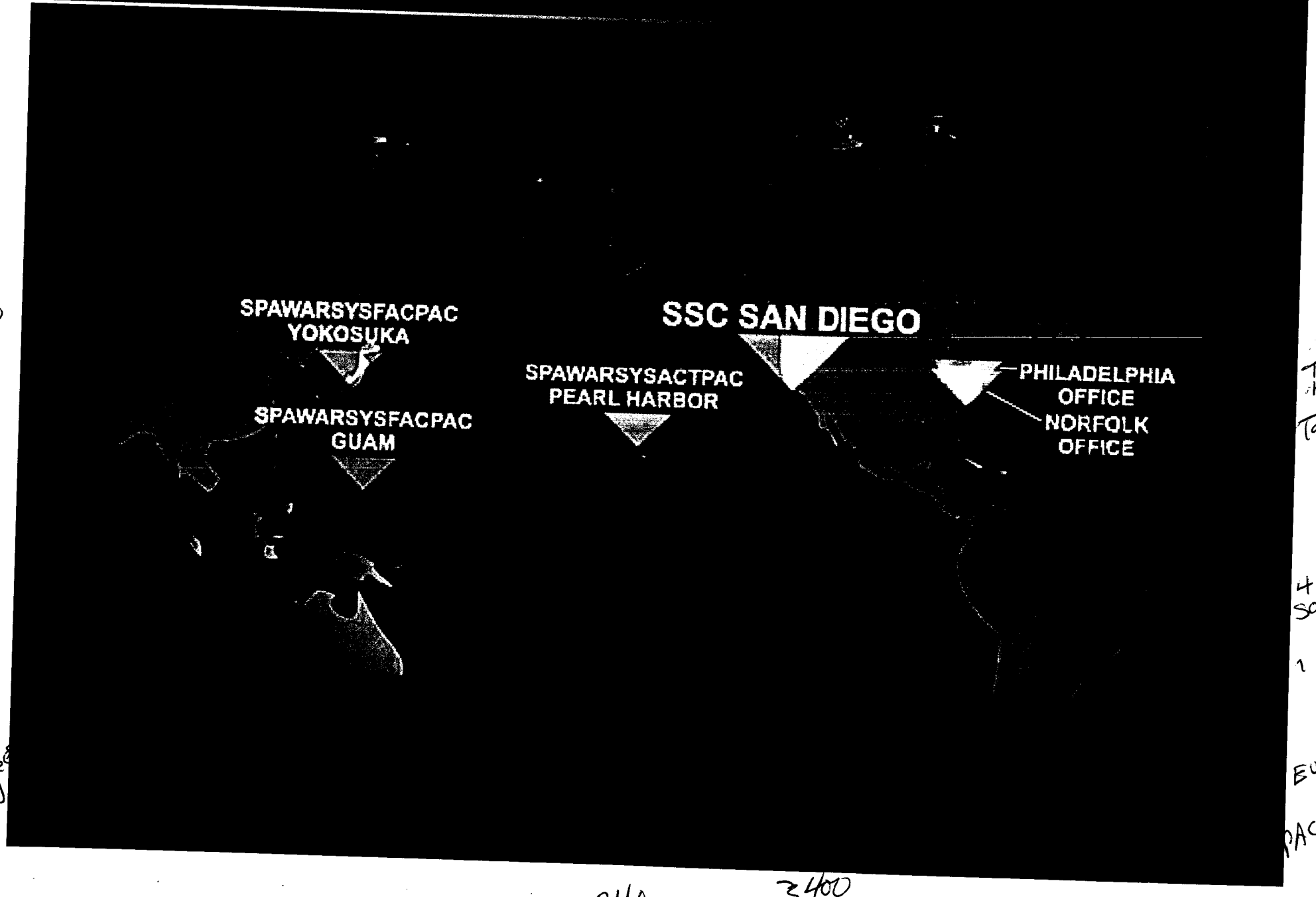
Base Closure, Realignment and Reorganization - nothing new



SSC SD:	Space and Naval Warfare Systems Center, San Diego
NRaD:	NCCOSC RDT&E Division
NISE West:	NCCOSC In-Service Engineering Division, West Coast. NISE West included the NAVELEXs in San Diego and Vallejo, and the Pacific engineering activities in Pearl Harbor, Guam, and Japan
NADC:	Naval Air Development Center (Warminster, PA)
NOSC:	Naval Ocean Systems Center
NUC:	Naval Undersea Center
NURDC:	Naval Undersea Research and Development Center
NRDL:	Naval Radiological Defense Laboratory (San Francisco, CA)
NUWC:	Naval Undersea Warfare Center
NOTS:	Naval Ordnance Test Station(Pasadena, CA)
NELC:	Naval Electronics Laboratory Center
NCCLC:	Naval Command, Control and Communications Laboratory Center
NEL:	U.S. Navy Electronics Laboratory
UCDWR:	University of California Division of WarResearch
NRSL:	U.S. Navy Radio and Sound Laboratory

vertical launch ASROC all that remains

SSC San Diego and Detachments



100

24

Tom
haul
Targe

4
Socor

1

EUCO

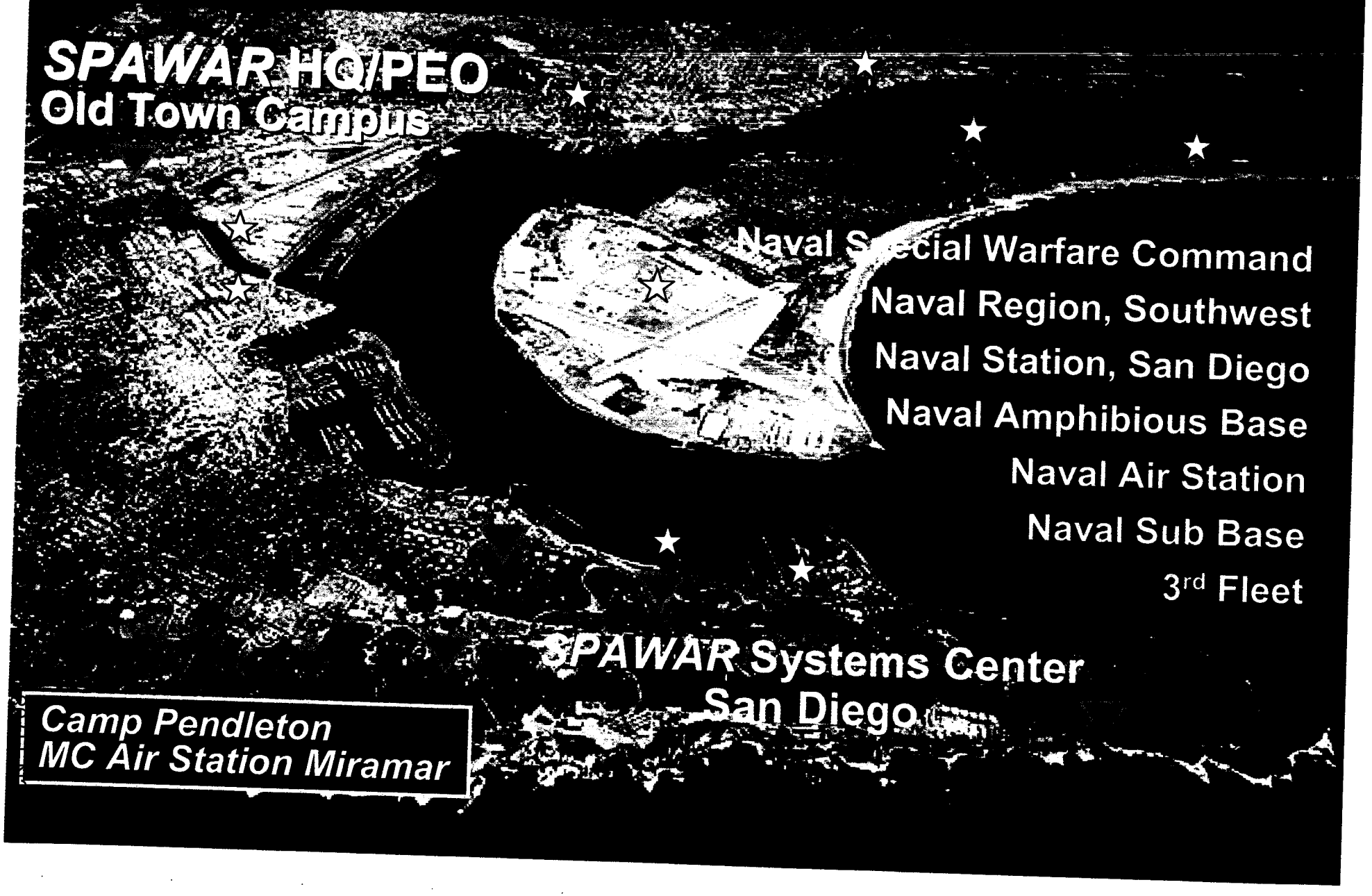
PACCO

mplogee

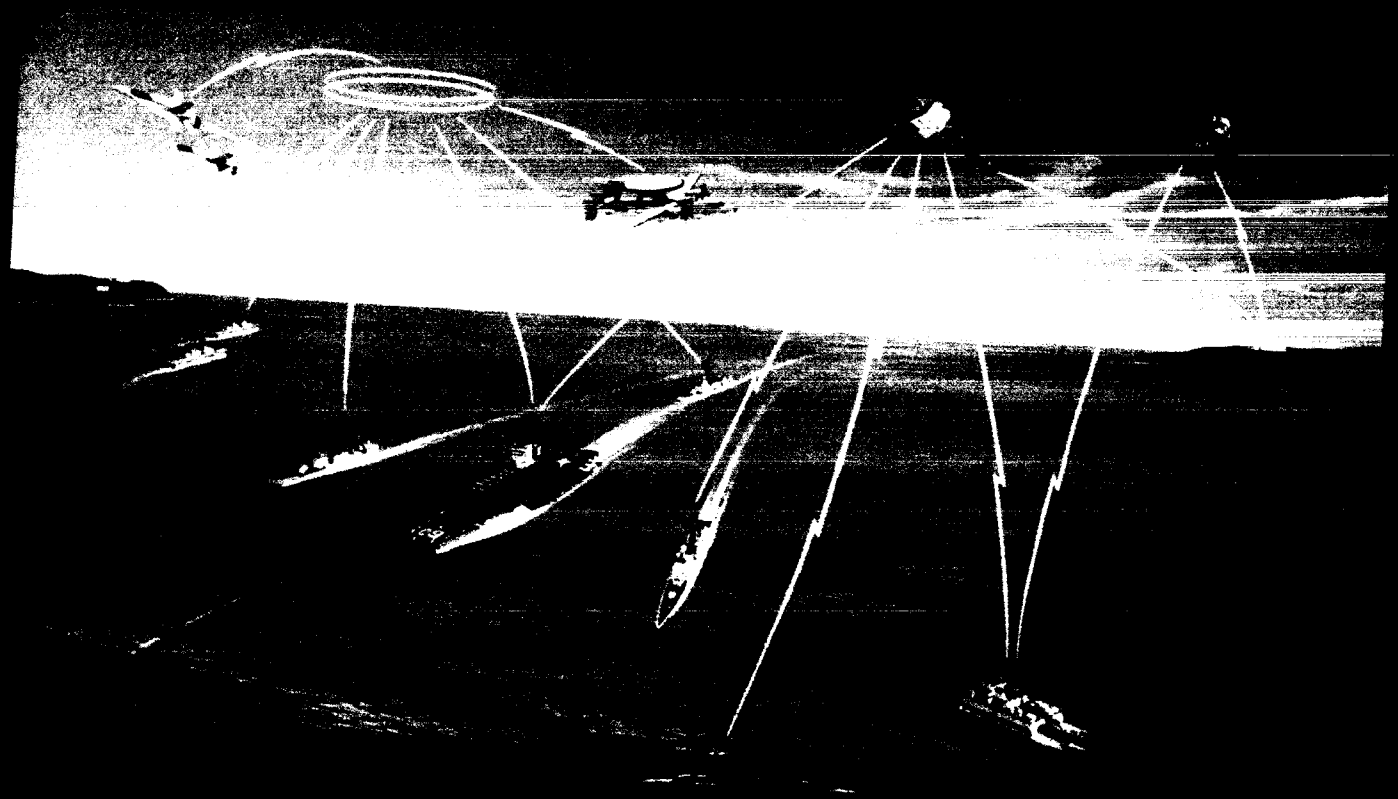
240

3400

Co-Located with the Fleet, Industry and Academia



SSC SD Mission

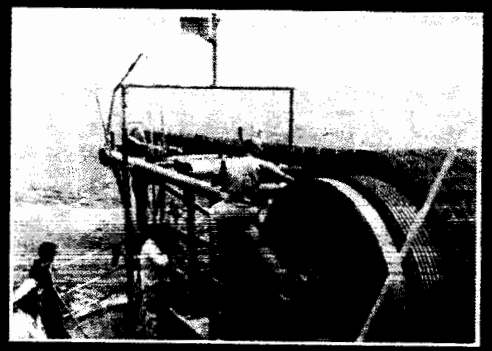


The Navy's *"cradle to grave"* RDT&E, engineering and fleet support center for command and control, communications, ocean surveillance and the integration of those systems which overarch multiple platforms

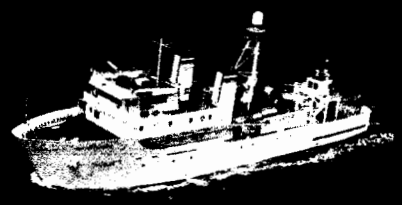
Historic Accomplishments

Satellite Communications

Radar / ECM



Oceanography



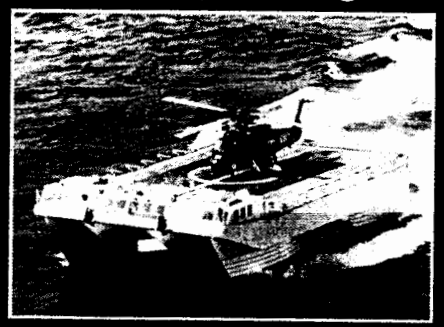
Towed Arrays

Underwater Acoustics

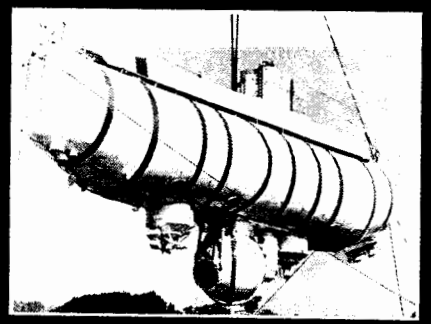
Air-dropped and Ship-launched Torpedoes

Navy Tactical Data System

Ocean Engineering



Undersea Vehicles



Arctic Submarine Operations

DCN-11708

Trieste

sensorize subs: punch thru ice

SSC SD Core Competencies

- C4ISR
- Command & Control
- Communications and Networks
- Intelligence, Surveillance and Reconnaissance
- Integrated Space Communications and Surveillance
- Force Protection/Anti-Terrorism – Physical Security (Automated Detection and Tracking)
- Information Operations
- Information Assurance
- Navigation Technology
- Marine Mammals

DCN:11708

- plays in domestic preparedness
- [illegible] products for NSA

Center of Excellence for IT

San Diego designated "Centers of Excellence" for Information Technology by DDR&E largely because of close associations with academia and industry partners.

DCN:11708

help small business bring forward SBIRs etc

60% of billing here

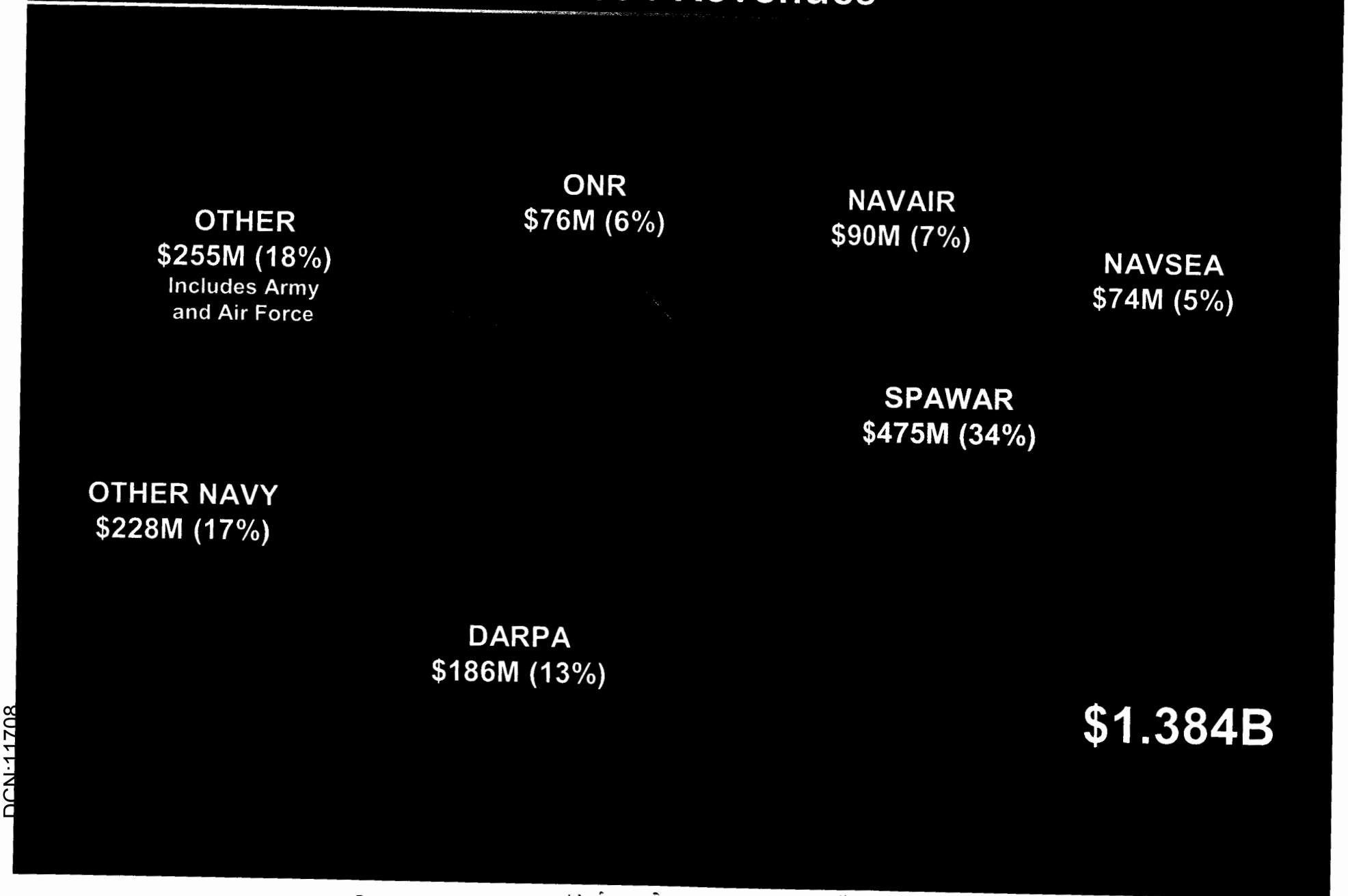
SSC San Diego Personnel
FY 2004 End Strength

Scientists and Engineers	1941
Technicians	400
Tech Specialists	574
Administrative	412
Clerical	248
Ungraded/Other	24
SES	5
Officers	43
Enlisted	29
	3676

320 technical PhD

DCN:11708

SSC San Diego Funding by Sponsor
FY 2004 Revenues



DCN:11708

Non-Linear Dynamics → - anti-jamming
- less time @ periscope depth
- [illegible] out of

2362 75% SCI cleared
75% of those [illegible]

SSC San Diego
FACILITIES

Footprint and Infrastructure

594 acres on Point Loma, 71 acres in Old Town and 5.75 acres at Mount Soledad Signal Station, supporting multiple Federal and State agencies.

Unrestricted developable land -- 128 acres

Restricted developable land -- 99 acres

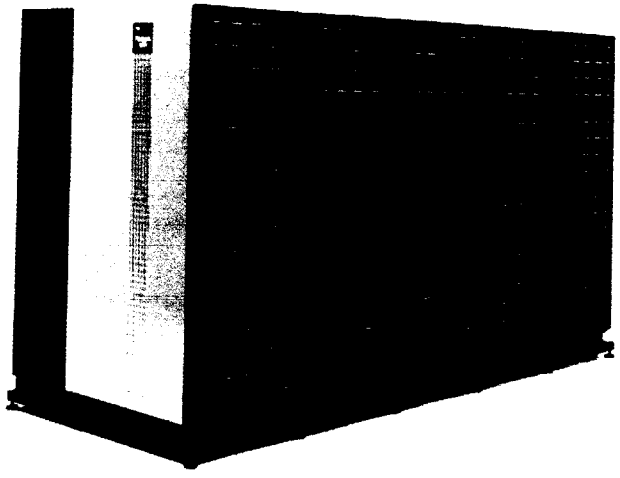
100 sq miles of Range Complex area at San Clemente Island

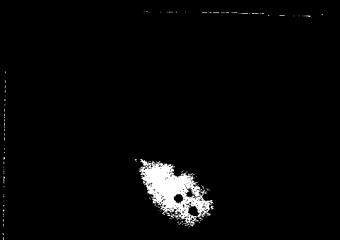
217 buildings totaling 2.5 million GSF

Four Piers

12 buildings (50,000 GSF) capable of adding an additional story

High Performance Computing
DoD Distributed Center





Constant
Likelihood
Ratio

3 Levels of Computing Capability:

- Unclassified, GENSER and SCI

Applications include:

- 3-D data visualization of complex networks
- Signal processing of multiple INT sources and communications systems
- Physics based modeling and simulation

National Resource for SCI Projects

SSC San Diego is *uniquely positioned* to take on a wide variety of classified programs:

2362 personnel are SCI cleared

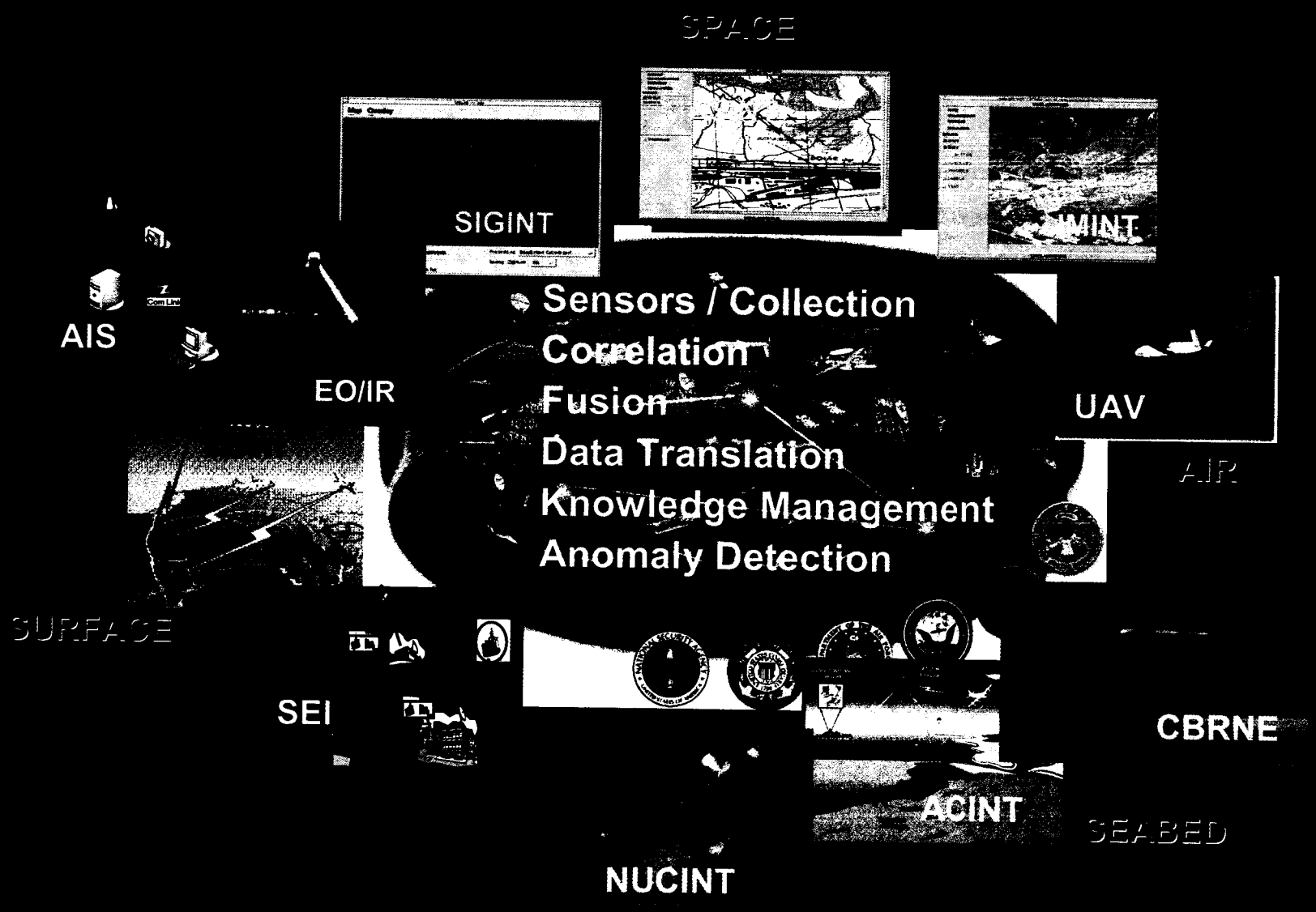
- 75% have higher clearances.

37 Sensitive Compartment Intelligence Facilities (SCIFs), comprising 53,000 sq ft with 3 large SCIF conference rooms.

"Special Contracting" facility (i.e., contracts which require SCI access).

- 68 prime contractors, utilizing 106 subcontractors

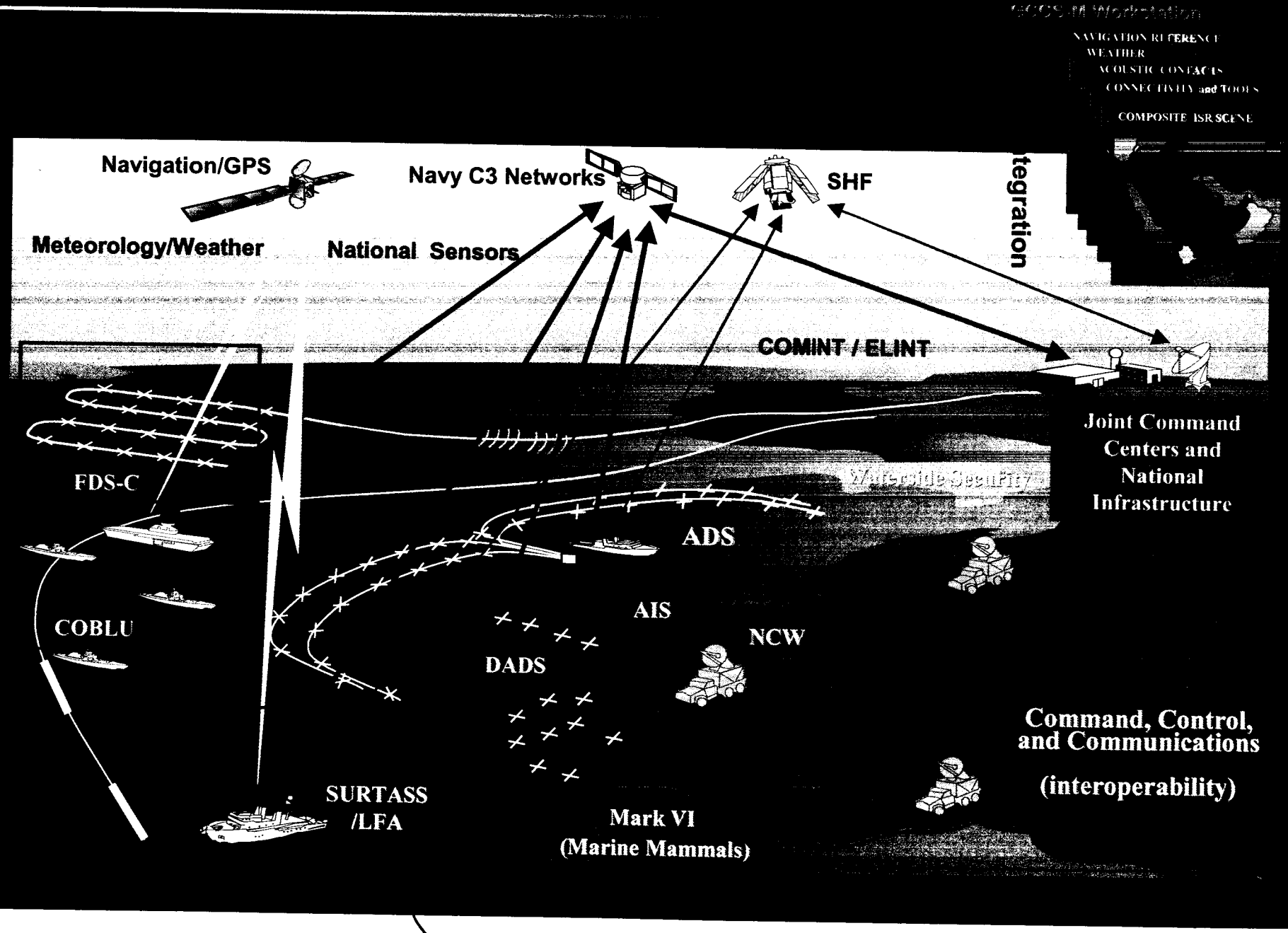
Intelligence, Surveillance and Reconnaissance



- Sensors / Collection
- Correlation
- Fusion
- Data Translation
- Knowledge Management
- Anomaly Detection

... From Seabed to Space

Maritime Domain Awareness

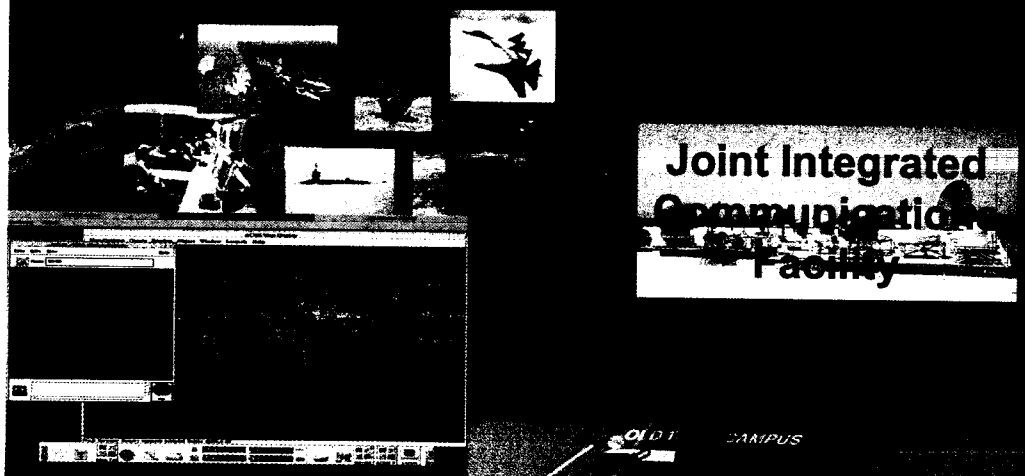


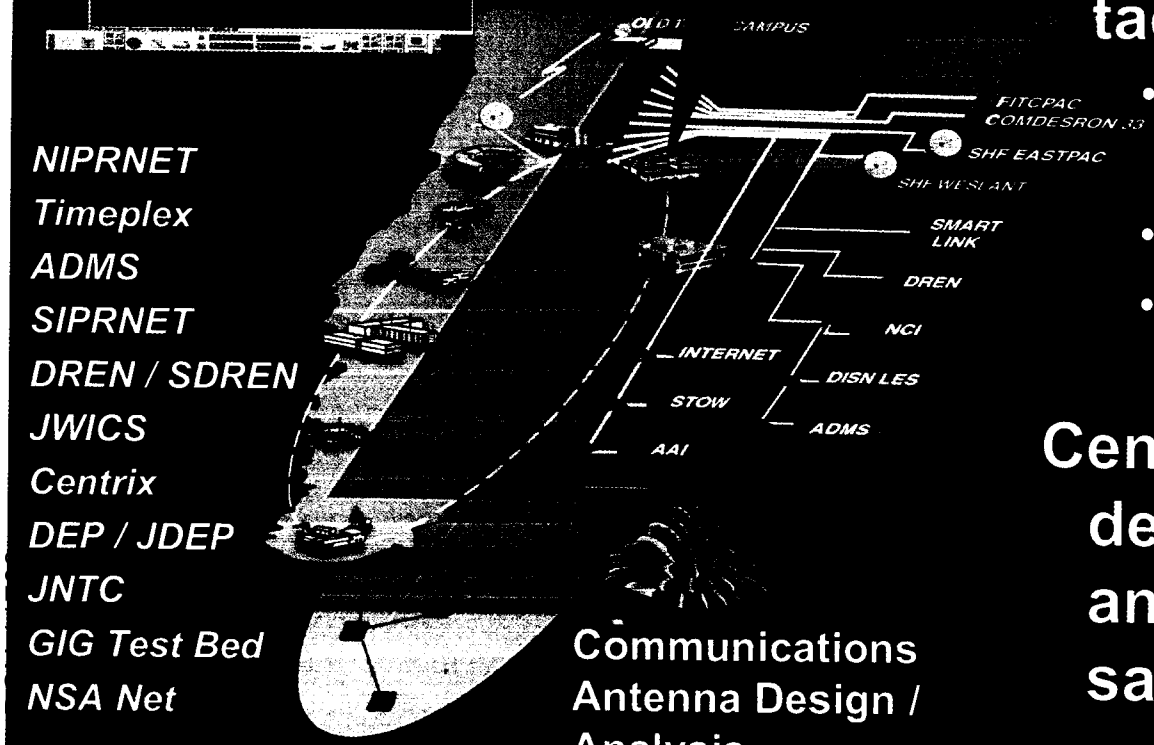
Goes to NWWC

Goes to

Goes to NWWC

Networks and Communications





NIPRNET
Timeplex
ADMS
SIPRNET
DREN / SDREN
JWICS
Centrix
DEP / JDEP
JNTC
GIG Test Bed
NSA Net

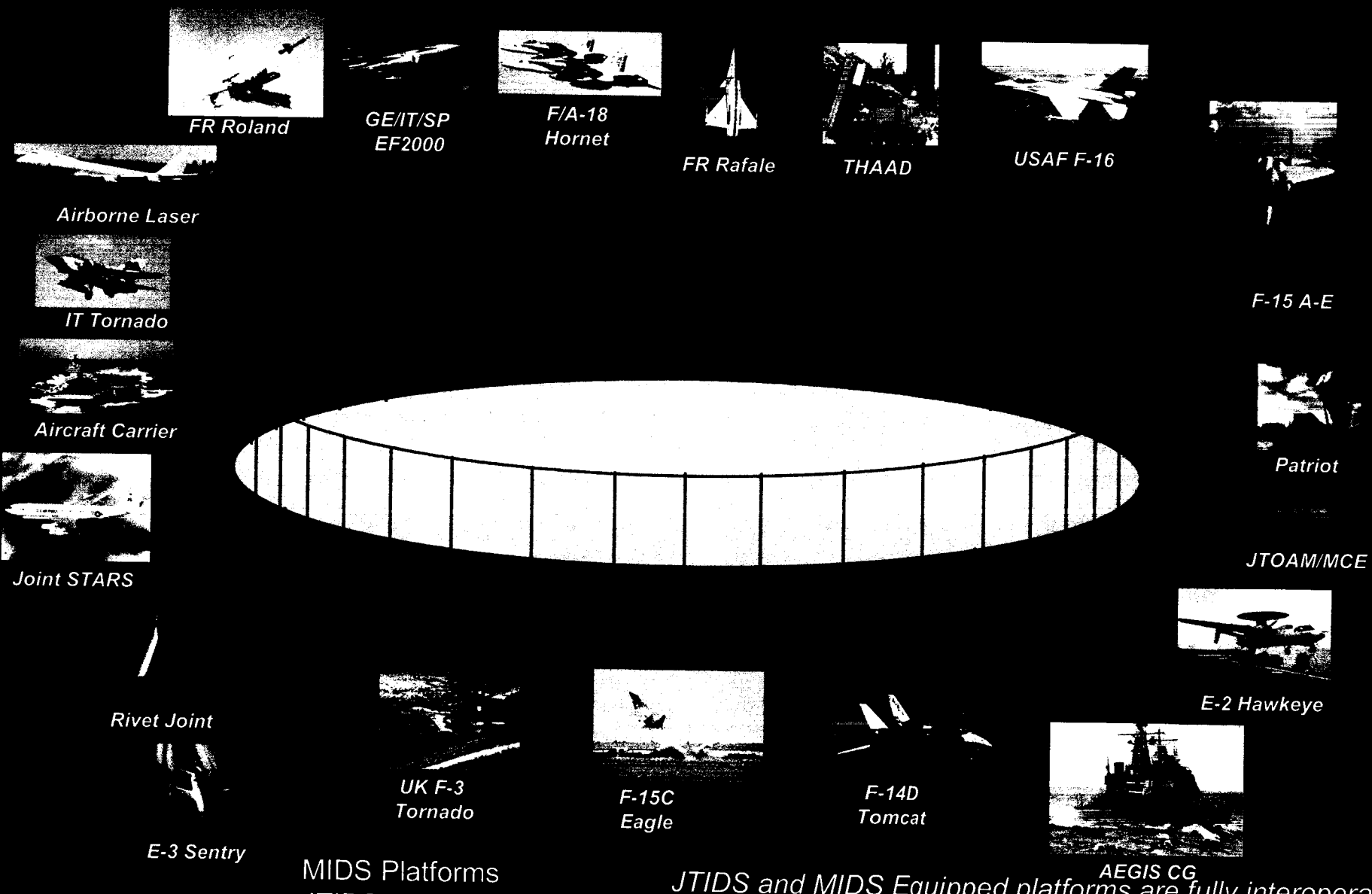
Communications Antenna Design / Analysis

Communications Systems and Network Connectivity to emulate the full spectrum of operational configurations from tactical to strategic:

- Individual shipboard systems
- Expeditionary Strike Group
- Network centric sea, air, land, space connectivity

Centralized control and decentralized management and planning tools for satellite communications

Link-16 / JTIDS
Platforms / Connectivity



MIDS Platforms
JTIDS Platforms

JTIDS and MIDS Equipped platforms are fully interoperable

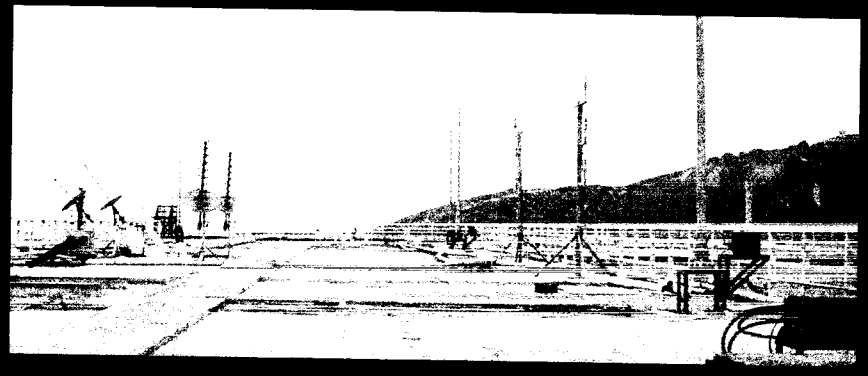
Joint Tactical Data System

Systems Integration Facility (SIF) Combined Test Bed (CTB)

Our labs are a Unique/ National Asset

CIC

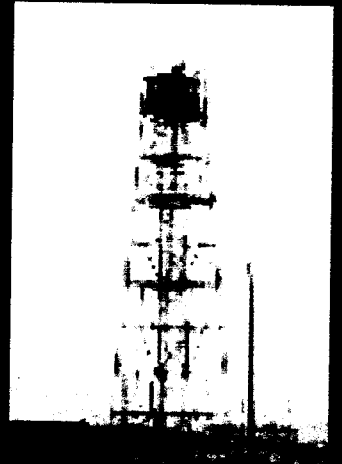
Build 600 Antennas



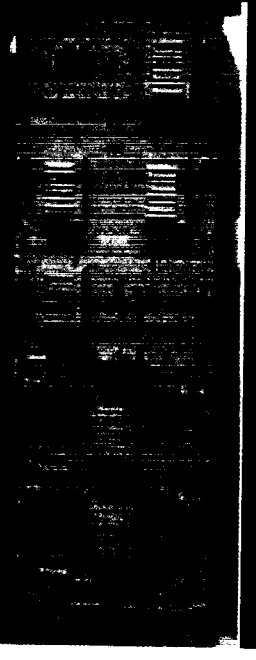
Air Platforms
F-14D Lab, NAWC-WD
F/A-18 Lab, China Lake

MIDS Mini-Rack

Pedro Tower Antenna Site viewing Entire Harbor

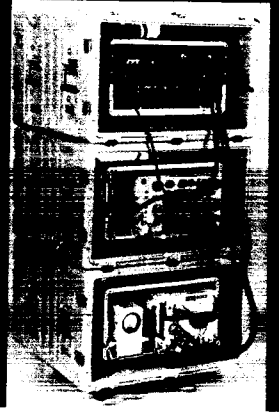


JTIDS Terminal



C&D, ACDS & CDLMS / C2P UYK-43 Processors

Link-16 Mini-Rack



MIDS LVT Terminal

E2C Test Lab

↳ to Dahlgren

Navigation

Global Positioning System (GPS)

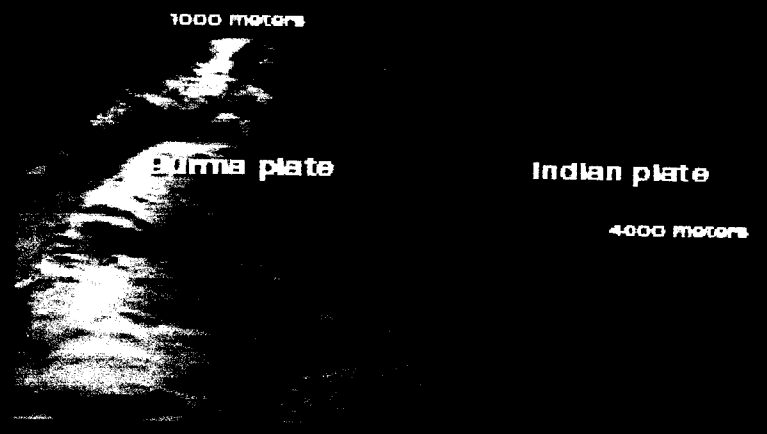
Operational Importance

- Satellite simulations
- Aircraft and shipboard integration
- Navigation warfare technology
- Shipboard and aircraft installations

Accomplishments

- Open system architecture test bed
- GPS interference detection system
- Wavefront simulator for testing GPS-
  phased array antennas
- Control display navigation unit software
  for non-precision approach

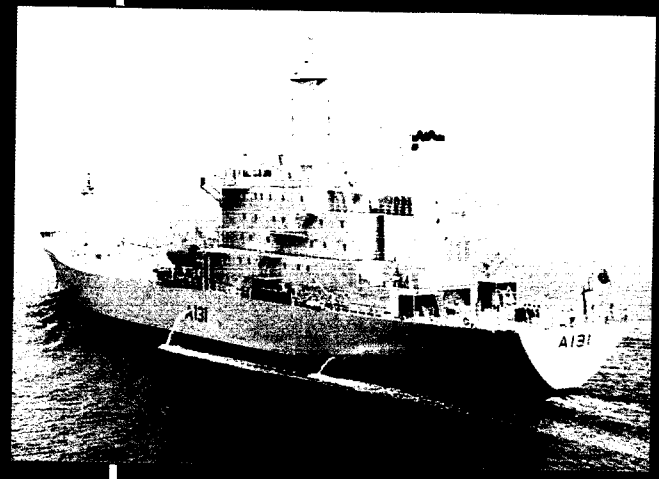
HMS SCOTT
TSUNAMI EPICENTER SURVEY



Seabed display generated by the bathymetric surveying system designed and developed by the Marine Navigation Division and installed aboard the United Kingdom ocean survey ship HMS SCOTT. This system utilizes a very high resolution wide swath array sonar system for depth measurement.

Bathymetry at its Best

Navigation

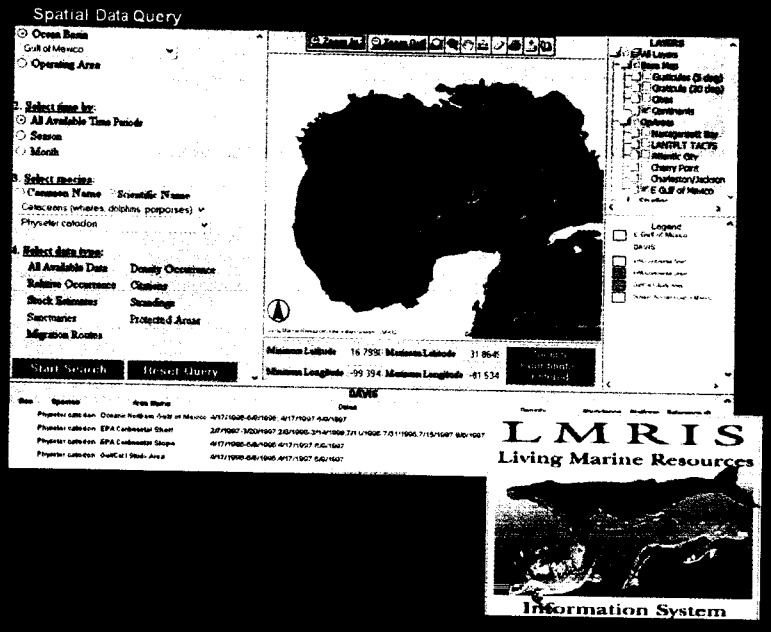


Accomplishments

- Integrated bathymetric survey system to meet FBM submarine requirements
- United Kingdom MoD with Wide-Swath Bathymetric Survey System
- Acoustic Simulator with up to 144 channels simulating any type and depth of ocean bottom topography
- For the tsunami survey effort, it scientists on hand believed that much was learned because of the unique capabilities of the sonar system on board HMS Scott.

Goe
to
NWC

Fleet Marine Mammal Systems and Operations Planning Tools

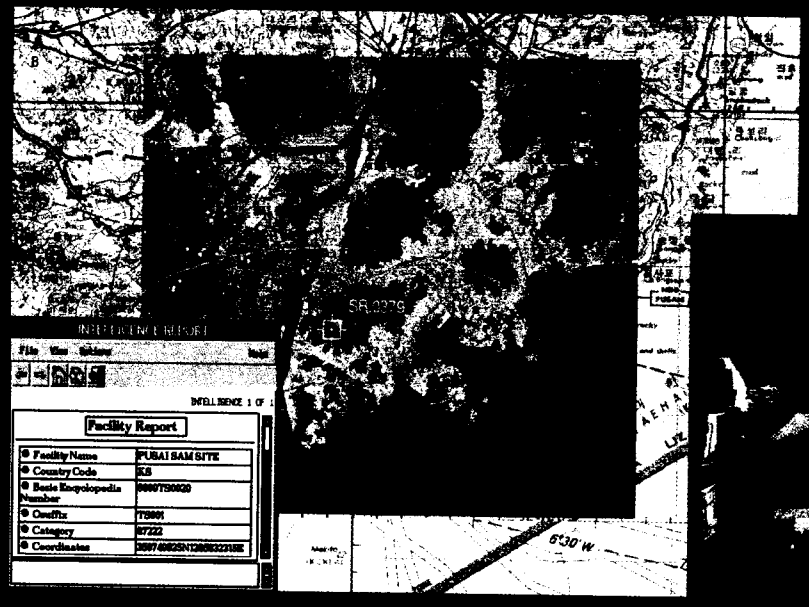


LMRS
↓
NUSC

- **Fill capability gaps** where unmanned systems or divers are not feasible
  - Mine hunting and clearance
  - Swimmer defense
- Technical support for offensive mining certification of naval air forces
- Planning tools to avoid adverse impact on marine population and environment

Design of Ranges → to NUSC

Command and Control

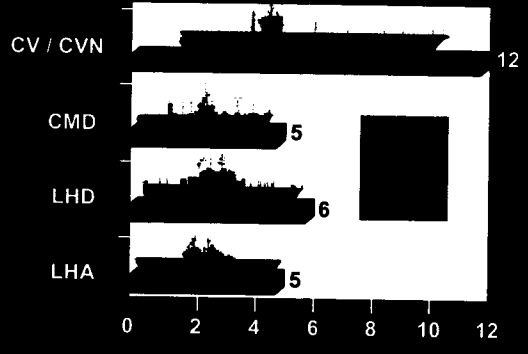


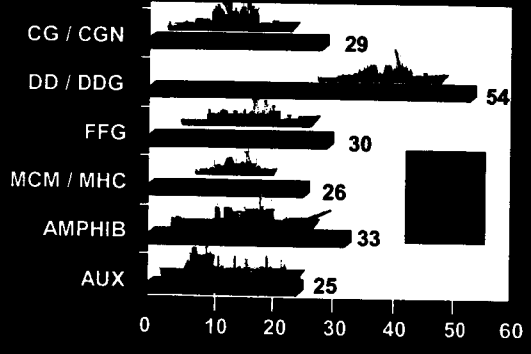
Integrated and scalable C3I information management capabilities in support of the warfighter

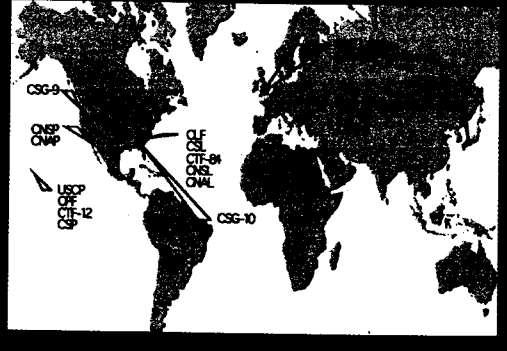
GCCS–M Afloat

GCCS–M Ashore

Global Command and Control System—Maritime (GCCS-M)



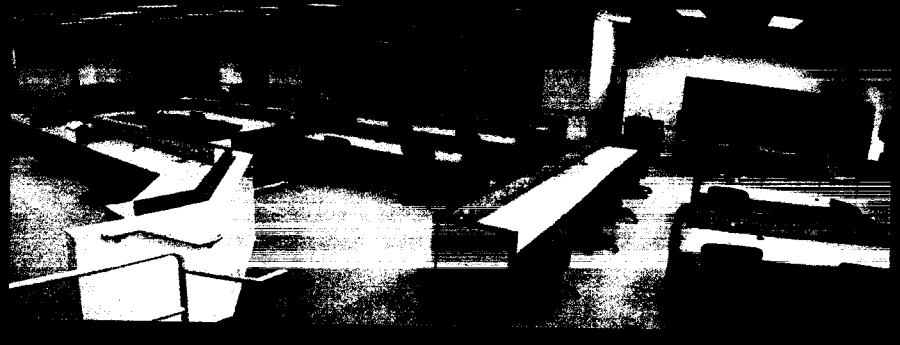




Command Centers

Joint Operations Center

- Focus of Crisis management
- Uses all C4I assets including national C2 systems
- Integrated with other battle cells



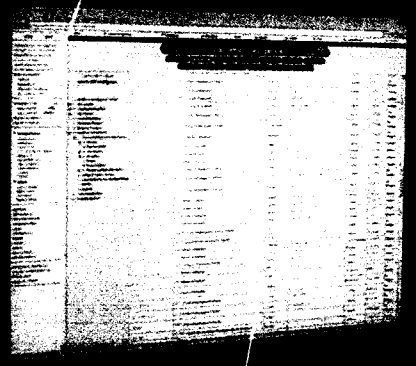
Central Command Deployed HQs

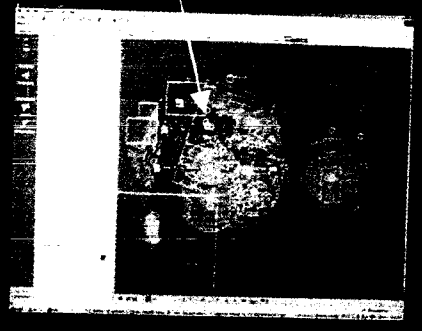
Build portable Command Center

Composeable FORCEnet at CTF 74 in Japan

CFn Geo Display
- GCCS-M Tracks
- PC-IMAT overlays
- GALElite AOUs
- CVOA overlays
- AREPS overlays
- Documents
- Digital Nautical Charts
- ADRG charts
- DBDB-V in 3D
- Map-Chat

CTF74 Web Site





DMS Messages

ONI Web Page

Acoustic Full Field View

Tactical Chat Rooms

C4ISR Science and Technology (S&T) Provider for SPAWAR Enterprise

CAPABILITIES
PROCESSES
TOOLS

CTO

DEVELOP AND
INTEGRATE
C4ISR SYSTEMS

PROGRAM OFFICES

NEAR-TERM NEEDS
MID-TERM NEEDS
FAR-TERM NEEDS

SPAWAR Chief Technology Office (CTO) located at SSC SD to increase effectiveness and efficiency of S&T transitions to acquisition

Example S&T Thrust Areas:

- Human- information system interaction in distributed computing environments
- Dynamically reconfigurable networks
- Dynamic, non-linear techniques for communications and signal processing
- Fusion of geographically dissimilar source data
- Correlation navigation using topography, gravity, magnetics

to Dahlg
orig here
Ties here
peopl work not move

7 or 8 of the 9 or 10 in world

In Summary

PEOPLE with talent and domain expertise

FACILITIES that are *UNIQUE* in the world

CONNECTIVITY to the Fleet, the Joint Establishment, the Acquisition Community, and to Industry

VISION of where we need to go, how to get there, and how to demonstrate the resulting capabilities

Conceive, Develop, Support

DCN:11708

SPAWAR

Summary of BRAC actions

The Space & Naval Warfare Systems Center San Diego

Carmela Keeney
Acting Executive Director
Space & Naval Warfare Systems Center

SPAWAR

Supporting the Goals of BRAC

- SECDEF BRAC recommendation created Maritime Information Systems Center of Excellence at SPAWARSYSCEN San Diego using:
  - Current capacity, future capacity, and surge capacity in their capacity analysis
  - Military Value analysis
  - and Scenario Development and Analysis
  - An overarching strategic framework in it's recommendations
    - Provide efficiency of operations by consolidating technical facilities to enhance synergy and reduce excess capacity
    - Establish multifunctional multidisciplinary technical RDAT&E Centers of Excellence

DCN:11708

SPAWAR

Scenarios Affecting SPAWARSYSCEN San Diego

- Surface sensors – Tech-0008E
- Sub-surface sensors – Tech-0008I
- Maritime Information Systems – Tech-0008F

DCN:11708

SPAWAR

Scenarios Affecting SPAWARSYSCEN San Diego

- **Scenarios Tech-0008E, Tech-0008I, and Tech-0008Faffect SPAWARSYSCEN San Diego**
  - Total of 365 FTE reported in Sensor scenarios
    - Not considered for realignment
      - Classified projects totaling 28 FTE
      - Projects completed since Capacity data call totaling 51 FTE

by 2010 or 2011 could be nothing to transfer; may resist accepting work that might be moved

DCN:11708

SPAWAR

Scenario Reporting by SPAWARSYSCEN San Diego

- **Tech-0008E - Surface sensors**
  - **Total of 118 individual projects**
    - **101 projects reported < 1 FTE total work effort**

Not required to move people unless working on project > .5 MY moving

SPAWAR

Sensor Scenarios reported exclusions SPAWARSYSCEN San Diego

Scenario	Reported FTE Exclusions		FTE Exclusion Total
	Inextricable	Location	
Tech-0008E – Surface	81	11	92
Tech-0008I – Sub-Surface	37	43	80

Need help getting fidelity on intent, Can't tell what work is intended to move. They didn't visit

Proposition 90 to be approved

Scenario data system

20% moved DC → San Diego

COBRA rolls up 6 people, but decision is to move 98

SPAWAR

Scenarios Affecting SPAWARSYSCEN San Diego

- Sensors moving out of SSC San Diego
  - Moving to NSWC Dahlgren 108
  - Eliminated 43
  - Moving to NUWC Newport 113
  - Eliminated 5

TOTAL BILLETS OUT OF SAN DIEGO 269

SPAWAR

Scenarios Affecting SPAWARSYSCEN San Diego

- **Maritime Information Systems moving to SSC San Diego**
  - Moving from NSWC Dahlgren 111
  - Eliminated 5
  - Moving from NUWC Newport 112
  - Eliminated 38
  - Moving from NSWC Port Hueneme 98
  - TOTAL BILLETS TO SSC SAN DIEGO 321

DCN:11708

DCN:11708

SPAWAR

May lose Navy work and keep Army yesterday

WRAP-UP/Questions

008K best savings

- Today we have provided you an overview of SPAWARSYSCOM and SPAWARSYSCEN San Diego
- We have also explained the BRAC recommendations across the SPAWAR Enterprise
- What questions can we further answer for you?

what 0008 E/F/I should have read

8I fragments even more because San Diego part went to NWC not here

③ Amplification of paragraph 47s

Remember this was only Navy funded

Legal problems with names of commands

1) Confusion about available seats counts all Pt. Loma not just SSC Pt. Loma
2) Kluge of multiple actions
3) #47
4) Sensor work Charleston → Newport ships in Pacific

5) Risk breaking int'l/NATO
8K Most comfortable

DCN:11708

SPAWAR

DCN: 11708

SPAWAR

Today's Agenda

- SPAWAR Background & Info – RDML Rodriguez
- BRAC Recommendations across SPAWAR– Rod Smith
- SPAWARSYSCEN San Diego Command Overview – RDML (Sel) Timothy Flynn
- BRAC Recommendations across SPAWARSYSCEN San Diego – Carmela Keeney
- Questions

DCN:11708

SPAWAR

Space & Naval Warfare Systems Command

Who we are …

One of the Navy's three major acquisition commands with 7,600 employees

What we do…

- Partner with PEO- C4I & Space to deliver C4ISR and FORCEnet capability to the joint warfighter
- Partner with PEO-IT, DNMCI & PEO Space Systems
- Develop Navy, Joint and Coalition Interoperability
- Navy C4ISR Chief Engineer
- Navy FORCEnet Chief Architect/Assessor
- Combined TOA $4.7 Billion

SPAWAR

Mission, Vision & Commitment

- **Mission Statement:**

  SPAWAR Enterprise "delivers" FORCEnet – transforming information into decisive effects

- **Vision Statement:**

  "FORCEnet is the decisive weapon for the future Force"

- **Commitment:**

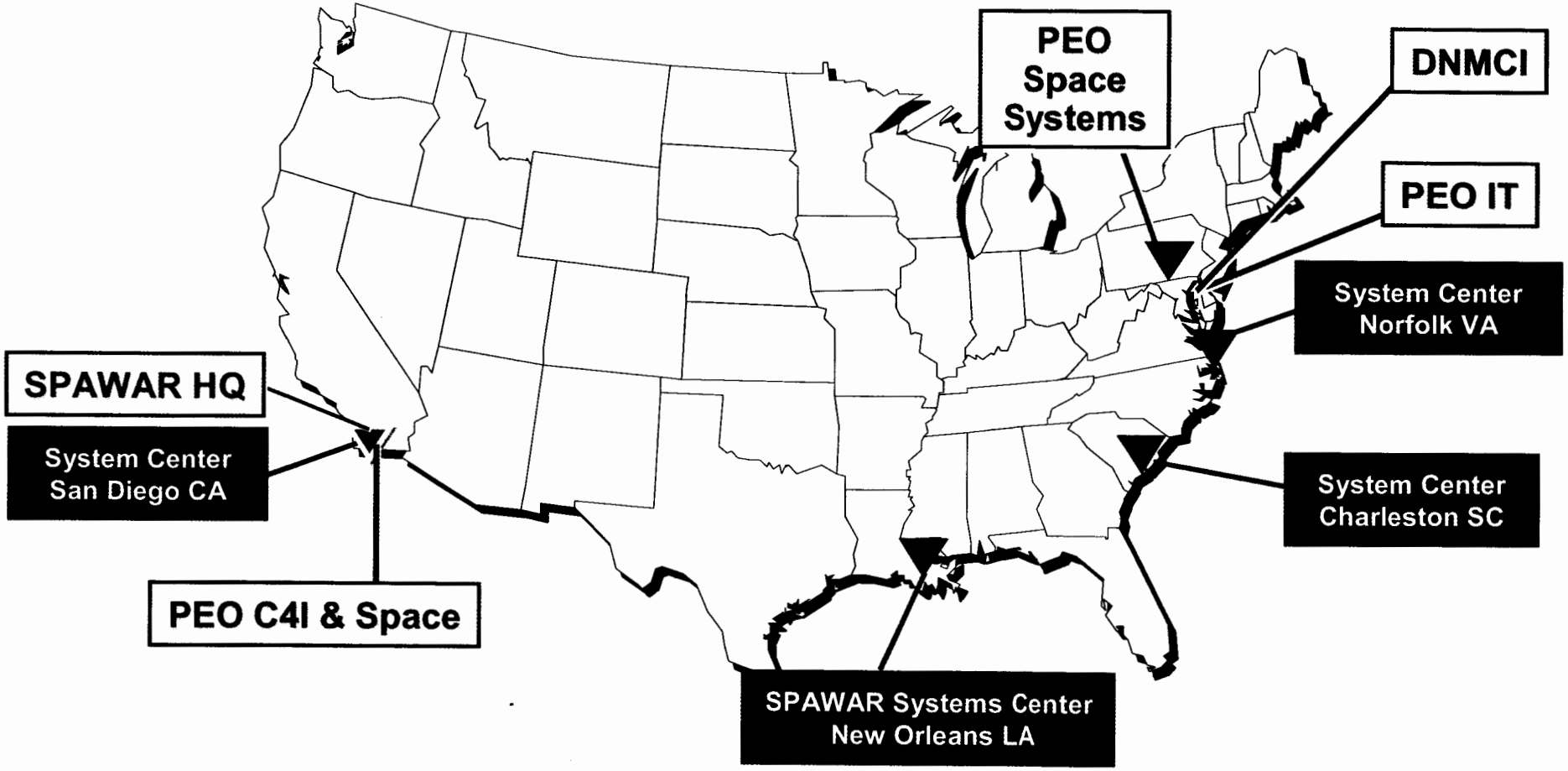
  [redacted]

"Transforming information into decisive effects."

DCN:11708

SPAWAR

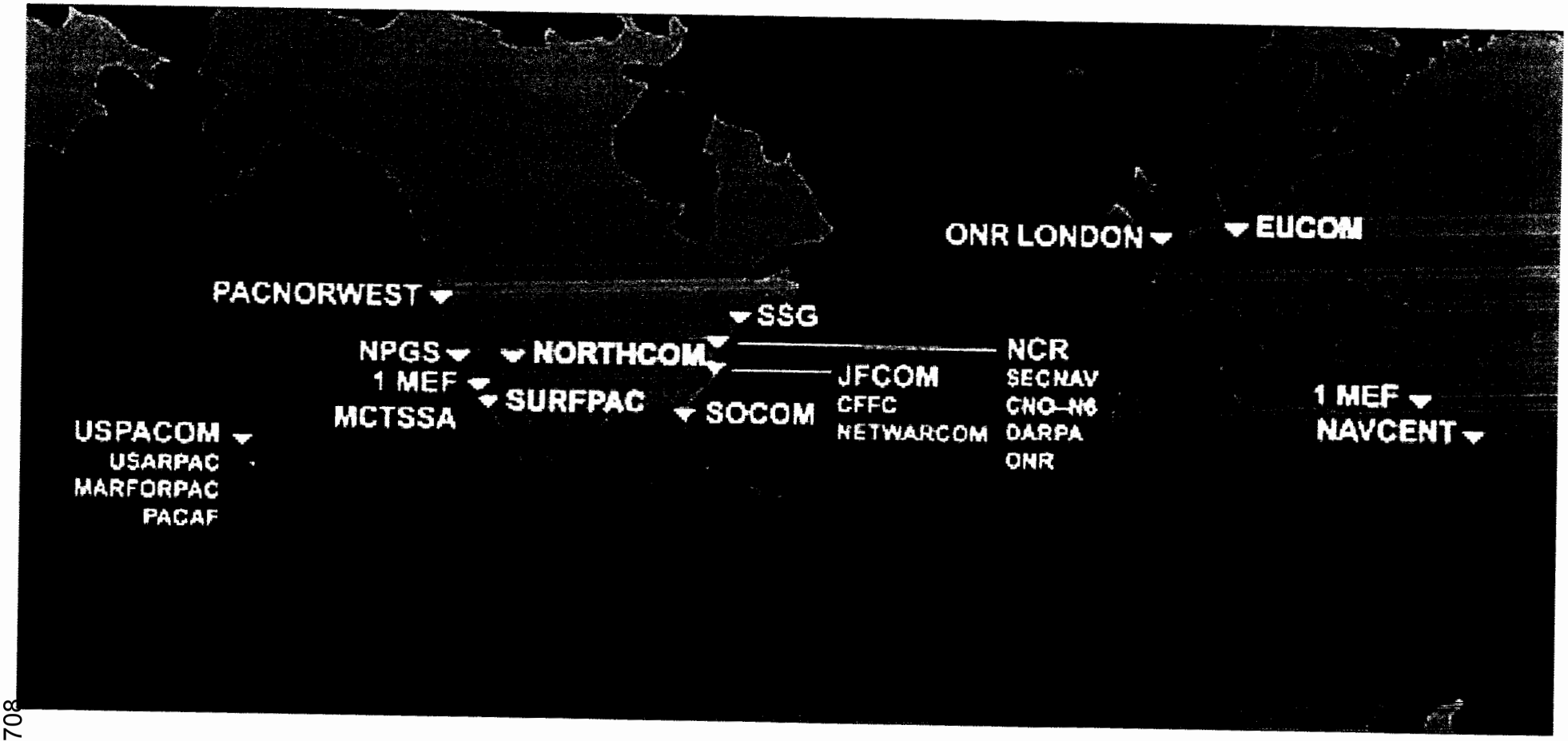
Corporate *SPAWAR*



"Transforming information into decisive effects."

SPAWAR

Joint Community Presence



DCN:11708

DCN:11708

SPAWAR

Joint Forces Synergy

- Army National Training Ctr.
- Fort Huachcua
- USMC Camp Pendleton
- MCAS Miramar
- 29 Palms MCAGCC
- MCAS Yuma
- China Lake Test Range
- NAS Fallon
- Pt. Mugu Test Range
- Davis Monthan AFB
- Edwards AFB
- Luke AFB
- Nellis AFB

Potential Partnering Opportunities!

"Transforming information into decisive effects."

SPAWAR

The Navy's Vision

SEA POWER 21

Projecting Defensive Assurance
assure allies, deter adversaries, sustain access

Sea Shield

Innovation to the Warfighter...
rapid prototyping,
concept development,
coordinated experimentation

Sea Trial

Preparing the Warfighter...
the right skills,
in the right place,
at the right time

Sea Warrior

Resources to the Warfighter...
optimum resource allocation,
increased productivity,
enhanced procurement

Sea Enterprise

FORCEnet

Sea Strike

Projecting Offensive Power...
responsive, precise, and persistent

Sea Basing

Projecting Operational Independence...
joint power from the sea

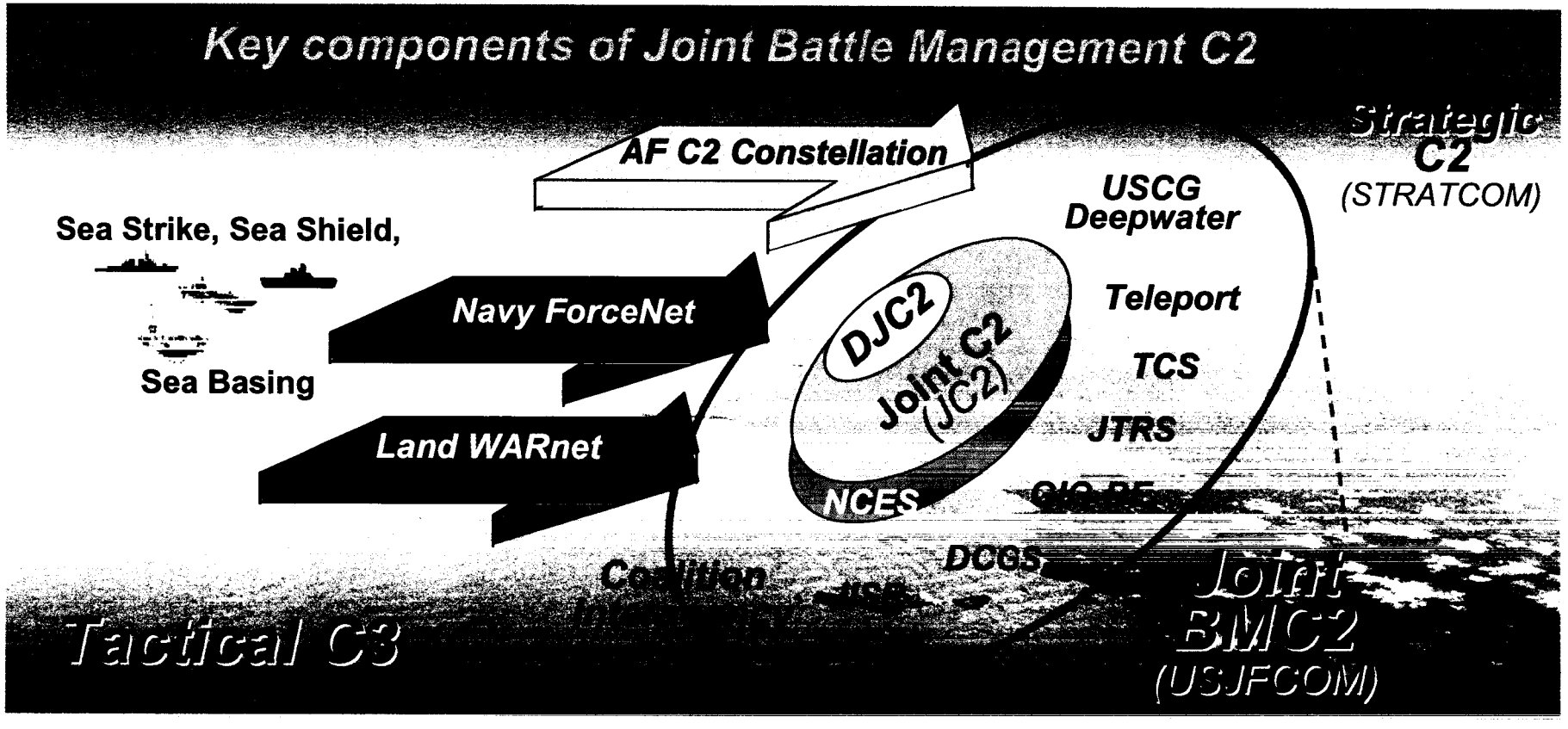
DCN:11708

DCN:11708

SPAWAR

FORCEnet Provides the Naval Component of the Global Information Grid (GIG)

"FORCEnet is an inherently Joint/Coalition concept, both relying on and providing essential capabilities to the Joint/Coalition community and other Services and Agencies"



DC 11708

SPAWAR

SPAWAR Enterprise BRAC Overview

The Space & Naval Warfare Systems Command

Mr. Rod Smith
Deputy Commander
Space & Naval Warfare Systems Command

(Statement A: Approved for public release; distribution is unlimited (27 JAN 2005)

SPAWAR

Supporting the Goals of BRAC

- We responded to multiple data calls and scenarios from the Joint Cross Service Groups (JCSG) to support the DoD BRAC Goals:
  - Eliminate excess capacity
  - Rationalize our infrastructure with defense strategy
  - Reconfigure our infrastructure into one in which operational capacity maximizes both warfighting capability and efficiency
- We had the opportunity to provide alternative scenarios to optimize Navy and Joint C4ISR infrastructure

DCN:11708

SPAWAR

SPAWAR

Supporting the Goals of BRAC

- The TJCSG used an overarching strategic framework in it's recommendations
  - Provide efficiency of operations by consolidating technical facilities to enhance synergy and reduce excess capacity
  - Establish multifunctional multidisciplinary technical RDAT&E Centers of Excellence
- The TJCSG used the following to make their recommendations:
  - Current capacity, future capacity, and surge capacity in their capacity analysis
  - Military Value analysis
  - And Scenario Development and Analysis

SPAWAR

Supporting the Goals of BRAC

- TJCSG process and construct resulted in "Centers of Excellences" for:
  - Sub-surface sensors – Newport
  - Surface sensors – Dahlgren
  - Maritime Information Technology – San Diego

DC[illegible]11708

SPAWAR

Technical Scenario TECH-0042AR

[redacted]

Surface Sensors
From
SSC San Diego
SSC Charleston

To
NSWC Dahlgren

[redacted]

Sub-surface Sensors
From
SSC San Diego
SSC Charleston
NAWC(AD)
To
NUWC Newport

[redacted]

Maritime Info Systems
From
NUWC Dahlgren
NUWC Newport
NSWC Port Hueneme
To
SSC San Diego

[redacted]

SPAWAR
Alternative

SPAWAR

Technical Scenario TECH-0008K

- Key tenants of scenario development:
  - SPAWARSYSCEN Atlantic/Pacific plan not intended to be a two-site solution but a:
    - We aligned capabilities in Norfolk to support the Fleet, JFCOM, CFFC, and NETWARCOM
    - Centralization of Command authority into two geographic locations providing increased responsiveness to the fleet and maximizing return on equity of engineering infrastructure.
    - Reduces infrastructure through this action

DCN:11708

SPAWAR

Technical Scenario TECH-0008K

- Scenario outcome:
  - Enterprise critical capacity and capabilities for execution of Navy and joint C4ISR missions and FORCEnet implementation.
    - We consolidated activities
    - We maintain critical infrastructure and human capital
    - We improve our customer support to the fleet
    - We reduce billets and infrastructure costs
    - We reduce leased spaces
  - Increases responsiveness to the fleet and maximizing return on equity of engineering infrastructure.
  - Strengths Norfolk presence
    - Primary customers: JFCOM, NETWARCOM and CFFC
  - Consolidates Washington DC presence
  - Consolidates East Coast activities
    - Eliminates 2 Echelon III commands
  - Consolidates West Coast activities

SPAWAR

SPAWAR Activities not affected

- SPAWAR Space Field Activity
- PEO C4I & Space
- PEO Space Systems
- Systems Center New Orleans
- All OCONUS activities

SPAWAR

Technical Scenario TECH-0008K Summary

Activity	Actions			Billets	
				Moved	Eliminated
SSC Charleston	Disestablish as Command	Relocate command functions to NAB Little Creek	Create SSC Atlantic	7	1
Det Jacksonville	Disestablish				34
Det Pensacola	Disestablish			21	81
Det Yorktown	Consolidate in Norfolk			9	7
Det Norfolk	Consolidate			9	114
Det Washington	Realign (104) remain				172
SSC Norfolk	Disestablish	Consolidate with SSC Atlantic			3
SSC San Diego	Disestablish as Command		Create SSC Pacific		
SSC Norfolk, Det San Diego	Disestablish	Consolidate with SSC Pacific		55	3
SSC San Diego Dets in Tidewater	Remain in place	Consolidate with SSC Atlantic		45	
NCTSI	Remain in place	Consolidate with SSC Pacific		98	6

DCN:11708

SPAWAR

Command Overview and Summary of BRAC actions

The Space & Naval Warfare Systems Center San Diego

RDML (Sel) Tim Flynn
Commanding Officer
Space & Naval Warfare Systems Center

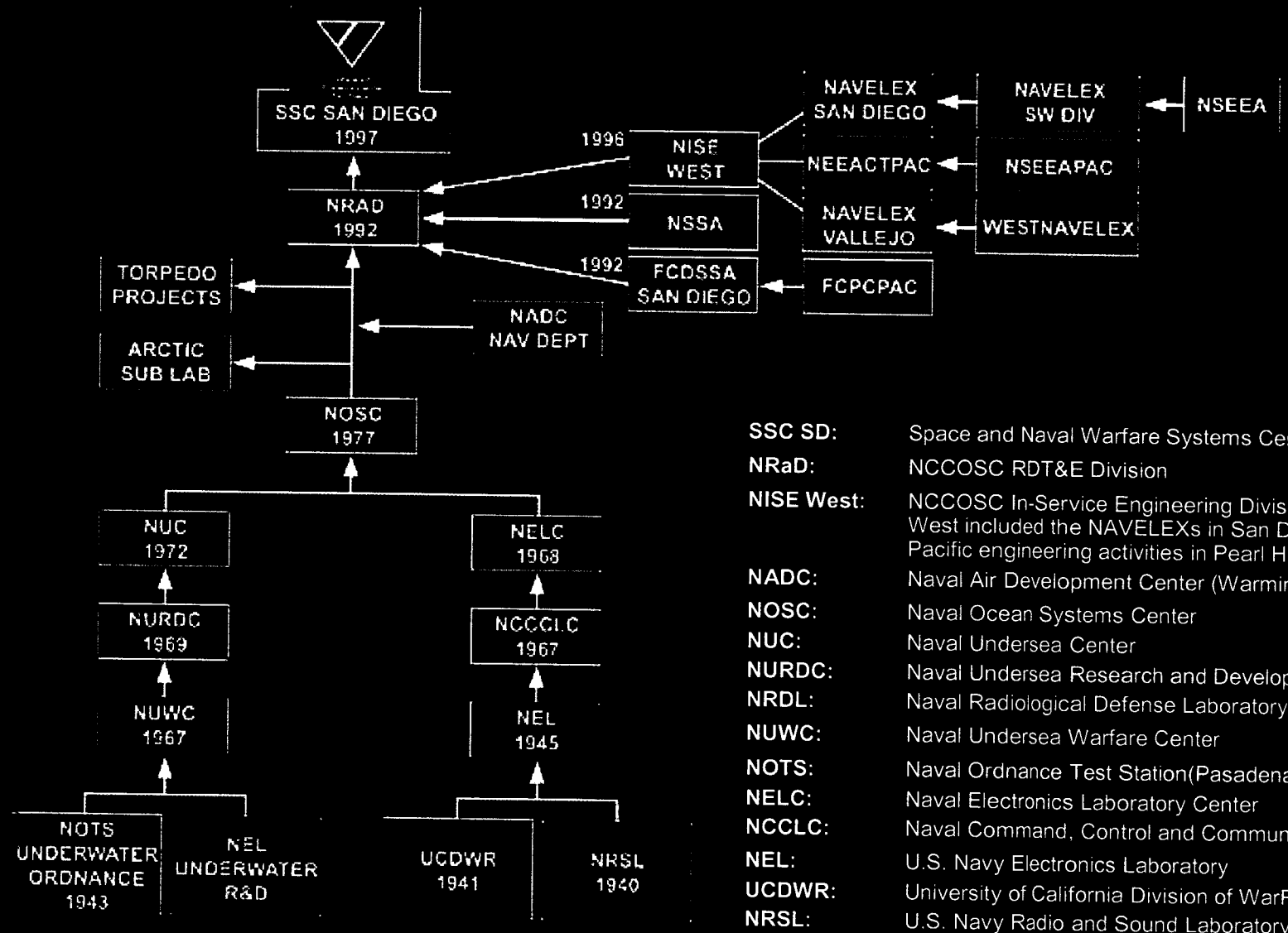
DCN:11708

SSC San Diego

COMMAND OVERVIEW

SPAWAR
Systems Center
San Diego

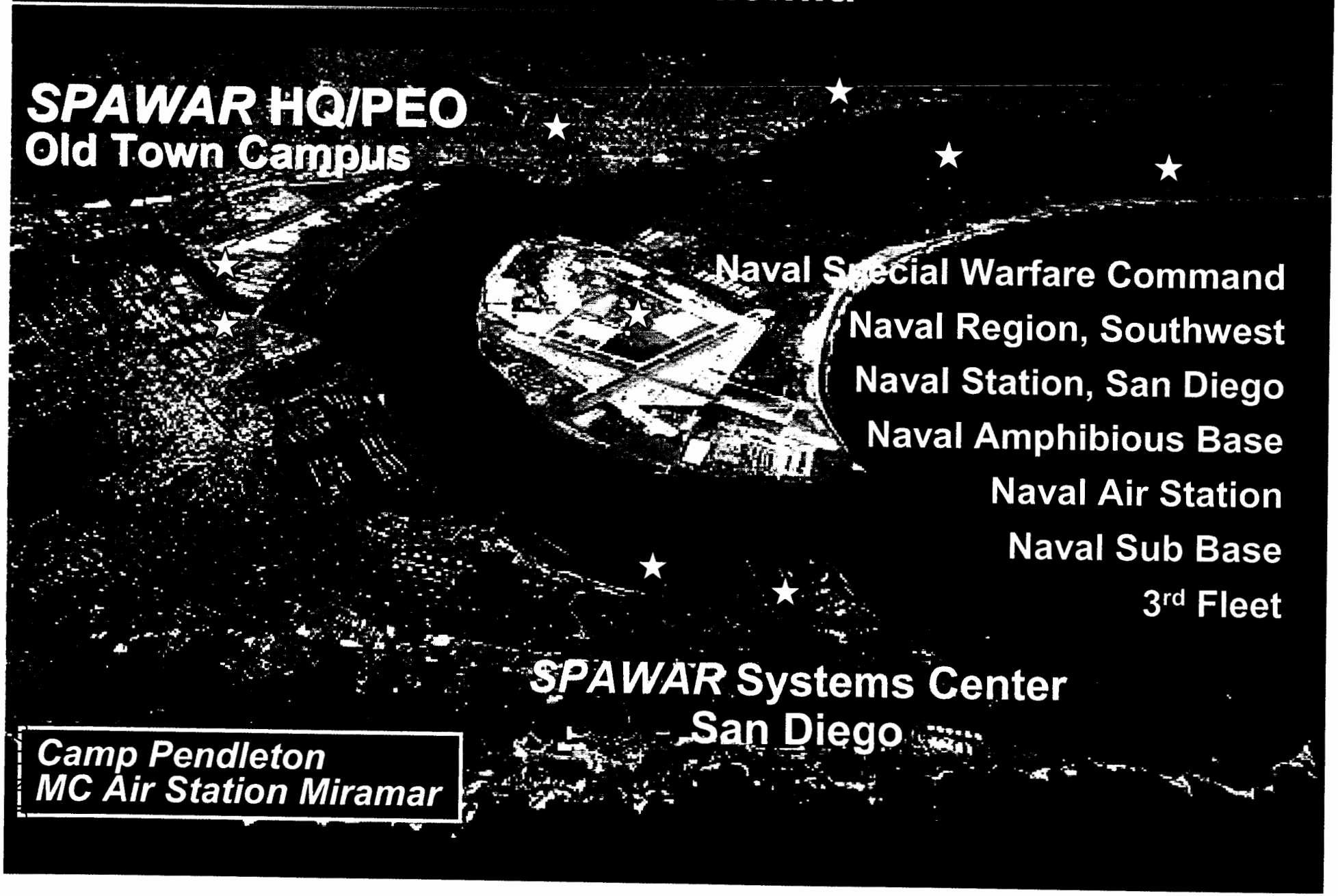
Base Closure, Realignment and Reorganization - nothing new



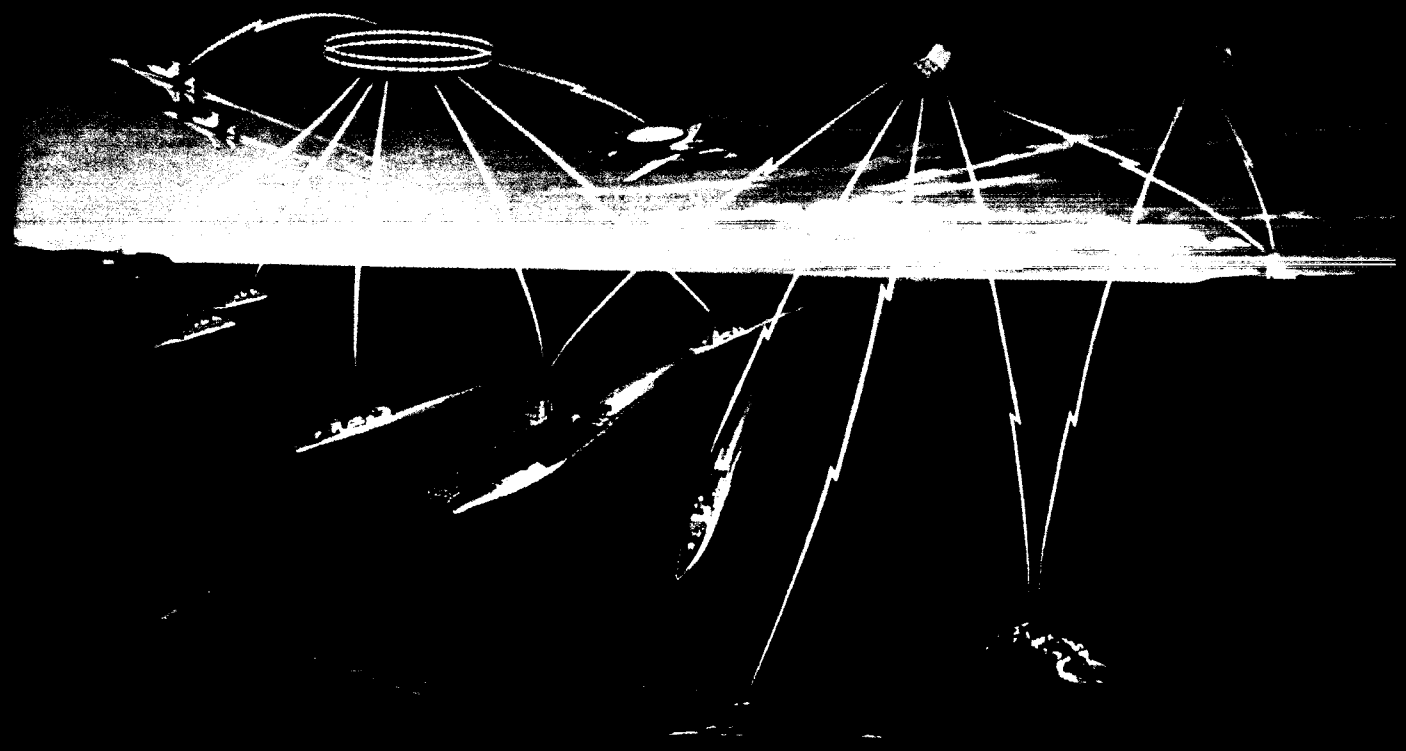
SSC SD:	Space and Naval Warfare Systems Center, San Diego
NRaD:	NCCOSC RDT&E Division
NISE West:	NCCOSC In-Service Engineering Division, West Coast, NISE West included the NAVELEXs in San Diego and Vallejo, and the Pacific engineering activities in Pearl Harbor, Guam, and Japan
NADC:	Naval Air Development Center (Warminster, PA)
NOSC:	Naval Ocean Systems Center
NUC:	Naval Undersea Center
NURDC:	Naval Undersea Research and Development Center
NRDL:	Naval Radiological Defense Laboratory (San Francisco, CA)
NUWC:	Naval Undersea Warfare Center
NOTS:	Naval Ordnance Test Station(Pasadena, CA)
NELC:	Naval Electronics Laboratory Center
NCCLC:	Naval Command, Control and Communications Laboratory Center
NEL:	U.S. Navy Electronics Laboratory
UCDWR:	University of California Division of WarResearch
NRSL:	U.S. Navy Radio and Sound Laboratory

SSC San Diego and Detachments

Co-Located with the Fleet, Industry and Academia

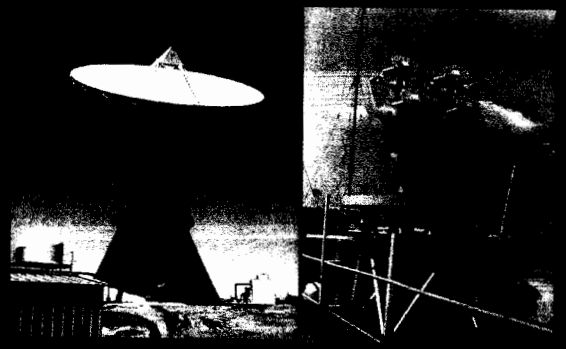


SSC SD Mission



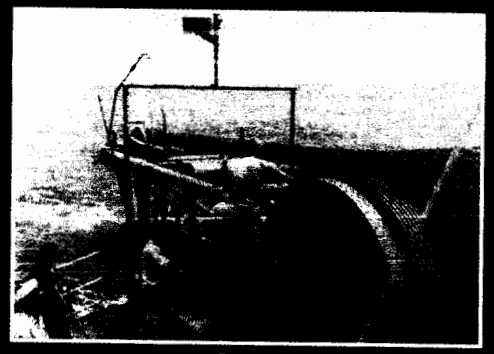
The Navy's *"cradle to grave"* RDT&E, engineering and fleet support center for command and control, communications, ocean surveillance and the integration of those systems which overarch multiple platforms

Historic Accomplishments

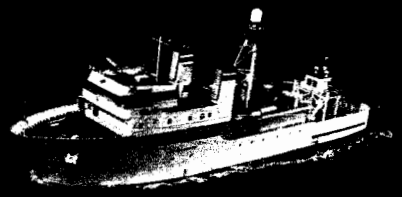


Satellite Communications

Radar / ECM

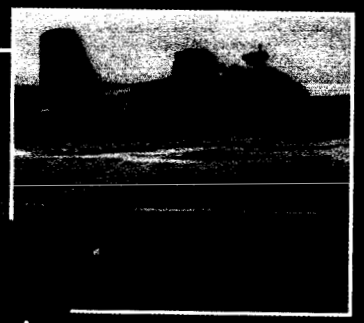


Oceanography



Towed Arrays

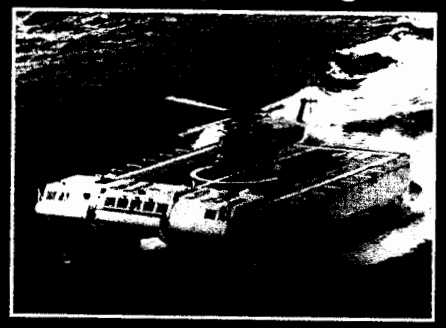
Underwater Acoustics



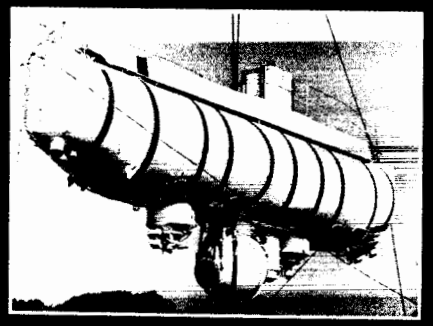
Air-dropped and Ship-launched Torpedoes

Navy Tactical Data System

Ocean Engineering



Undersea Vehicles



Arctic Submarine Operations

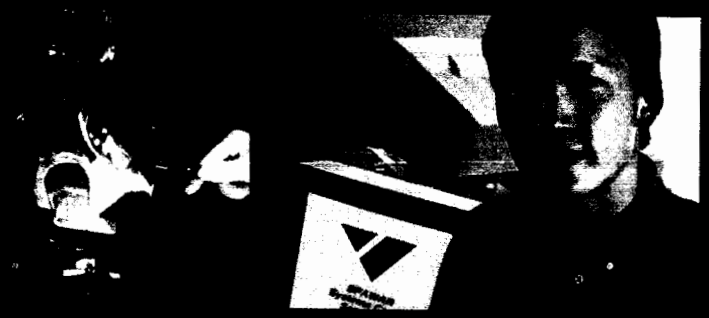
SSC SD Core Competencies

- C4ISR
- Command & Control
- Communications and Networks
- Intelligence, Surveillance and Reconnaissance
- Integrated Space Communications and Surveillance
- Force Protection/Anti-Terrorism – Physical Security (Automated Detection and Tracking)
- Information Operations
- Information Assurance
- Navigation Technology
- Marine Mammals

Center of Excellence for IT

San Diego designated "Centers of Excellence" for Information Technology by DDR&E largely because of close associations with academia and industry partners.

SSC San Diego Personnel
FY 2004 End Strength



Scientists and Engineers	1941
Technicians	400
Tech Specialists	574
Administrative	412
Clerical	248
Ungraded/Other	24
SES	5
Officers	43
Enlisted	29

3676

SSC San Diego Funding by Sponsor
FY 2004 Revenues

OTHER
$255M (18%)
Includes Army
and Air Force

ONR
$76M (6%)

NAVAIR
$90M (7%)

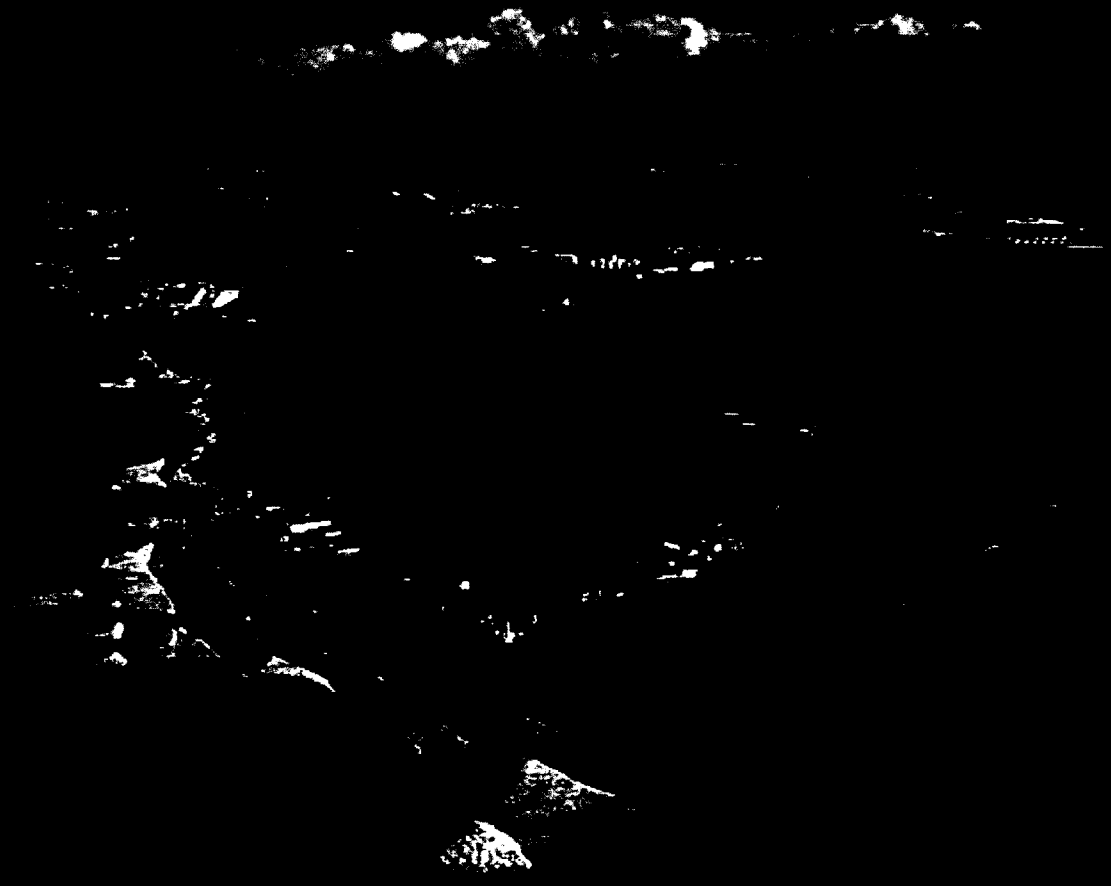
NAVSEA
$74M (5%)

SPAWAR
$475M (34%)

OTHER NAVY
$228M (17%)

DARPA
$186M (13%)

$1.384B



SSC San Diego
FACILITIES

Footprint and Infrastructure

594 acres on Point Loma, 71 acres in Old Town and 5.75 acres at Mount Soledad Signal Station, supporting multiple Federal and State agencies.

Unrestricted developable land -- 128 acres

Restricted developable land -- 99 acres

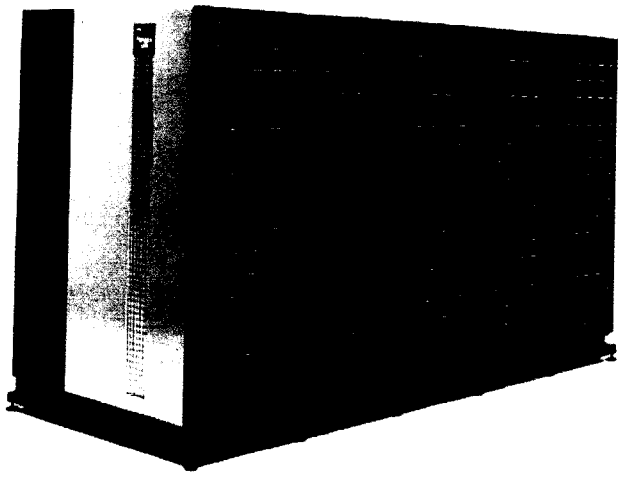
100 sq miles of Range Complex area at San Clemente Island

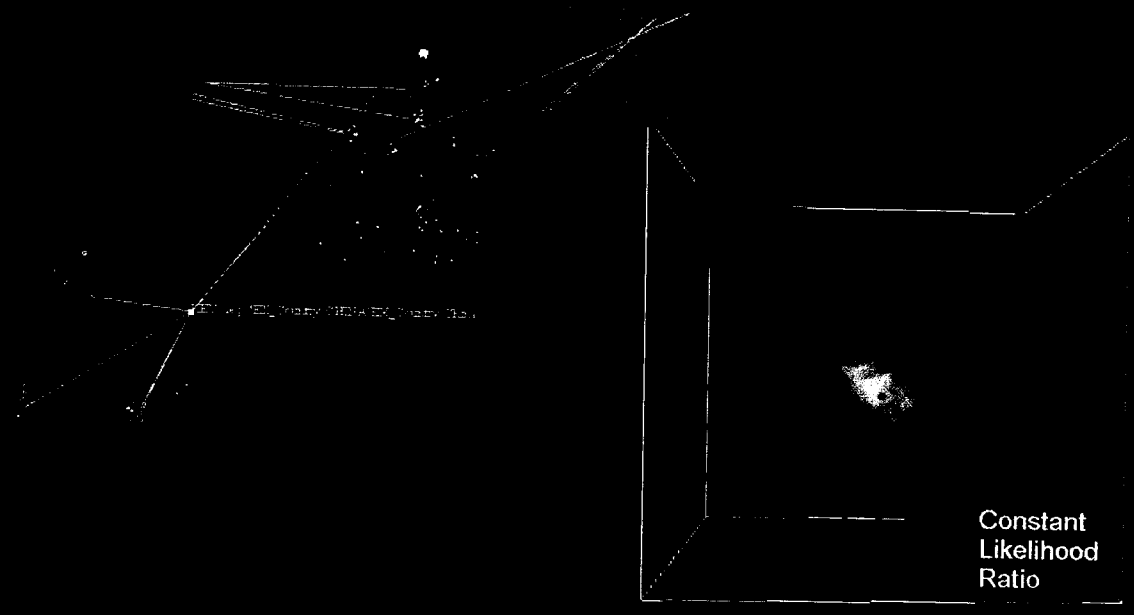
217 buildings totaling 2.5 million GSF

Four Piers

12 buildings (50,000 GSF) capable of adding an additional story

High Performance Computing
DoD Distributed Center





3 Levels of Computing Capability:

- Unclassified, GENSER and SCI

Applications include:

- 3-D data visualization of complex networks
- Signal processing of multiple INT sources and communications systems
- Physics based modeling and simulation

National Resource for SCI Projects

SSC San Diego is *uniquely positioned* to take on a wide variety of classified programs:

2362 personnel are SCI cleared

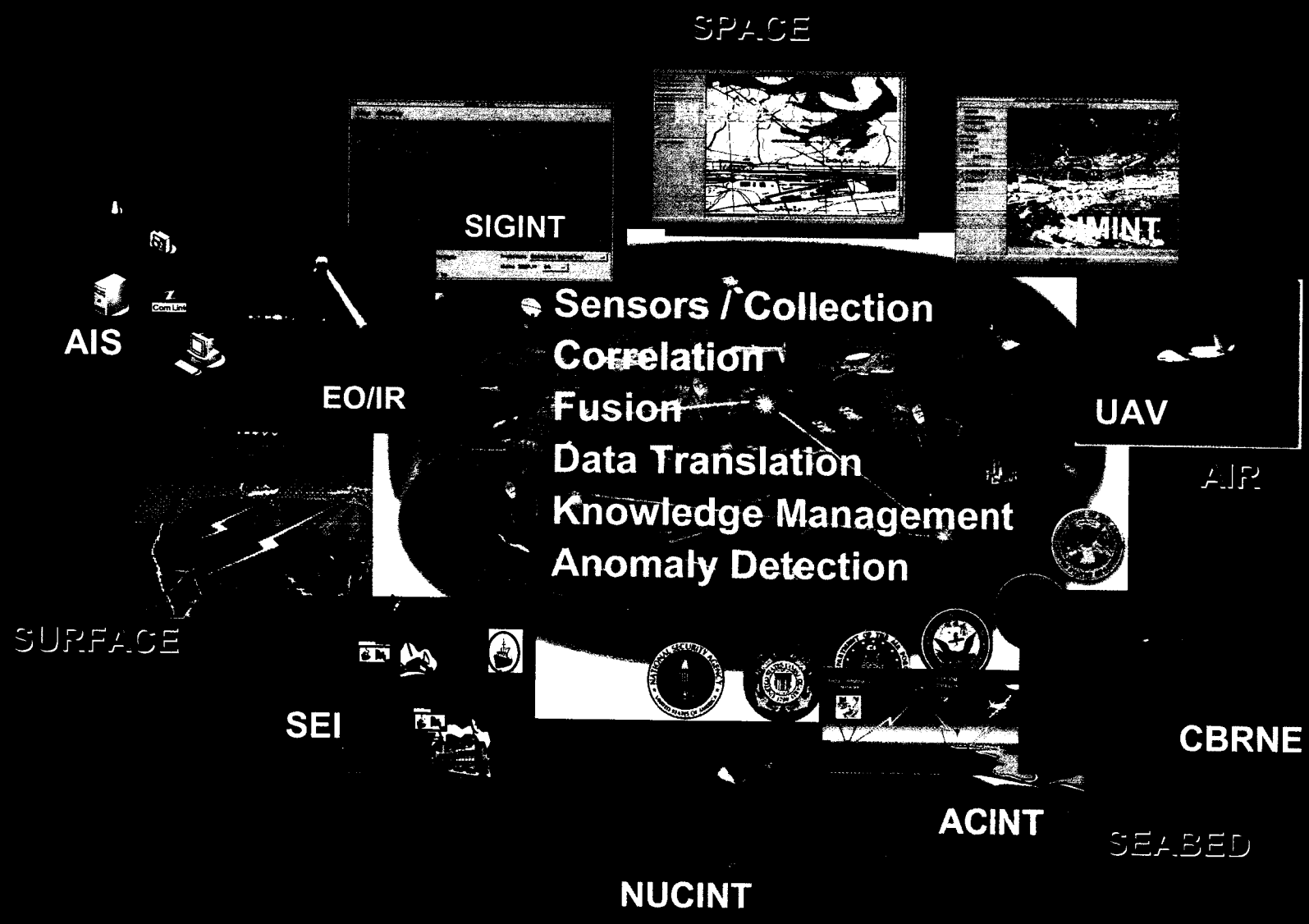
- 75% have higher clearances.

37 Sensitive Compartment Intelligence Facilities (SCIFs), comprising 53,000 sq ft with 3 large SCIF conference rooms.

"Special Contracting" facility (i.e., contracts which require SCI access).

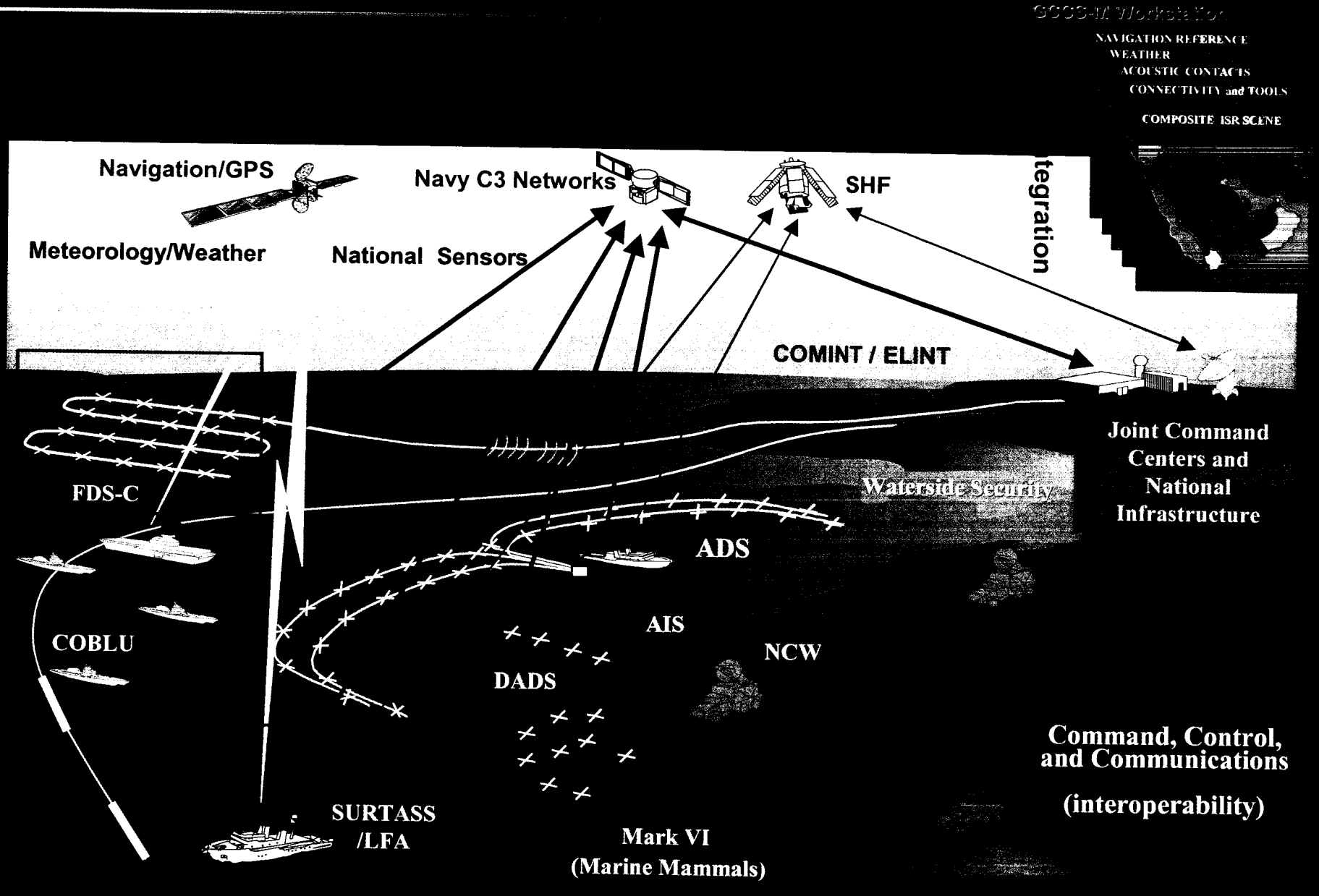
- 68 prime contractors, utilizing 106 subcontractors

Intelligence, Surveillance and Reconnaissance

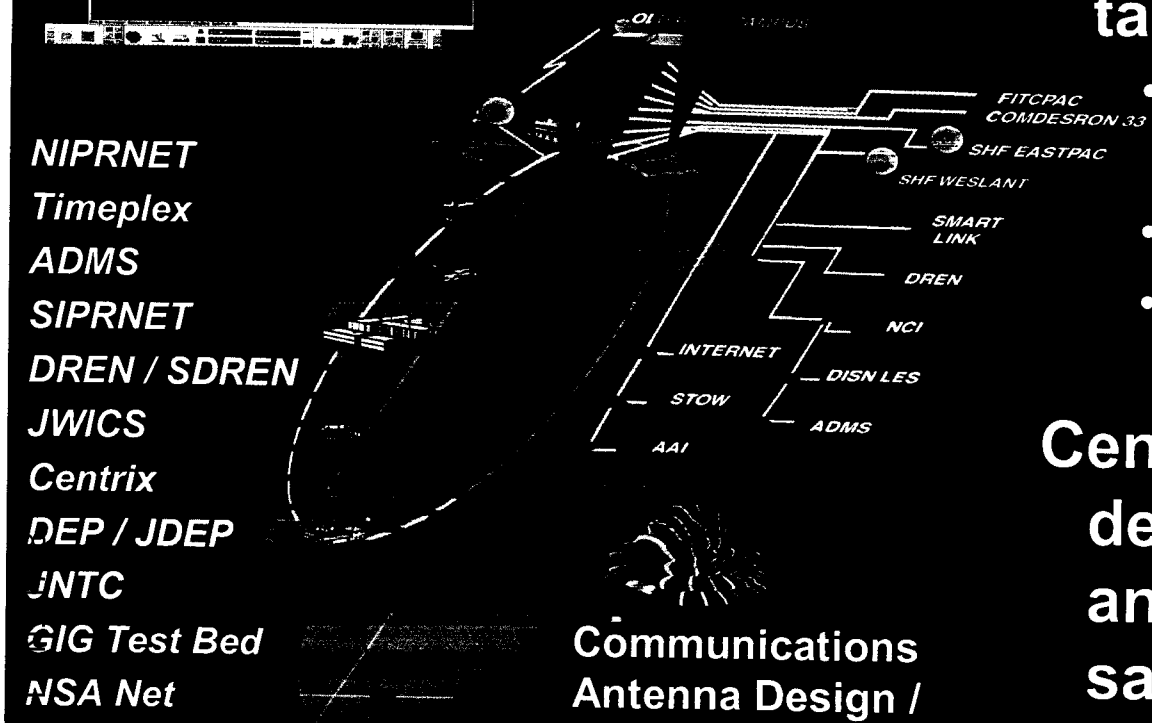


... From Seabed to Space

Maritime Domain Awareness



Networks and Communications



NIPRNET
Timeplex
ADMS
SIPRNET
DREN / SDREN
JWICS
Centrix
DEP / JDEP
JNTC
GIG Test Bed
NSA Net

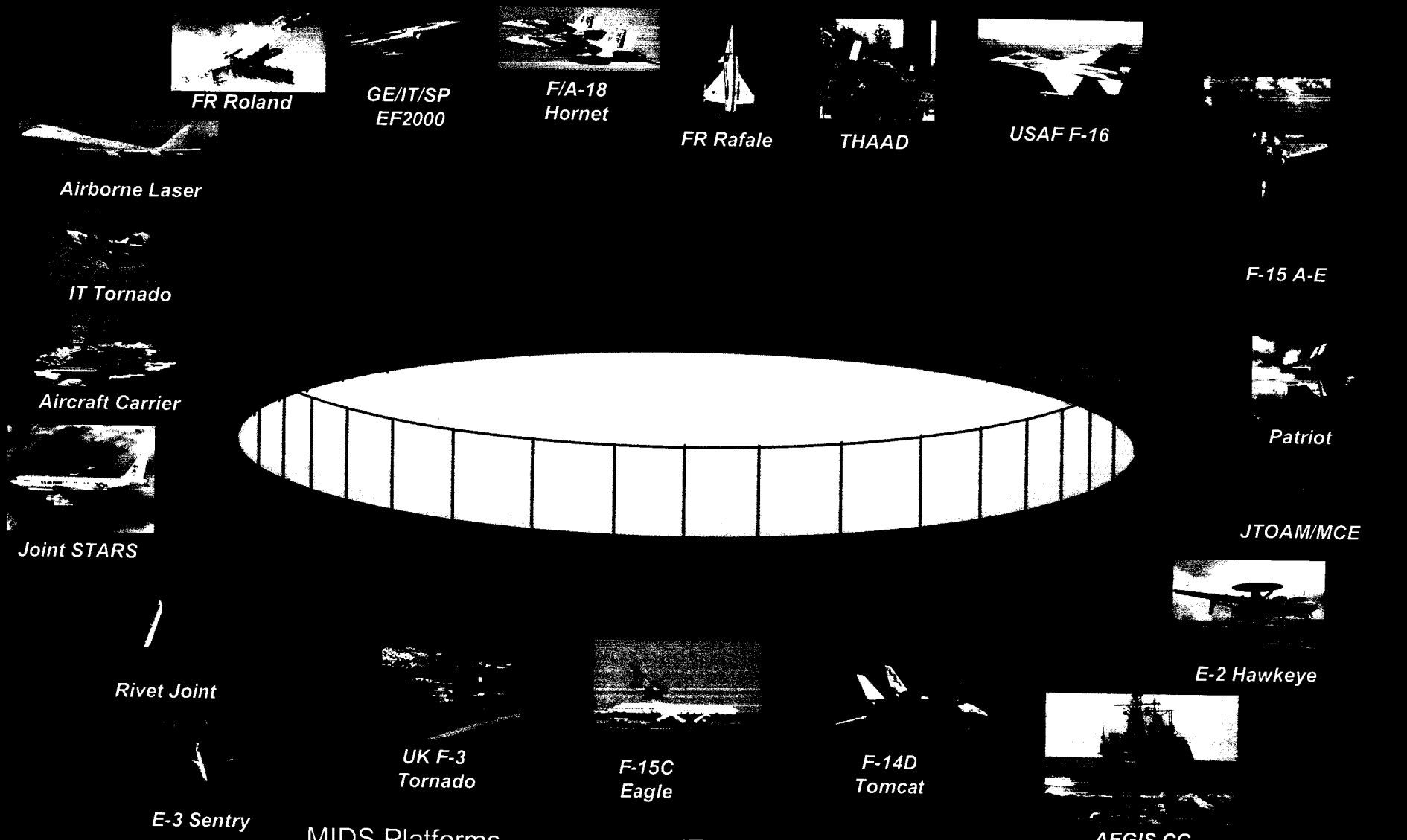
Communications Antenna Design / Analysis

Communications Systems and Network Connectivity to emulate the full spectrum of operational configurations from tactical to strategic:

- Individual shipboard systems
- Expeditionary Strike Group
- Network centric sea, air, land, space connectivity

Centralized control and decentralized management and planning tools for satellite communications

Link-16 / JTIDS
Platforms / Connectivity



MIDS Platforms
JTIDS Platforms

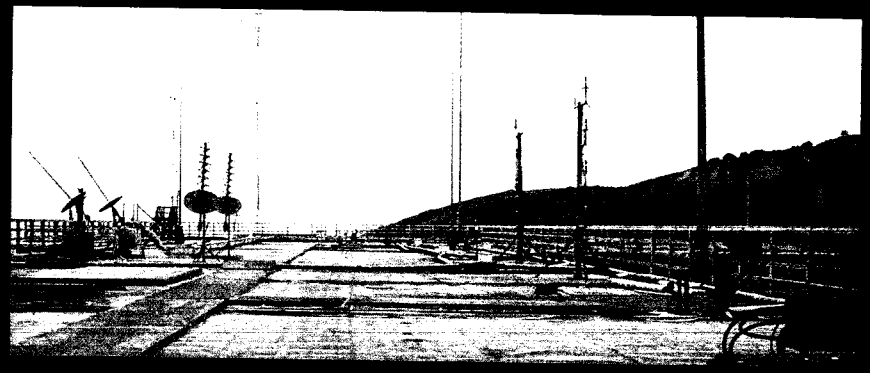
JTIDS and MIDS Equipped platforms are fully interoperable

Systems Integration Facility (SIF) Combined Test Bed (CTB)

Our labs are a Unique/ National Asset

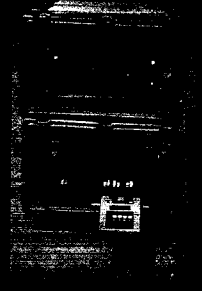
CIC

Build 600 Antennas

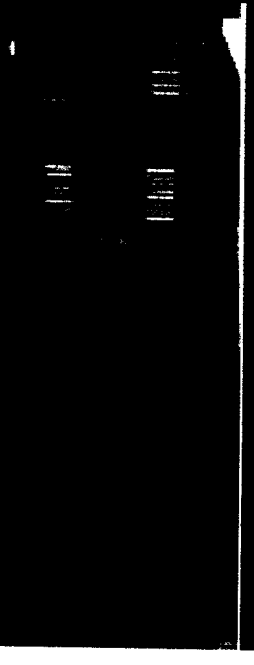


Air Platforms
F-14D Lab, NAWC-WD
F/A-18 Lab, China Lake

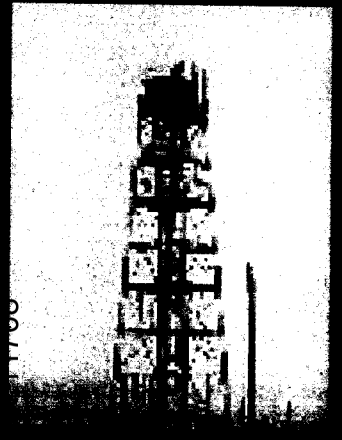
MIDS Mini-Rack



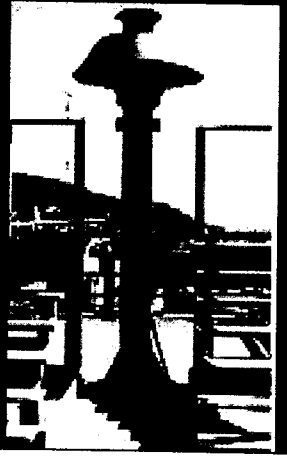
JTIDS Terminal



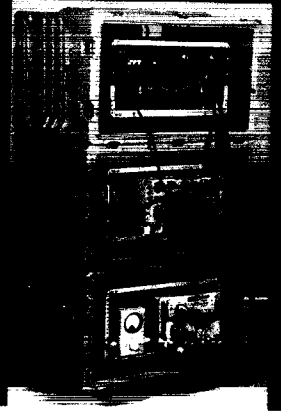
Pedro Tower Antenna Site viewing Entire Harbor



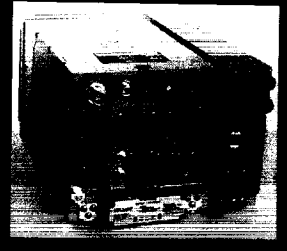
C&D, ACDS & CDLMS / C2P UYK-43 Processors



Link-16 Mini-Rack



MIDS LVT Terminal



E2C Test Lab

Navigation

Global Positioning System (GPS)

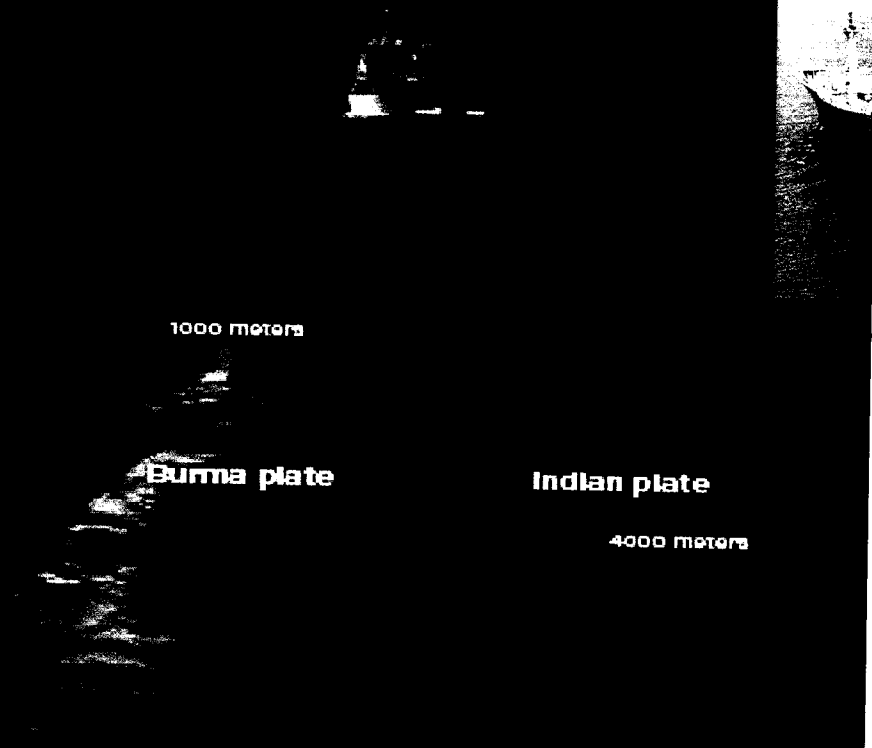
Operational Importance

- Satellite simulations
- Aircraft and shipboard integration
- Navigation warfare technology
- Shipboard and aircraft installations

Accomplishments

- Open system architecture test bed
- GPS interference detection system
- Wavefront simulator for testing GPS-
  phased array antennas
- Control display navigation unit software
  for non-precision approach

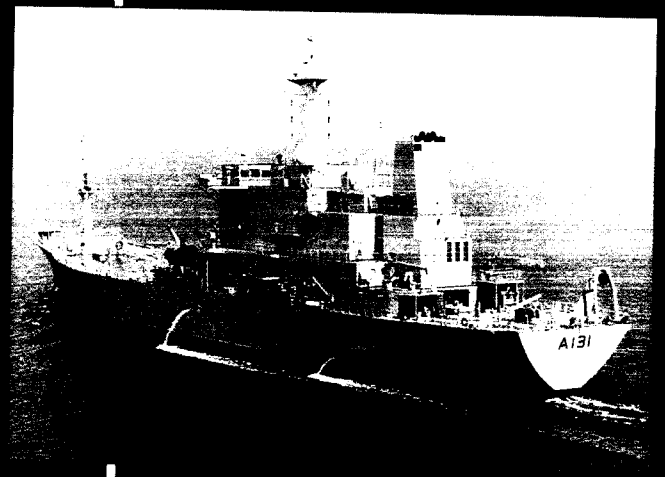
HMS SCOTT
TSUNAMI EPICENTER SURVEY



Seabed display generated by the bathymetric surveying system designed and developed by the Marine Navigation Division and installed aboard the United Kingdom ocean survey ship HMS SCOTT. This system utilizes a very high resolution wide swath array sonar system for depth measurement.

Bathymetry at its Best

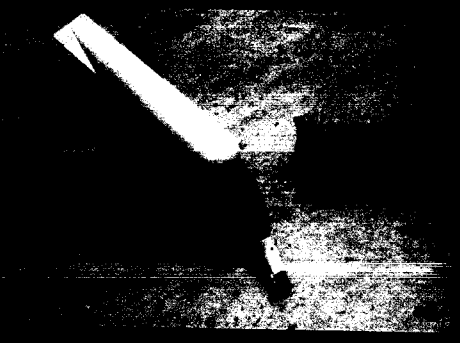
Navigation



Accomplishments

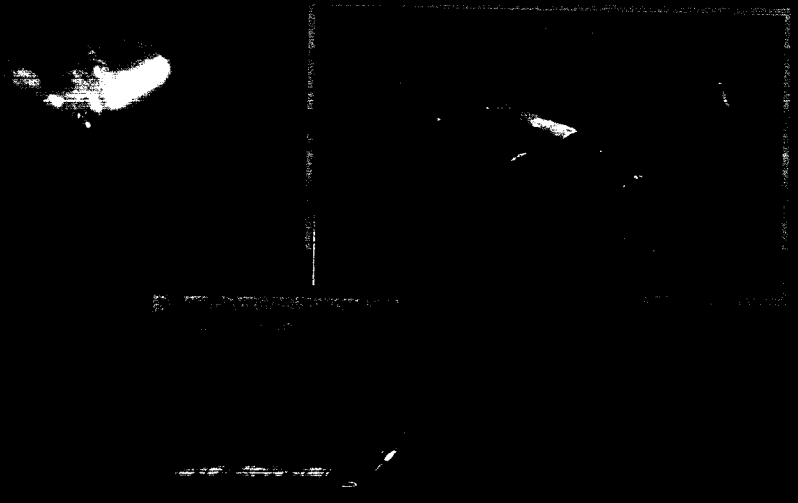
- Integrated bathymetric survey system to meet FBM submarine requirements
- United Kingdom MoD with Wide-Swath Bathymetric Survey System
- Acoustic Simulator with up to 144 channels simulating any type and depth of ocean bottom topography
- For the tsunami survey effort, it scientists on hand believed that much was learned because of the unique capabilities of the sonar system on board HMS Scott.

Fleet Marine Mammal Systems and Operations Planning Tools

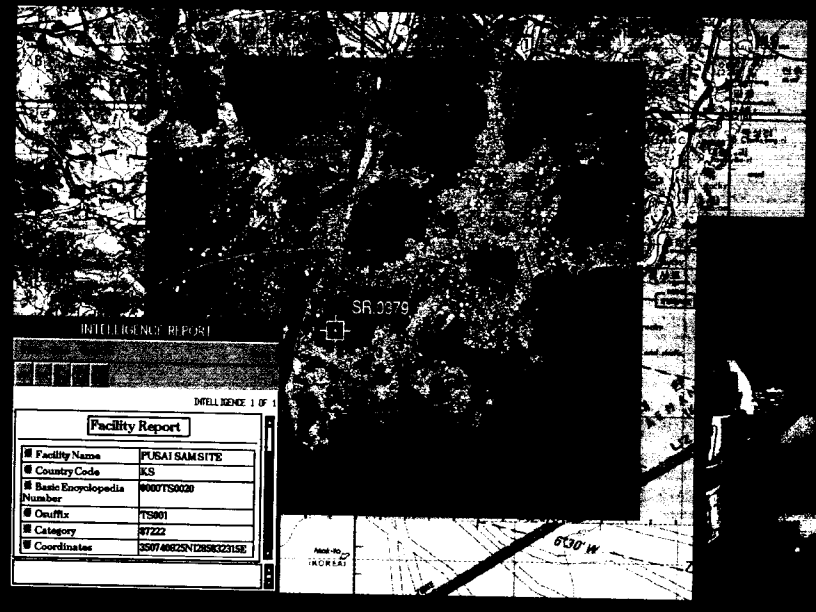


Spatial Data Query

- **Fill capability gaps** where unmanned systems or divers are not feasible
  - Mine hunting and clearance
  - Swimmer defense
- Technical support for offensive mining certification of naval air forces
- Planning tools to avoid adverse impact on marine population and environment



Command and Control

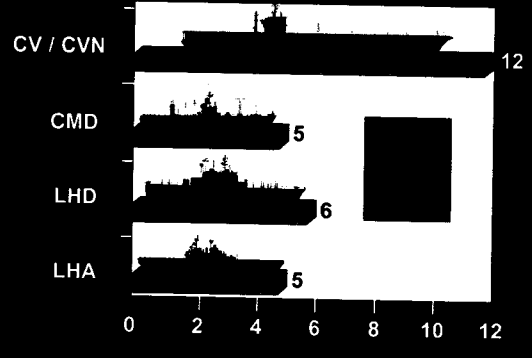


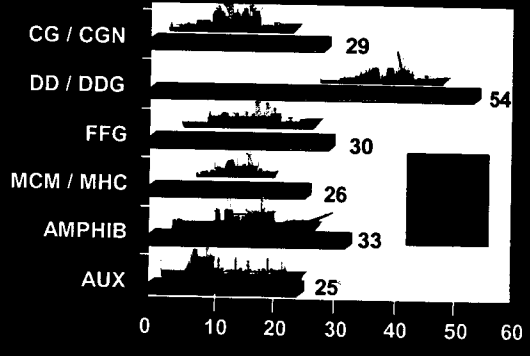
Integrated and scalable C3I information management capabilities in support of the warfighter

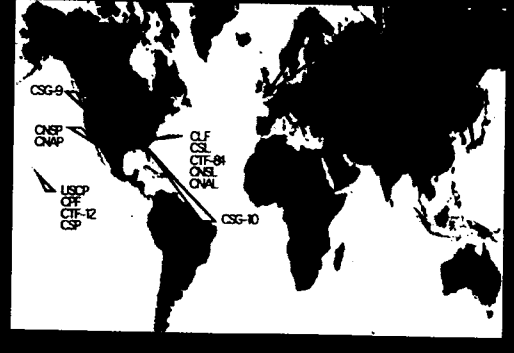
GCCS–M Afloat

GCCS–M Ashore

Global Command and Control System—Maritime (GCCS-M)







Command Centers

Joint Operations Center

- Focus of Crisis management
- Uses all C4I assets including national C2 systems
- Integrated with other battle cells

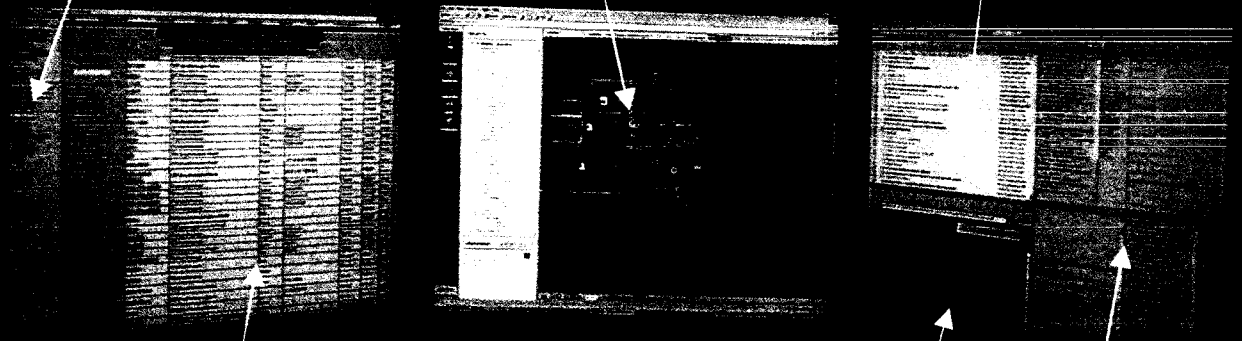
Central Command Deployed HQs

Composeable FORCEnet at CTF 74 in Japan

CFn Geo Display
- GCCS-M Tracks
- PC-IMAT overlays
- GALElite AOUs
- CVOA overlays
- AREPS overlays
- Documents
- Digital Nautical Charts
- ADRG charts
- DBDB-V in 3D
- Map-Chat

CTF74 Web Site

DMS Messages



ONI Web Page

Acoustic Full Field View

Tactical Chat Rooms

C4ISR Science and Technology (S&T) Provider for SPAWAR Enterprise

CAPABILITIES
PROCESSES
TOOLS

CTO

DEVELOP AND
INTEGRATE
C4ISR SYSTEMS

PROGRAM OFFICES

NEAR-TERM NEEDS
MID-TERM NEEDS
FAR-TERM NEEDS

SPAWAR Chief Technology Office (CTO) located at SSC SD to increase effectiveness and efficiency of S&T transitions to acquisition

Example S&T Thrust Areas:

- Human- information system interaction in distributed computing environments
- Dynamically reconfigurable networks
- Dynamic, non-linear techniques for communications and signal processing
- Fusion of geographically dissimilar source data
- Correlation navigation using topography, gravity, magnetics

In Summary

PEOPLE with talent and domain expertise

FACILITIES that are *UNIQUE* in the world

CONNECTIVITY to the Fleet, the Joint Establishment, the Acquisition Community, and to Industry

VISION of where we need to go, how to get there, and how to demonstrate the resulting capabilities

Conceive, Develop, Support

DCN:11708

SPAWAR

Summary of BRAC actions

The Space & Naval Warfare Systems Center San Diego

Carmela Keeney
Acting Executive Director
Space & Naval Warfare Systems Center

SPAWAR

Supporting the Goals of BRAC

- SECDEF BRAC recommendation created Maritime Information Systems Center of Excellence at SPAWARSYSCEN San Diego using:
  - Current capacity, future capacity, and surge capacity in their capacity analysis
  - Military Value analysis
  - and Scenario Development and Analysis
  - An overarching strategic framework in it's recommendations
    - Provide efficiency of operations by consolidating technical facilities to enhance synergy and reduce excess capacity
    - Establish multifunctional multidisciplinary technical RDAT&E Centers of Excellence

DCN:11708

SPAWAR

Scenarios Affecting SPAWARSYSCEN San Diego

- Surface sensors – Tech-0008E
- Sub-surface sensors – Tech-0008I
- Maritime Information Systems – Tech-0008F

SPAWAR

Scenarios Affecting SPAWARSYSCEN San Diego

- Scenarios Tech-0008E, Tech-0008I, and Tech-0008Faffect SPAWARSYSCEN San Diego
  - Total of 365 FTE reported in Sensor scenarios
    - Not considered for realignment
      - Classified projects totaling 28 FTE
      - Projects completed since Capacity data call totaling 51 FTE

SPAWAR

Scenario Reporting by SPAWARSYSCEN San Diego

- Tech-0008E - Surface sensors
  - Total of 118 individual projects
    - 101 projects reported < 1 FTE total work effort

SPAWAR

Sensor Scenarios reported exclusions SPAWARSYSCEN San Diego

Scenario	Reported FTE Exclusions		FTE Exclusion Total
	Inextricable	Location	
Tech-0008E – Surface	81	11	92
Tech-0008I – Sub-Surface	37	43	80

SPAWAR

Scenarios Affecting SPAWARSYSCEN San Diego

- **Sensors moving out of SSC San Diego**
  - Moving to NSWC Dahlgren 108
  - Eliminated 43
  - Moving to NUWC Newport 113
  - Eliminated 5

  TOTAL BILLETS OUT OF SAN DIEGO 269

SPAWAR

Scenarios Affecting SPAWARSYSCEN San Diego

- **Maritime Information Systems moving to SSC San Diego**
  - Moving from NSWC Dahlgren 111
  - Eliminated 5
  - Moving from NUWC Newport 112
  - Eliminated 38
  - Moving from NSWC Port Hueneme 98
  - TOTAL BILLETS TO SSC SAN DIEGO 321

DCN:11708

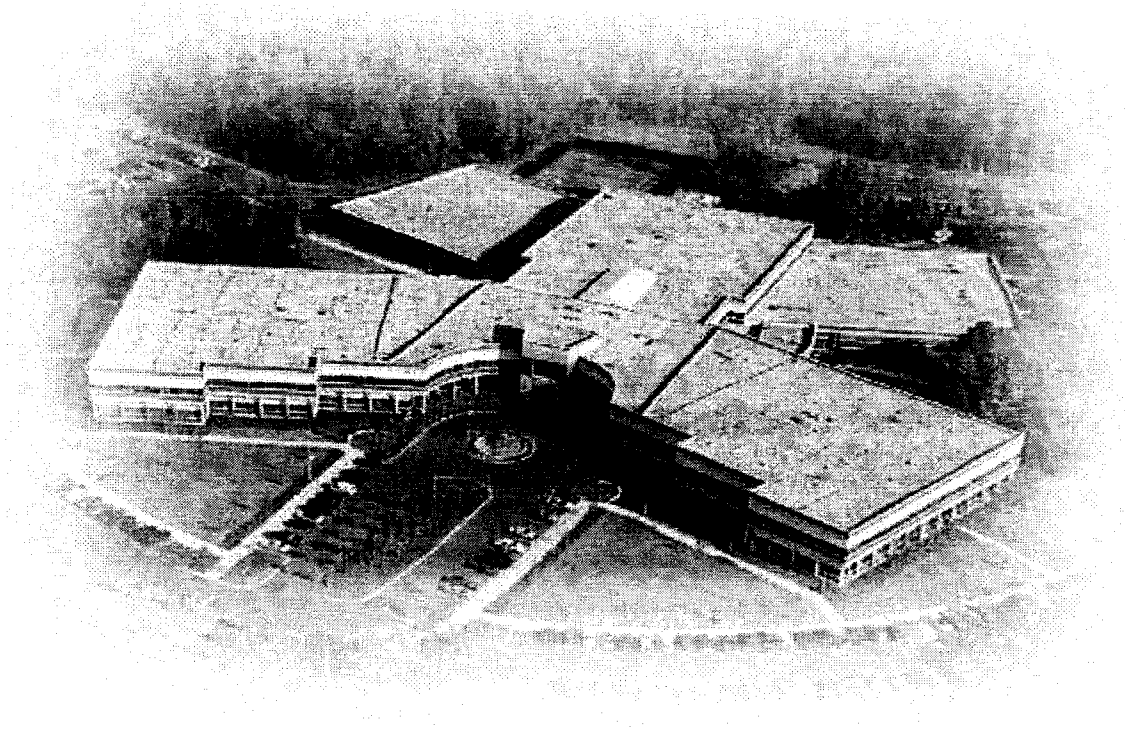
SPAWAR

WRAP-UP/Questions

- Today we have provided you an overview of SPAWARSYSCOM and SPAWARSYSCEN San Diego
- We have also explained the BRAC recommendations across the SPAWAR Enterprise
- What questions can we further answer for you?

SPAWAR Systems Center Charleston

A Joint Network Centric Enterprise



Presented to the
BRAC Commission

By:

CAPT James Hoffman
USN (RET)

DCN:11708

DCN 11708

Consolidate Maritime C4ISR RDT&E

- Move Maritime Information Systems (IS) to SSC San Diego
  - Naval Surface Warfare Center (NSWC) Dahlgren, VA
    - Lose 111 people to SSC SD
  - Naval Underwater Warfare Center (NUWC), Newport, RI
    - Lose 112 people to SSC SD

DCN: 11708

Why Move Work to Charleston?

- Charleston is a Cost Effective Location
  - Civilian Labor Rates
  - Contractor Labor Rates
  - Cost Effective Operations…Additional Savings

DCN: 1708

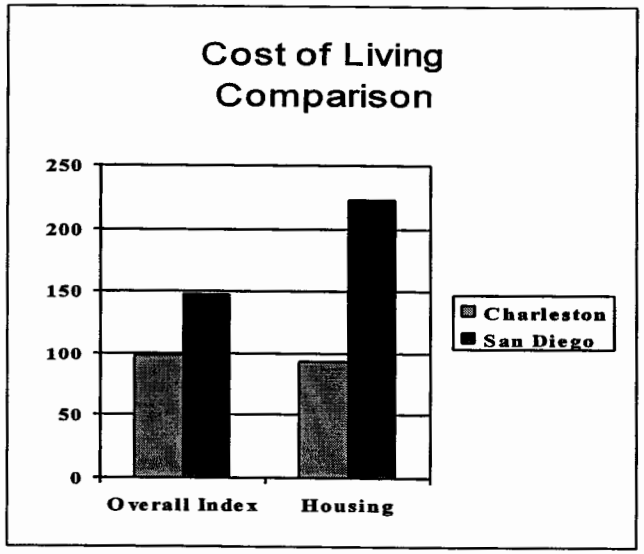
Greater Mission Effectiveness

- Charleston Mission Highly Synergistic with NSWC and NUWC's IS Work
  - C4ISR & Combat Systems
  - Submarine Info Systems
  - Platform integration Activities
  - Joint and Multi-Service Programs

DCN:11708

Charleston = Cost Effectiveness

Charleston's Cost of Living Makes Relocation Possible



2400 Square Foot Home

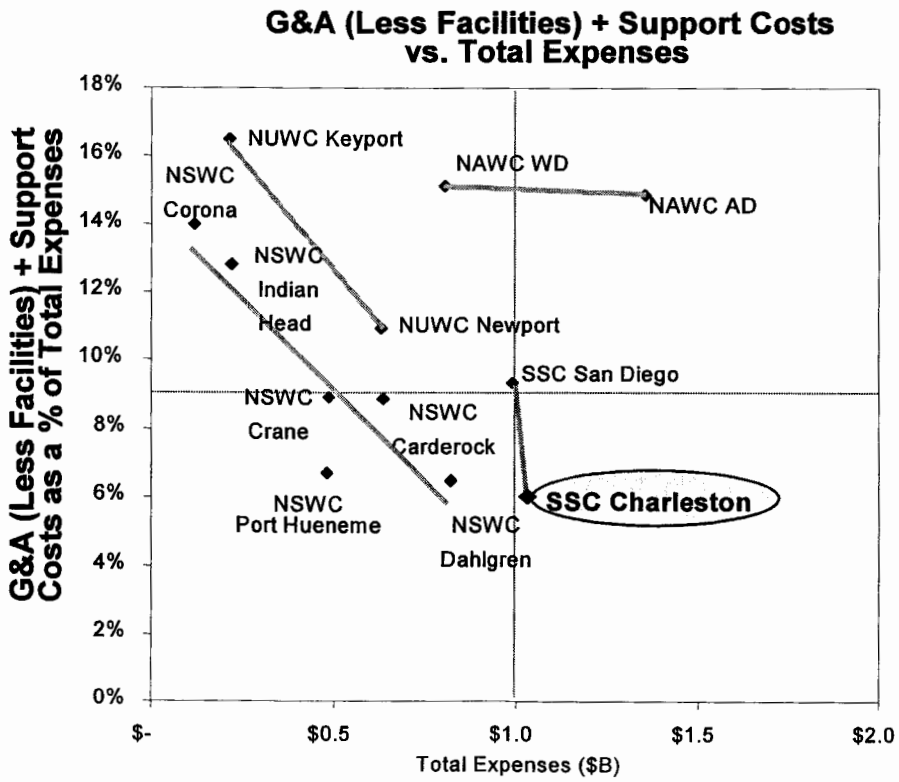
Charleston = $229,000

San Diego = $597,000

Source: ACCRA Cost of Living Index

Preservation of Intellectual Capital

Charleston: Most Efficient Operations of All Navy Engineering and Warfare Centers



Source: SECNAV Study Conducted by Booz Allen Hamilton

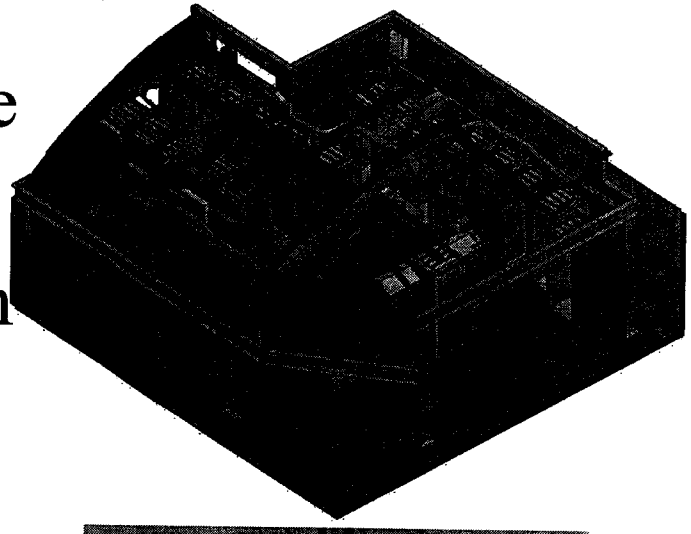
Highly Synergistic with Navy Surface Weapons Center IS Work

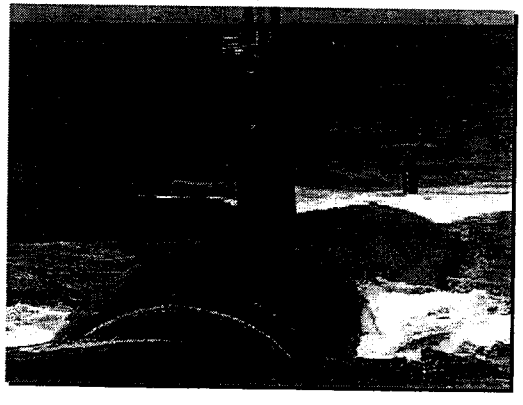
- **C4ISR & Combat Systems**
  - Closer Coupling Reduces Time to Observe, Orient, Decide, and then Act
- **FORCEnet**
  - Relies on Close Coupling of Sensors, Shooters, and Command and Control Nodes (Complete C4ISR and Combat Systems) to Succeed
- **Interior Communications**
  - Voice and Data are the Tie Between C4ISR and Combat Systems
- **Global Information Grid – Bandwidth Expansion**
  - SSC Charleston is a Leader in GIG-BE Implementation & Testing

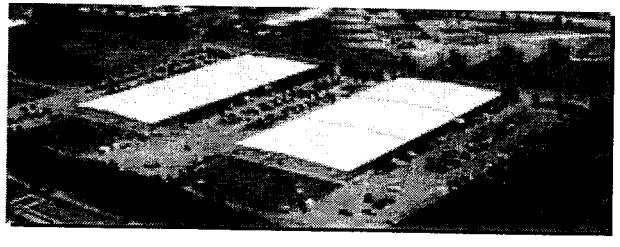
DCN:11708

A Leader in Sub C4ISR and Platform Integration – Logical Location for NUWC IS Work

- Lead for Common Submarine Radio Room Integration
- 90,000 SF System Integration Facility
- Multiple Turnkey Platform Integration Facilities



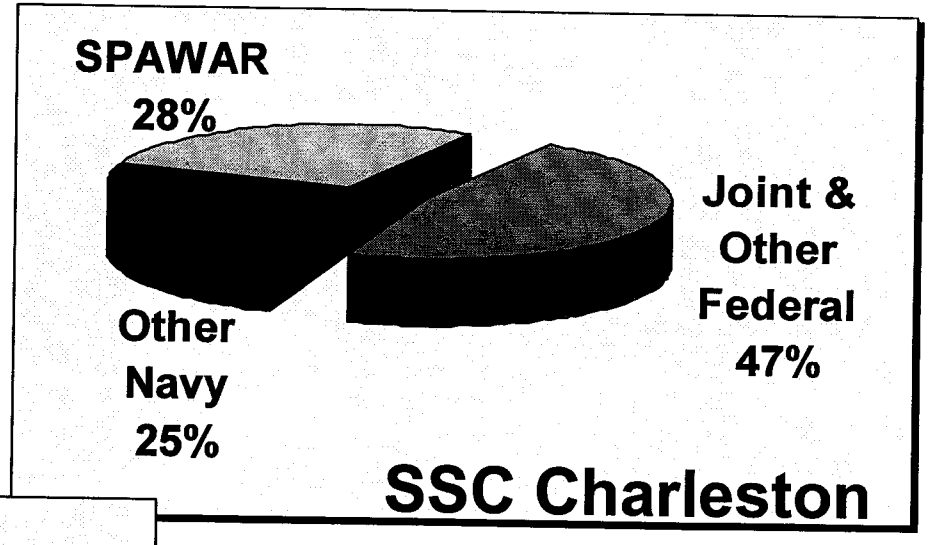


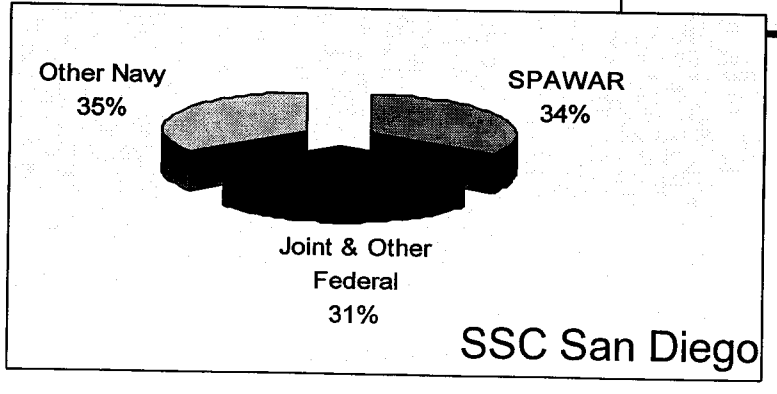


DCN:11708

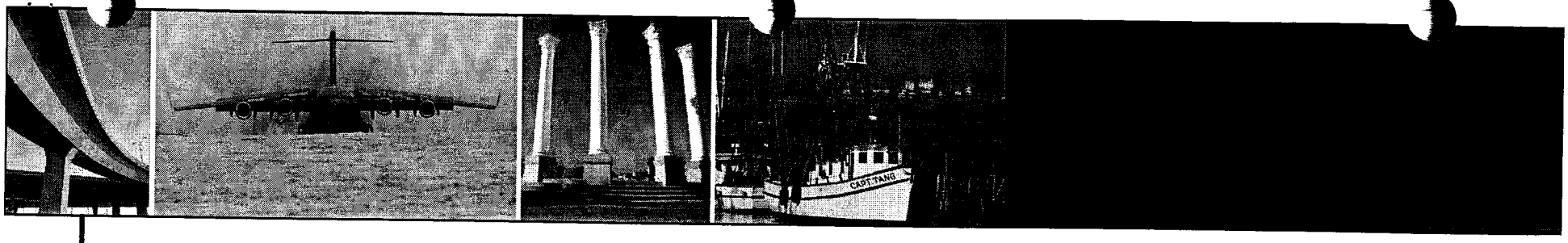
A Major Joint System Provider

- A Major Joint and Transformation Hub with 47% of its Work Coming from Joint and Other Federal Customers
- Systems Developed for Multiple Services Leverage Common Software and Designs





DCN:11708



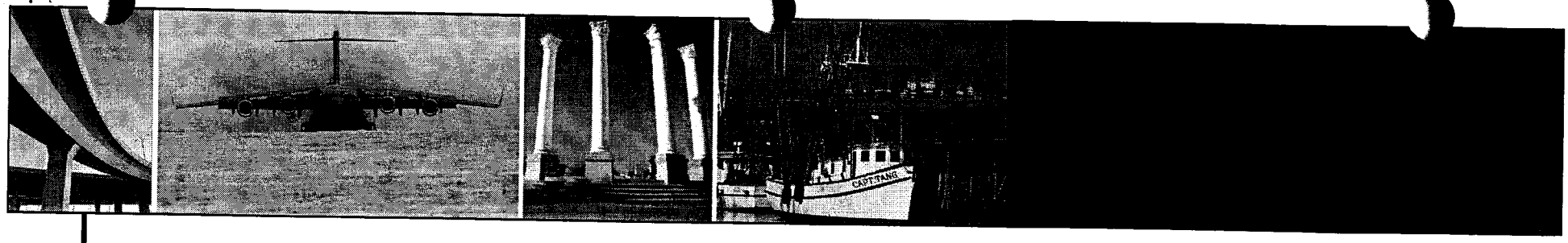
Joint War-fighter Engineering Facility

"The trip to SSC Charleston illustrated an engineering facility that has application across the complete Joint War-fighter environment with a significant amount of effort within other agencies outside of DoD. They are not just a Navy lab but could form the basis for a Joint War-fighter Engineering Facility…They have drawn on lessons learned and implementation experience that place them 18 to 24 months ahead of our other DoD initiatives."

OSD-NII, March 29, 2005

OASD Networks and Information Integration

DCN:11708



Charleston is a Better Location to Move NSWC and NUWC IS Work

- More Cost Effective… >$30M Savings
- Preservation of Intellectual Capital
- Strong Synergy with Combat Systems IS Work
- Replacement of Submarine Radio Room Already in Execution at Charleston
- Major Opportunities for Increasing Joint System Developments
- Facilities and Infrastructure Already in Place

DCN:11708