The CoastWatch Data Analysis Tool: Status and Future

Peter Hollemans, Terrenus Earth Sciences Consultant for NOAA/NESDIS

CoastWatch Operations Managers Meeting, August, 2008
Talk Outline

• About CDAT
• Current Release
• Future Releases
Example Screen
History

- **2001** Beta release in C
- **2004** Java release with CW utilities
- **2005** OPeNDAP network support
- **2006** GUI updates, units conversions, expression masking
- **2007** Navigation analysis, user’s guide, full screen mode, ACSPO, non-AVHRR NOAA 1b
User Groups

- NOAA/NESDIS researchers: verify products, analysis
- Academic researchers: data conversion, analysis, visualization
- Casual and commercial users: fishing, weather
Home Page

- coastwatch.noaa.gov/cw_cwfv3.html
- Installation packages, documentation
- Errata, prereleases
Development

- New versions released every 6-12 months
- Major feature requests from NESDIS (approval and funding)
- Minor feature requests from users
- Bug fixes are ongoing
Documentation

- Data users: User’s guide, help menus
- Software developers: Java code API in HTML (Javadoc), user’s guide chapter on main modules
- Data providers: User’s guide appendices on supported formats & metadata
New Features (3.2.2)

- Windows Vista support
- Full screen mode
- NOAA 1b improvements
- Navigation analysis
- User’s guide updates
New Features (cont ...)

Navigation Analysis

Add Point

Navigation Points

<table>
<thead>
<tr>
<th>Latitude</th>
<th>Longitude</th>
<th>Row</th>
<th>Col</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.0596 N</td>
<td>87.8511 W</td>
<td>1079</td>
<td>787</td>
<td>Auto failed</td>
</tr>
<tr>
<td>21.1872 N</td>
<td>86.8343 W</td>
<td>829</td>
<td>864</td>
<td>Auto failed</td>
</tr>
<tr>
<td>28.9135 N</td>
<td>82.5955 W</td>
<td>186</td>
<td>1185</td>
<td>Auto failed</td>
</tr>
<tr>
<td>30.3784 N</td>
<td>88.0096 W</td>
<td>59</td>
<td>775</td>
<td>Manual</td>
</tr>
<tr>
<td>29.6388 N</td>
<td>93.3049 W</td>
<td>106</td>
<td>374</td>
<td>Manual</td>
</tr>
<tr>
<td>19.9436 N</td>
<td>87.5605 W</td>
<td>929</td>
<td>809</td>
<td>Manual</td>
</tr>
<tr>
<td>18.4507 N</td>
<td>88.1681 W</td>
<td>1048</td>
<td>763</td>
<td>Auto failed</td>
</tr>
</tbody>
</table>

Navigation Offset

Variable: avhrr_ch2

Box size: 20 40 60 80 100

Row offset: 0

Column offset: 0

Clear
Save... Close

About CDAT
Current Release
Future Releases

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User Installations

- Total of 3571 user installations since April 2006 (~130 per month)
- Many more users installing than actively using:
User Distributions

Geographic Location

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User Distributions

Network Domain

- .edu 12%
- .gov 12%
- Other 76%

Operating System

- Windows 86%
- Unix 6%
- Mac 8%
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Current Development (3.2.3)

- Point data overlay
- XML-based shapefile display
- Data time series support
- Support for 3D and 4D CF-compliant netCDF and OPeNDAP data
Feature Ideas

- Vector data display
- Google Earth compatible output
- Flexible data import
- Scriptable operations
Summary

• About CDAT: history, users, website, development, docs

• Current Release: new features, current user stats

• Future Releases: development for 3.2.3, feature ideas
Acknowledgements

• CoastWatch node and central operations staff
• CoastWatch data users