#### **David Poulter**

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- 1 Introduction
  - HR-DDS Concept
  - HR-DDS User Interface
- 2 Progress since Villefranche-sur-Me
  - Architecture
  - New data sets
- 3 Usage
  - About the users
  - New interface prototype
  - Examples of usage
- 4 New Developments
  - Funded developments!!
- 5 Conclusions
  - Final thoughts



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**HR-DDS** 

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### The Medspiration concept of HR-DDS implementation was rather simple:

- To generate for each data chain a collection of common subsets.
- To make these available via OPeNDAP and FTP.
- To make available in some form of quick look imagery

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- The concept of limited 'pre analysis' with some geophysical data being stored in a relational database
- Very limited dynamic quick look generation
- Batch download facilities



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# We are currently building HR-DDS version 3. Specifically designed to meet the expected requirements of MyOcean, with three major shifts in implementation:

- User specific services, i.e. configuration pages, languages, filtering etc.
- More dynamic user experience, i.e. heated layer calculations or DV model estimations
- More ingestion pathways. Specifically to include wave data and ocean colour data.



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- All computers now run a common HR-DDS 'package', containing the code for the controller, workstation and server configurations. Everything is hot swappable.
- System is now operated by an interactive command program which controls machine load. Processing times for 24 hours of data is now 50 minutes. (Was 18 hours for HR-DDS version 1 and 6 hours for HR-DDS version 2)
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These changes have dramatically reduced maintenance overheads. Processing times have also improved significantly.



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### We are now operationally ingesting the following new data sets

- DMI 0.03 degree foundation analysis SST. This is a interesting product as it is gives by far the most spatially complicated SST patterns of all analysis.
- ODYSSEA 0.1 degree analysis product produced by Emmanuelle (?). Comparable to OSTIA but not as smooth
- REMSS TMI SSTs from GDAC.



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- MW OI 0.25 degree
- MW + AVHRR OI 0.25 degree
- SAF L3 'super collated' <sup>1</sup> SST
- Medspiration Galapagos L4 product

These should be ingested by the end of the month, although the L3 product may take a bit longer.

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Usage

- Average transfer is in the order of 75 MBytes per day
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- NOCS, UKMO, MF/CMS, UoE, EUMETSAT, NOAA, CSIRO, ESA
- Interestingly, users tend to be from UK, France, Germany and Canada
- There have been some unusual heavy users Samsung in South Korea and a High School in Portugal.

However, the most interesting statistic is that only 1 user in the last 2 months found the site from the GHRSST page. Almost everyone else arrived directly or from Google.



HR-DDS

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Usage

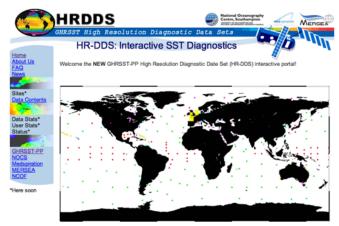
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Usage ... ...

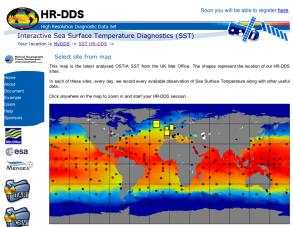
#### The old site looked like this (www.hrdds.net):



Copyright NOCS 2005-2006. Maintained by David Poulter. To link this page copy this link.



# The new site looks like this (medserve.noc.soton.ac.uk/mydds/sst):





D. J. S. Poulter NOCS

- The background is the latest OSTIA image (updated 15:00 each day)
- The screen includes a drop down menu on the left side which perpetuates through the users session
- The screen includes obvious links to FTP, OPeNDAP, TAR and CSV data downloads.



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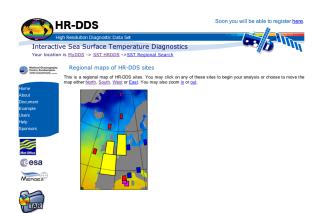
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New interface prototype

#### Users had reported the old map interface was cumbersome, the new one is easier:





# Users had reported bad rendering of images in FireFox, and slow page loads.:

- Every dynamic image produced on the site is cached server side for at least 24 hours
- Every dynamic image is thumbnailed to allow better rendering and fast browser performance.
- We have included web object graphics to give a smother feel ti the site

Specifically, 'hourglass' page loading graphics and background fadeouts provide for a more elegant feel...



HR-DDS

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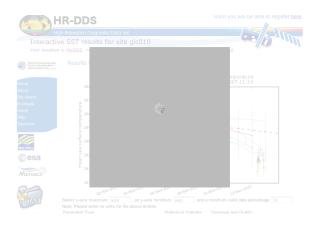
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Usage ○○ ○○○○○○

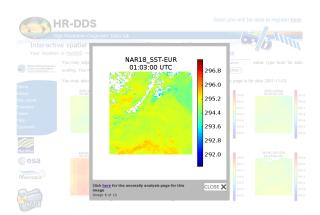
# Faded backgrounds make the page focus clearer





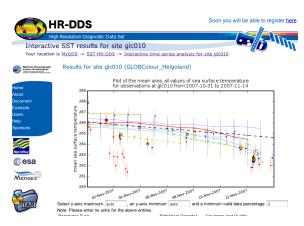
Usage

# Most images can be enlarged through a server side function:



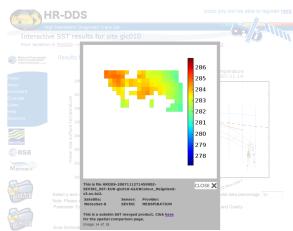


# Data can now be filtered by a minimum percentage of SST in granule:





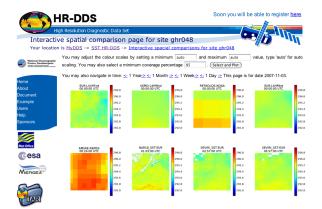
# Clicking on a point reveals a dynamic quick look image. Note that the colour bar is scaleble:





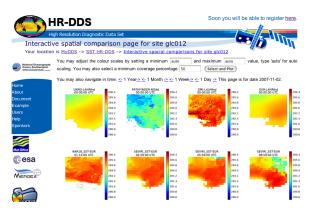
**NOCS** 

The spatial comparison pages can now be navigated by date.





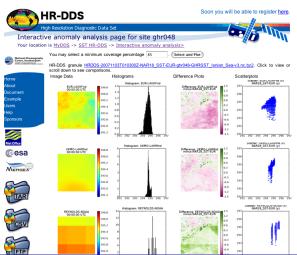
# Identification of spatial anomalies is far easier. For example the complexity of the DMI analysis





**NOCS** 

### The anomaly analysis has been enhanced.

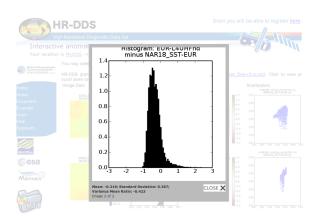




**NOCS** 

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# Inter-comparisons are more meaningful





The National Centre for Ocean Forecasting (NCOF) has funded us to perform a number of enhancements:

- Must ingest METOP-A, GOES and AMM SSTs.
- Must attempt to ingest MODIS-A SSTs
- We have to ingest *in situ* SSTs from CORIOLIS<sup>2</sup>

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Documentation, documentation and documentation:

- Online documentation
- Interactive documentation



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Introduction

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Introduction

## We have added automatic bug reporting features to the website





HR-DDS

- Disability awareness features (text enlargement)
- 'Make a suggestion' feature
- Consistent level of mouse overlay documentation



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