# Status of NDSF Navigation Upgrade

- **Embarked upon program as soon as funding was available**

- **Phase A only ($$)**

  - **Prototype for replacement of Benthos 455 ASP**

  - **Software to replace LBL PC**

  - **DP software, DVLNAV unaltered**

# Status of NDSF Navigation Upgrade

- **Chose to base system upon Digital Ranger, commercial ASP board developed by WHOI/OSL, available from Hydroid**

   **Used by NAVOCEANO, every *REMUS* user**

- **Likely configuration will be small (2U?) box in van, small (shoebox?) located at ship's transducer (prototype)**

- **Purchased 3 boards for *Jason/Medea*/ship**

- **Boards currently being modified to drive ship and vehicle transducer**
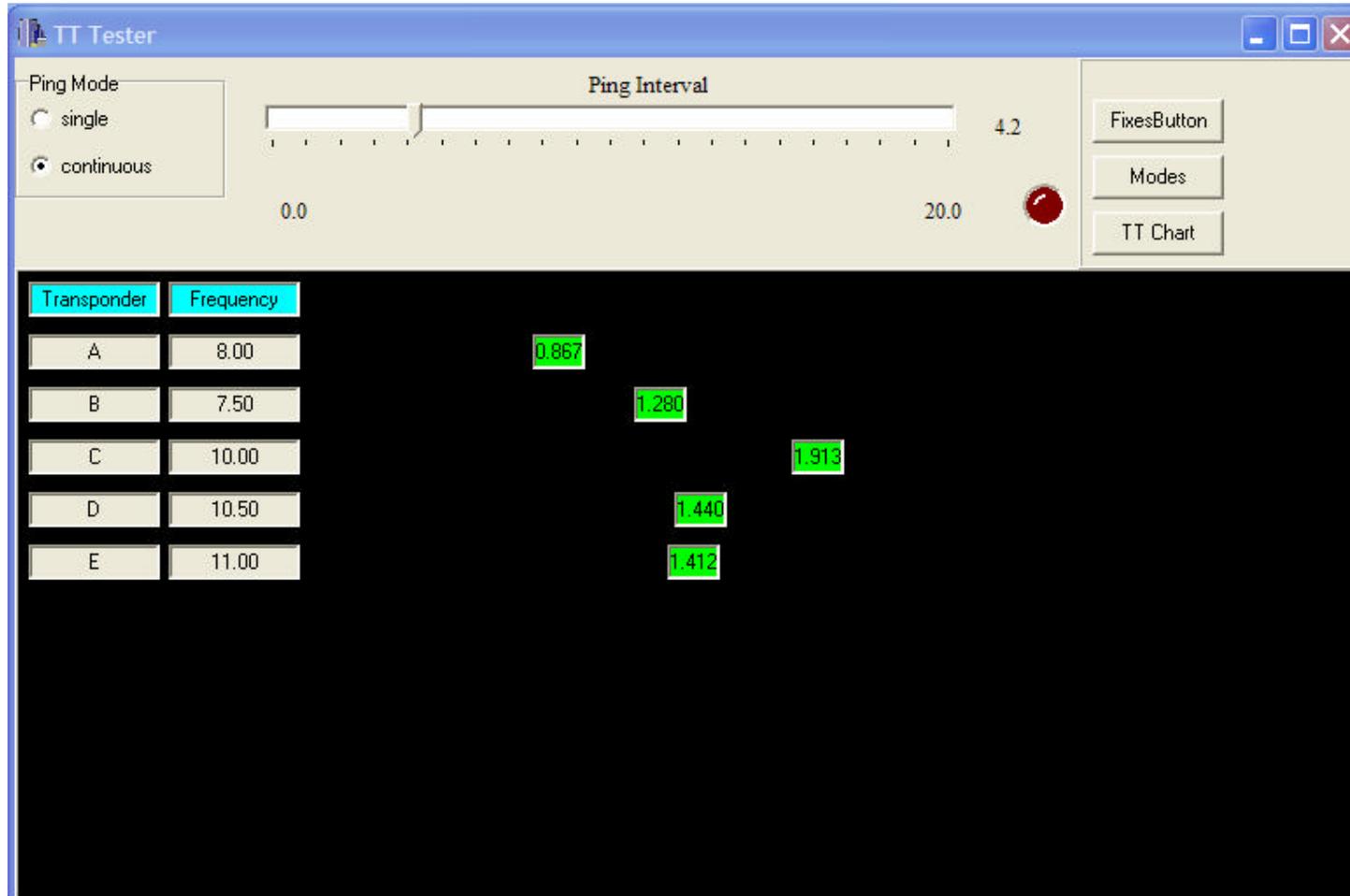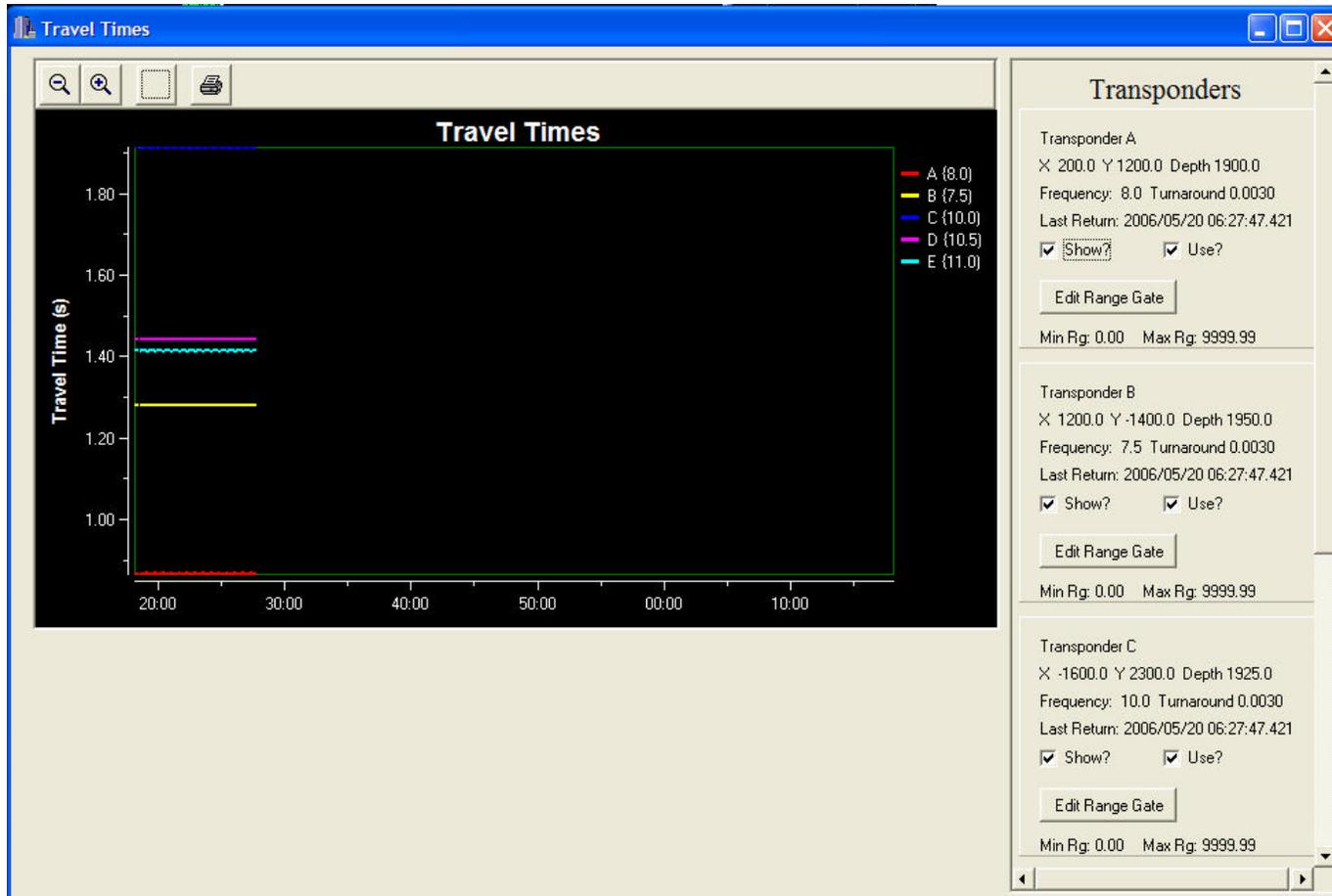
# Status of NDSF Navigation Upgrade

- **Software will include current LBL capabilities (PRV, relay, survey)**

- ***ABE* enhancements (multi-transponder, auto-range-gating)**

- **Will allow replacement/use of LBL computer as spare**

# Status of NDSF Navigation Upgrade

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- **Plan is to build hardware during the gap before the next *Jason* cruise period**

- **Testing…hardware/processor to sea?**

- **Benthos 455 becoming increasingly difficult**

- **Move from prototype to permanent equipment**

    → *Will require further funding*

# Enhancements

- **System can be generalized to other NDSF/vehicles**
  - → *Will require further funding/development*

- **Extendibility to smart transponders?**

- **Move DR boards subsea?**

# Summary

- **Chosen and purchased ASP hardware**

- **Testing software under development**

- **This year's plan:**

  - **Test hardware/prototype software**

- **Future**

  - **Replace 455/LBL PC**
  - **Continue with phased plan**