Space and Naval Warfare Systems Center Pacific

Command Overview
SSC Pacific Mission

From Concept to Capability via...

Research, development, engineering, and support of integrated C4ISR, cyber, and space systems across all warfighting domains and to rapidly prototype, conduct test and evaluation, and provide acquisition, installation, and in-service engineering support.
SSC PAC Support in the Pacific Region

Strategic Location

Only DoD Lab Located in a Major Fleet Concentration Area
SSC PAC: A Legacy of Discovery for 75 Years

Arctic Submarine Operations

Radar / EW

ARPANET

Laser Research

NTDS

SHF SATCOM

Polaris

Ship-launched Torpedoes

Underwater Acoustics

Personalized Assistant that Learns (PAL)
Naval Research & Development Establishment

Department of Navy Research and Development Establishment

- ONR
  - NRL +
  - SP PROJ
- CNR
- DASN RDT&E
- SYSCOMs
- NUWC
  - NUWC NP
  - NUWC KP
  - NUWC LANT
- NSWC
  - NSWC AD
  - NSWC CD
  - NSWC COR
  - NSWC CR
  - NSWC DL
  - NSWC PC
  - NSWC PHD
  - NSWC Phil
  - NSWC IH
  - NSWC COR
  - NSWC CR
  - NSWC PHD
  - NSWC Phil
  - NSWC IH
- UARCs
- FFRDCs

+ Principal R&D Labs and Centers
FY17 Profile
Our People Are Our Greatest Strength

**FY17 Profile**

<table>
<thead>
<tr>
<th>CIVILIANS*</th>
<th>4756</th>
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<tr>
<td>Scientists &amp; Engineers</td>
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<tr>
<td>Tech Specialists</td>
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<td>Admin/Professionals</td>
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<td>SES/ ST/ SSTM/ SL</td>
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**MILITARY**

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<td>Enlisted</td>
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<tr>
<td>Officers</td>
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**TOTAL**

4,953

*Civilians include NWCF and General Fund

**New Professional (NP) Program:**
- ~2850 applicants for 77 positions
- Average GPA 3.41

**Highly credentialed, educated workforce**
- 194 PhDs
- 1,356 Masters

**3,648 SCI Clearances**
- 1,955 Civil Servants & Military
- 1,693 Contractors

~ 32% of workforce: Active Duty, Reservists, Veterans
~ 400 Civilians Directly Supporting C4ISR with the Fleet Around the World

FY17 = $2.6B
Total Obligation Authority
Capabilities – Across the Full Life Cycle

**Today**
The Navy in Operation

Installation and Support

- Production, Installation
- In-Service Support

**Tomorrow**
The Navy in Construction

Engineering, Development, Test and Evaluation

- C4ISR for Unmanned Vehicles
- Mixed Reality

**Future**
The Navy in Planning

Science and Technology

- Cryogenic Exploitation of RF
- Nano Satellites
- Graphene
- Biologically-Inspired Autonomous Sensing

- Marine Mammals
- Networks
- Collaborative Software Armory
- Integrated Cyber Operations
- Integrated Fires
- Space Command & Control
- User Center Design
- FDECO
- Human Machine Teaming
- Advanced Antenna Research

CMD Overview
Intellectual Capital and Partnerships – Industry and Academia

CRADA - Cooperative Research and Development Agreement

- Establish and foster R&D partnerships with industry and academia
- Advance technology and move innovation from the lab to the market and ultimately the warfighter

Technology Transfer

- Promotes innovation and creativity with SSC Pacific technology
- Important pathway to move Navy innovation from lab to market and ultimately the warfighter

Partnering in Education and Community Outreach

- Three San Diego based start-up companies formed as a result of licensing SSC Pacific technologies

Community Impact:
- 16,654 Students
- 100 Schools
- 1,072 Teachers
- 178 Events

Volunteer Data:
- 407 Volunteers
- 11,174 Total STEM hours
- 9,409 Volunteer hours

Patents

- FY17: 155 Disclosures, 100 Patents Filed, 50 Patents Issued

Publications

- FY17: 177 Journal Articles, 361 Conf. Papers, 104 TRs/TDs

San Diego State University

UC San Diego

Carnegie Mellon

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Moving Forward

▼ Strong demand for Cyber and C4ISR

▼ Increasing demand for Systems of Systems engineering, rapid prototyping and experimentation

▼ Increase speed to capability and affordability

▼ Reduce complexity, streamline processes, and adopt best practices

▼ Human-machine teaming; Autonomy/ Machine Learning; ISR; Networks

▼ Innovate, Integrate, Interoperate