Role of IPRC’s Asia-Pacific Data-Research Center (APDRC) in PRIDE

PRIDE Workshop, 9-10 August 2005

• NOAA and NOPP perspective
• Value-added activities (ongoing and new)
Broader NOAA and NOPP Context
(APDRC contributes to several programs)

• PRIDE
• NOAA/OCO (Office of Climate Observations)
• GODAE (Global Ocean Data Assimilation Experiment)
A System of Complementary Networks.
It will Evolve.
Now 50% complete.
• Focus is on applications users (to complete observation system)
• Need is for new products from the observations
• Get the products to the users
GODAE

As the international community participates in the demonstration phase of GODAE, (2003-2007)
there is an overarching need for rapid delivery of data products from satellites and models to the broad user community including regional operational entities.
The APDRC as a GODAE Product Server

Legend:
- Sources of Inputs
- GODAE common
- Users of GODAE outputs
- Regional network
APDRC Activities

Web interface development
Data Server System operation and development
Data management and product archiving

Value-added and applications product development-
  GODAE product serving (nowcasts and forecasts)
  PRIDE research and integrated product development
  Data rescue and quality control
  Hawaii high-resolution regional model (and other regions)
  Observations for regional models
T(z) Quality Control at CSIRO

Indian Ocean will be completed in summer 2005

CSIRO would like to do the Pacific Ocean working with the APDRC

Locations of final Indian Ocean Thermal Archive which contains about 410 000 unique profiles.
HydroBase2
Ruth Curry, WHOI
QC of T,S(z) profiles and bottle data;
and produce gridded products
Regional Model

• Develop a high-resolution, regional model of an island domain; configure for Hawaii (data) but make it portable to other regions
• Use GODAE global products as boundary conditions
The left panel shows sea surface height from a regional model. Boundary conditions along the edges were supplied by a large-scale NRL model integration. This regional model will be run at even higher resolution to more accurately capture near-shore flows; the higher resolution bathymetry is given in the panel on the right.
Webb Research Glider
Track from Rutgers Glider Web Site

LAST SURFACING: 11-Dec-2004 10:29:58 GMT
APDRC Roles for PRIDE (2005-2007)

Continue base, global DSS and DM activities.

**Collaborative research** to support product development and evaluation.  
**Collaborative development** of application products.  
**Collaborative network development** for data and product delivery to users.  

*(servers to cell phones)*

Thank you!
Funded PRIDE Projects at JIMAR/IPRC

Features of projects: research, products, collaborations.

High rainfall events and their changes in the Hawaiian Islands
Pao-Shin Chu, (Met/UH)
(X. Fu, IPRC/UH; J. Potemra, IPRC/UH)

Development of an integrated dataset of subseasonal-to-seasonal rainfall forecasts for the Pacific islands
Fu, Xiouhua (IPRC/UH)
(N. Colasacco, PEAC/NWS; He, CPC/NCEP; J. Weyman, NWS; J. Potemra, IPRC; P. Chu, Met/UH)

Construction of a high-quality tropical cyclone reanalysis dataset using 4DVAR data assimilation techniques
Li, Tim (IPRC/UH)
(F. Weng, NOAA/NESDIS; X. Zhang, IPRC/UH)

Analysis of extreme events and trends in Pacific Ocean water level data and its application to risk and vulnerability assessment
Merrifield, Mark (UHSLC)
(L. Kong, UNESCO/IOC/ITIC)

Climatology of the Hawaii volcano plume during different meteorology conditions
Porter, John (HIGP/UH)

Development of an integrated data product for Hawaii climate
Xie, Shang-Ping (IPRC/UH)
(Y. Chen, Met/UH; J. Hafner, IPRC/UH)
Funded Projects at NOAA collaborating with APDRC

Integrated access to Pacific region data assimilation model output
Hankin, Steve (NOAA/PMEL)
(E. Chassignet, UM; J. Potemra, IPRC/UH)

Hawaiian Archipelago pilot project for a Pacific region integrated information website
Soreide, Nancy (NOAA/PMEL)
(J. Potemra and S. DeCarlo, IPRC/UH)

Integrated PMEL Argo access and EPIC web at IPRC to create an operational pilot for a Pacific region in-situ data display website
Soreide, Nancy (NOAA/PMEL)
(J. Potemra and G. Yuan, IPRC/UH; W. Zhu, NOAA/PMEL)

Integrated Pacific region data delivery for low and high bandwidth internet connects
Sun, Charles (NOAA/NODC)
(N. Soreide, NOAA/PMEL)