Lab Meeting – June 23. 05

- Status
  - AUVs Battle
  - ASC Curcio

- Personnel

- Travel Issues

- Test Plan

- Mission Software
  - AUV Navigation (Leedekerken)
  - AUV Control (Battle/Bahr)
  - Acomms
    - Operational (Patrikalakis/Bahr)
    - Measurements (Costas/Stojanovic)
  - Moving Baseline Nav (Leonard)
  - Detection and Tracking (Poulsen)
  - Adaptive Sampling (Wang)
  - Adaptive tracking (Eicksted)
  - Collaborative tracking (Eickstedt/Benjamin)
  - Target Handover (Leonard/Benjamin)
Adaptive Environmental Assessment

Nested aperture acoustic signal processing

Autonomous, cooperative navigation and control

Modem-ranging network navigation

Inter-platform communication

Target handover

Demonstration in 2005
  - Swordfish arrays
  - Target augmentation with HF source
2005
MIT Operations Area
Pianosa – 2005
MIT Assets

- **R/V**
  - DPS
  - Networking
    - 10Mb link to shore lab
    - GPRS Internet
    - Satellite Internet
  - AUV Operations
    - 2 MIT BF’21
    - Control Center
    - HIPAP real-time tracking
    - Zodiac work boat
  - AUV Engineer
    - HIPAP Operation
    - EM3000 Operation
    - AUV-ops support
  - MIT Personnel
    - 4 Full time
    - 5 Daytime

- **Laboratory**
  - Networking
    - 10 Mb link to R/V
    - GPRS Internet
    - Satellite Internet
  - ASC Operations
    - 3 MIT Autonomous Kayaks
    - Control Center
    - Zodiac work boat
      - GPS
      - Acoustic tracking
  - Modeling and Analysis
    - Ocean forecasting
    - Acoustic Signal Processing
  - Logistics Manager
    - Supplies
    - Networking
  - Personnel
    - 8 MIT
    - 1 WHOI
    - 2 Harvard
# 2005 Test Schedule

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2005
Mission A1: AREA Sampling

ACOMM Bouy
LBL transponder
POOL

10° 6’ E
42° 35’ N

2 km
2.5 km

Alpha
Bravo
Charlie
Echo Delta
NC
2005
Mission A2: Moving Baseline Navigation

ACOMM Bouy
LBL transponder
POOL

10° 6' E
42° 35' N
2005
Mission B3: Tracking and Handover

ACOMM Bouy
LBL transponder
POOL

10° 6’ E

42° 35’ N

2 km
2.5 km
2.5 km

Alpha
Charlie
Bravo
Echo Delta
NDT
2005
Mission B4: Adaptive Tracking

- ACOMM Bouy
- LBL transponder
- POOL
- Towed source

Coordinates:
- 10° 6' E
- 42° 35' N
2005
Mission C1: Dual AUV Surveillance

Ocean Engineering

ACOMM Bouy
LBL transponder
POOL
Towed source

2.5 km
2 km

Alpha
Charlie
Bravo
Echo Delta
NDT

10° 6’ E
42° 35’ N

Ingresso vietato
(vedi Avvertenza)
2005
Mission C2: Dual AUV Adaptive Tracking

ACOMM Bouy
LBL transponder
POOL
Towed source

Alpha
Charlie
Echo Delta
ND
NDTA
2.5 km

10° 6’ E
42° 35’ N
2005
Mission C3: Dual AUV Adaptive Tracking

ACOMM Bouy
LBL transponder
POOL
Towed source
2005
Mission C4: AUV-VLA Adaptive Tracking

Ocean Engineering

2 km
2.5 km
42° 35’ N
10° 6’ E

ND
NDT_R
NDT_A

ACOMM Bouy
LBL transponder
POOL
Towed source
VLA