



Naval Sea Systems Command  
NUWC Division Keyport

# **ESMS**

## **(Event Streaming Media System)**

### **A tool for media synchronization and T&E insight**

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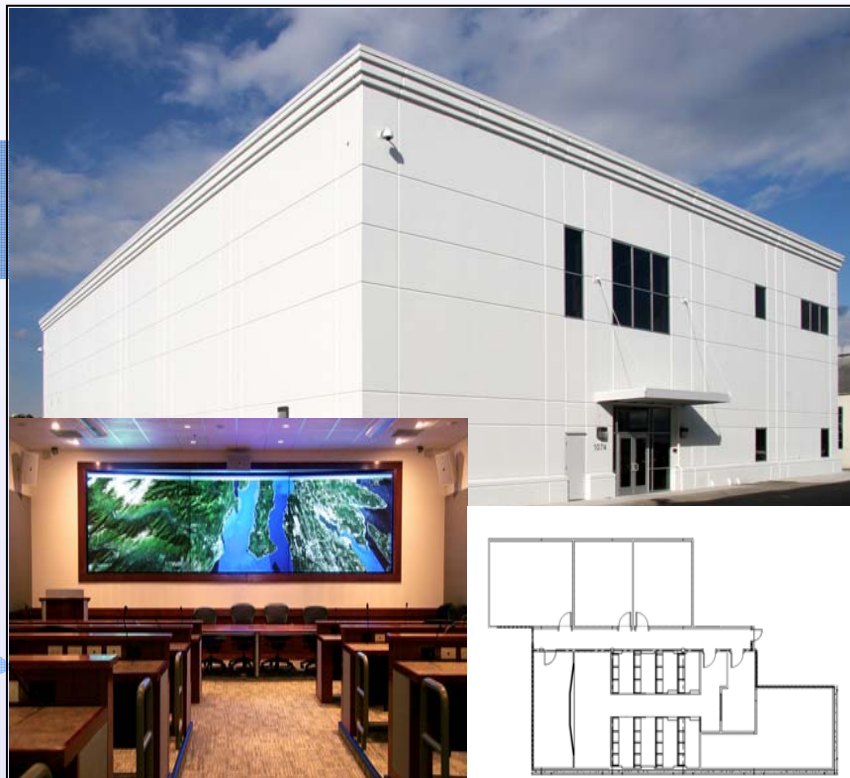
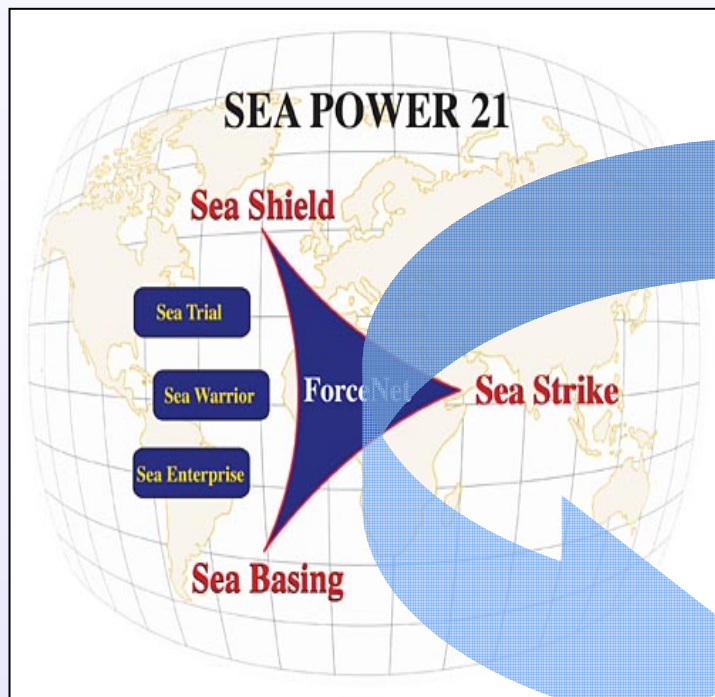
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- **About NUWC Division Keyport**
- **About CTEC (Collaborative T&E Capability)**
- **ESMS (Event Streaming Media System):**
  - **What is it & Why?**
  - **Some Details about the ESMS tool**
  - **ESMS Replay**
- **Conclusion**



# About NUWC Division Keyport





*“... develop Sea Power 21 capabilities  
... by coordinating war gaming, experimentation & exercises  
... using technology push, concept pull, and spiral development  
... with the Fleet at the heart of innovation.”*

# CTEC (Collaborative Test & Evaluation Capability)

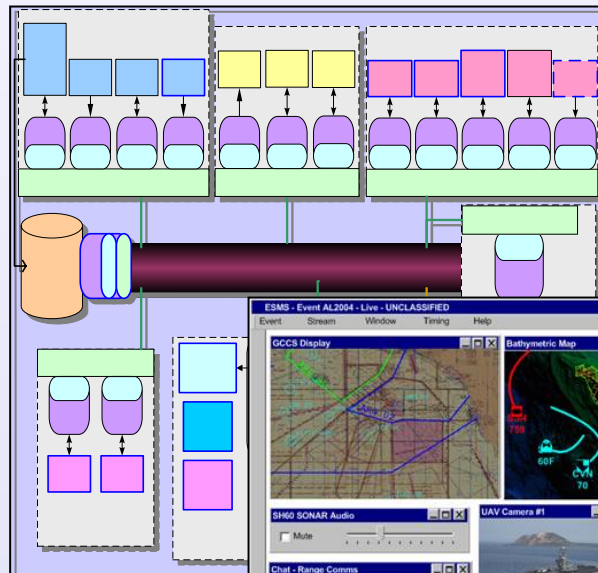


**Focus Area: The Undersea / Littoral Warfare Component**



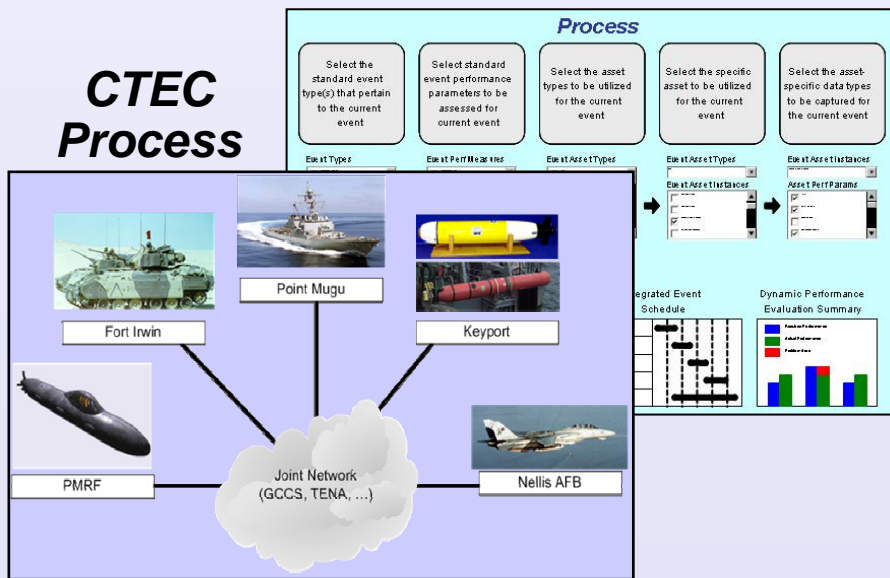


- CTEC, the **Capability**, is comprised of three complementary components:
  - **Facility**
  - **Process**
  - **Tools**

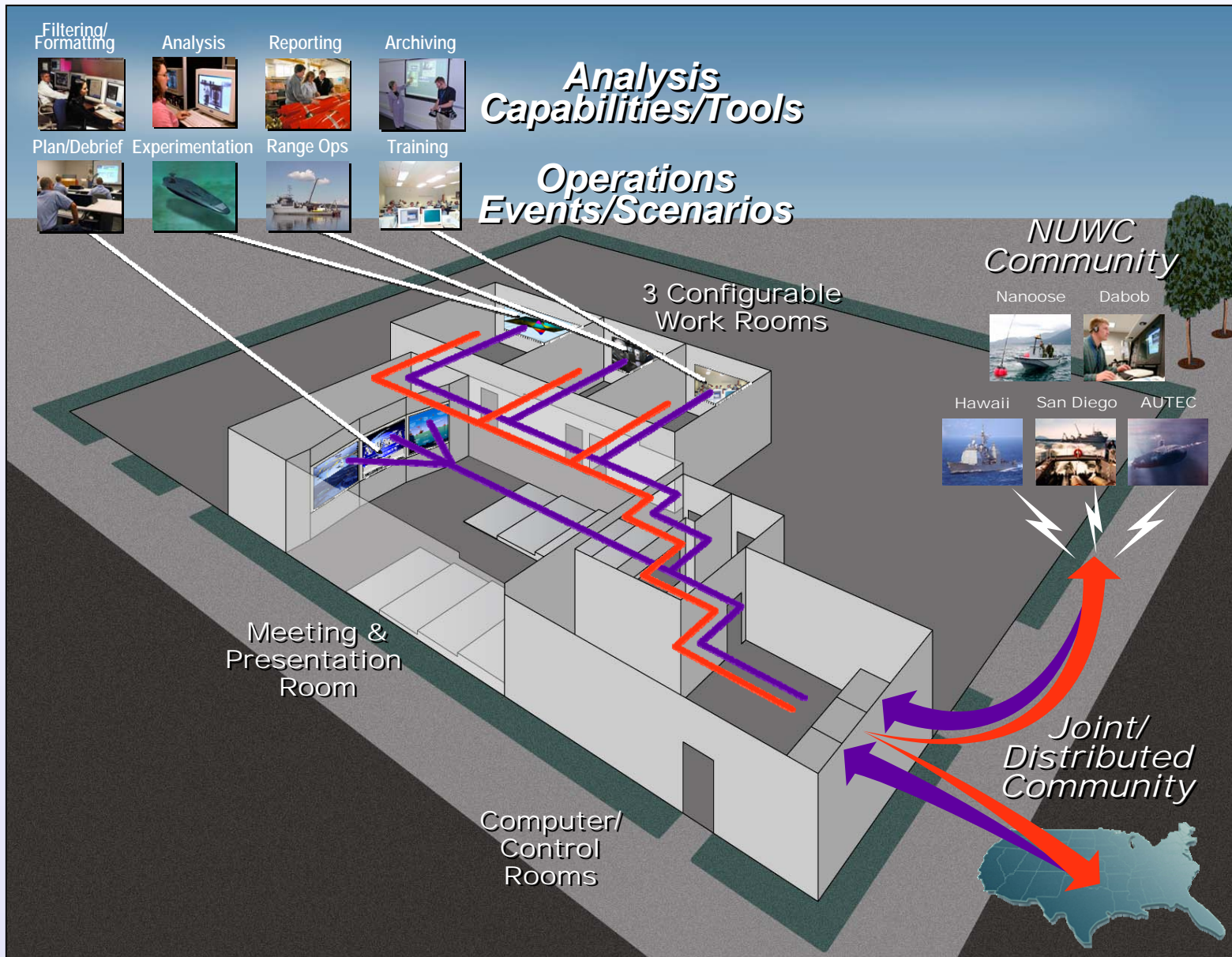


**CTEC Tools**

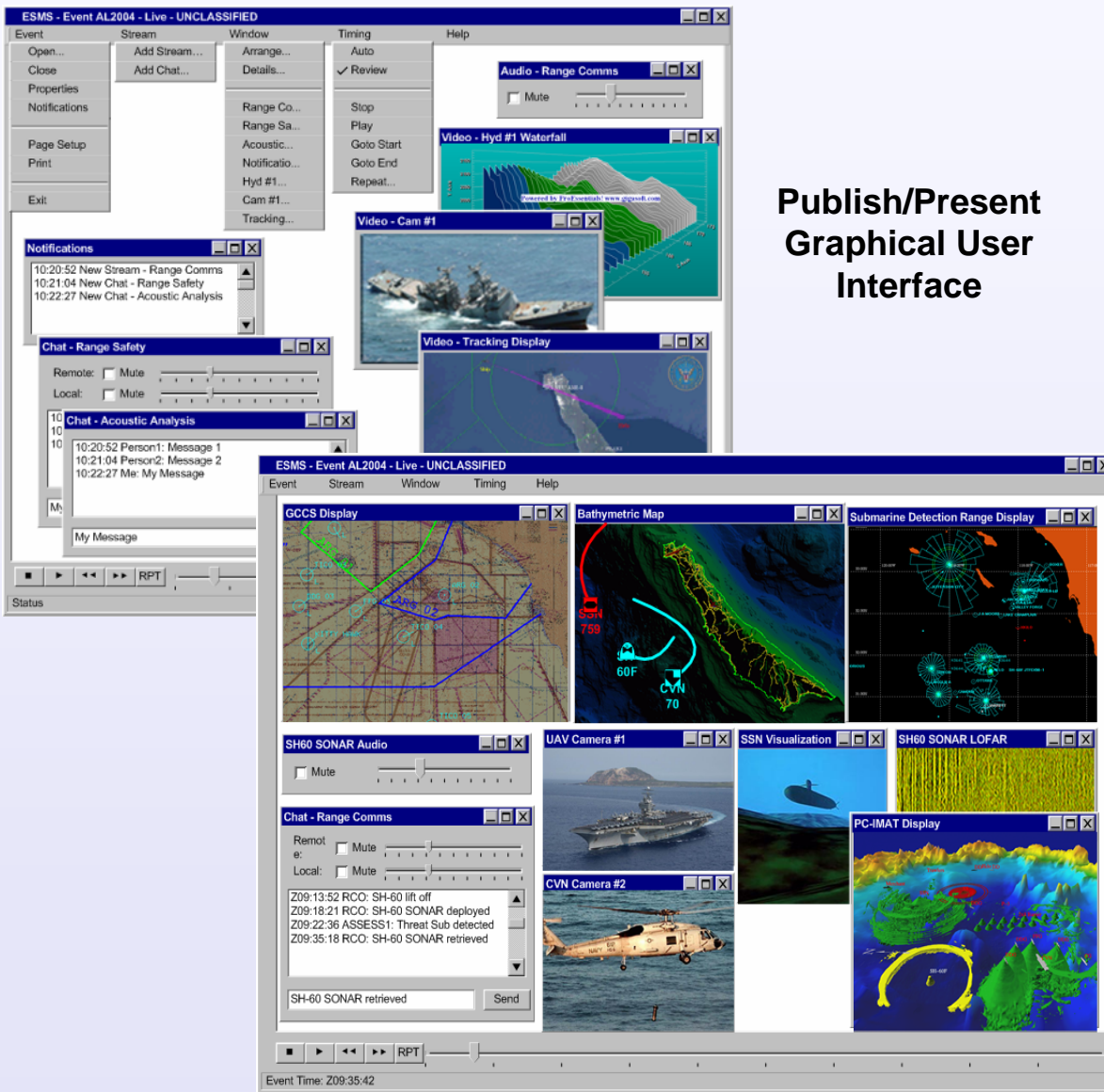
## CTEC Process



# CTEC: Facility, Tools, & Process





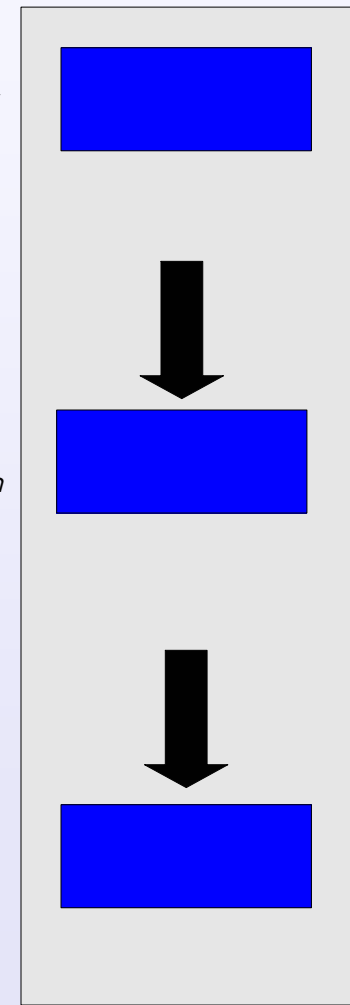


**Publish/Present  
Graphical User  
Interface**

*Publish Client:  
IE w/Flash Player*

*Servers:  
Adobe Flash Comm  
Microsoft SQL*

*Presentat Client:  
IE w/Flash Player*





# Why ESMS Is Needed?

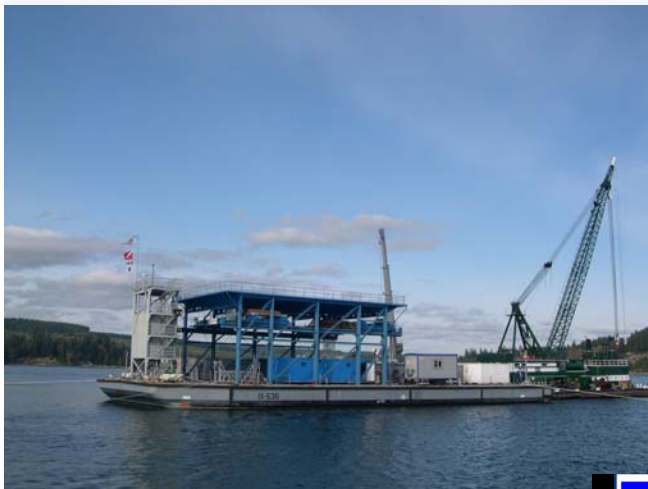
- **Limited event data correlation => limited insight**
- **Incomplete and/or inaccessible archive => limited cost effective test reconstruction**
- **Limited live event visibility => lower test productivity**
- **Diverse event viewing roles & requirements**
- **Extended duration events with ad hoc participation**
- **Complex event viewing & analysis applications**
- **Commercial media server products are not optimized for event insight**

## *Performance Priorities*

System Characteristic	Business Communication	Event Insight (ESMS)
Latency	1 (highest)	4 (lowest)
Bandwidth	2	3
Quality	3	2
Synchronization	4 (lowest)	1 (highest)

## *Desired Features*

Feature Set	Total Features
Event Administration Management	6
Event Access Management	3
Stream Access Management	17
Stream Administration Management	2
Archived Stream Access Management	2
Offline Event Timing Management	5
Online Event Timing Management	2
Notification Management	3
Chat Access Management	7
User Administration Management	6
Group Administration Management	3
Event Archive Management	2
Presentation Formatting	2
NUWC Range Integration	1
Hardcopy Management	1
Help Management	2
<b>Total</b>	<b>57</b>



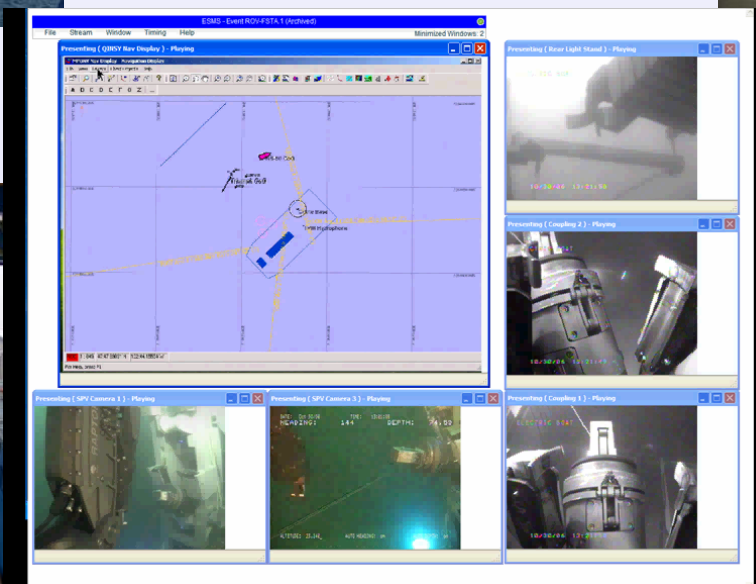
*Keyport Test Barge*



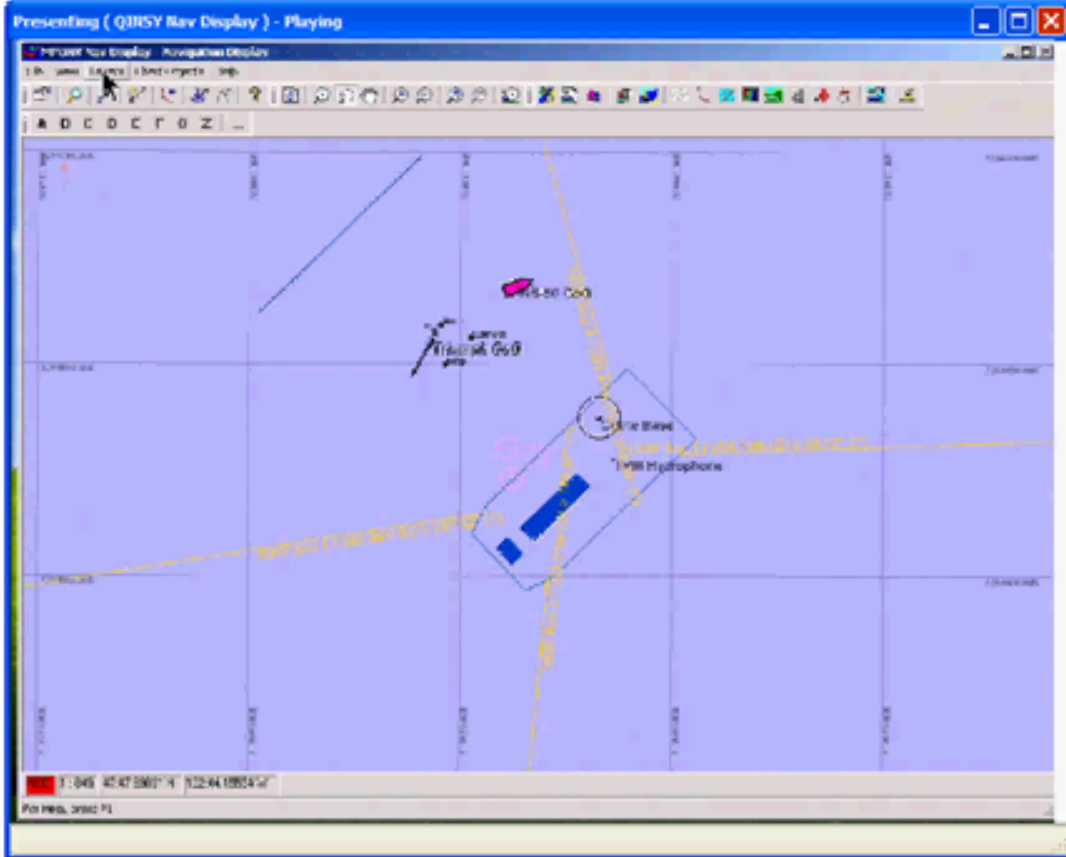
*ESMS Display*



*Keyport Recovery Vehicle*











## ESMS Features

- **Synchronous information** from distributed information sources (audio, video, screen capture) for a single event
- **Correlated analysis insight** in a distributed environment
- **Replay/review capability** (“TIVO” like)
- **Configurable perspectives** supporting insight for many job functions
- **Distributed collaboration** environment
- **Event comparison** through live archive access query
- **Continuous event life cycle** through re-publication
- **Distributed server design** to enhance communication performance

*ESMS Fly-Away Kit*



- *Panasonic Rugged notebooks*
- *PTZ Video Cameras*
- *Lorex Infrared Cameras*
- *Epiphan Frame Grabber*
- *Osprey 440 Video Capture Card*
- *A/V Cables*
- *Linksys Wireless Router & Hub*
- *Harris Wireless Bridge for SECNET-11*
- *Adobe Flash Media Server 2*
- *UPS Battery Backup*



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