MADIS Quality Control Prototype:
a system for improving real time weather observations

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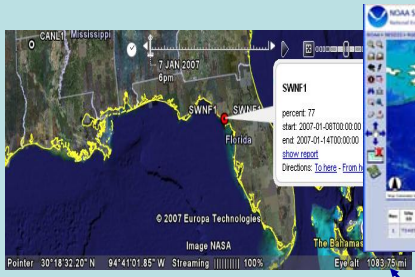
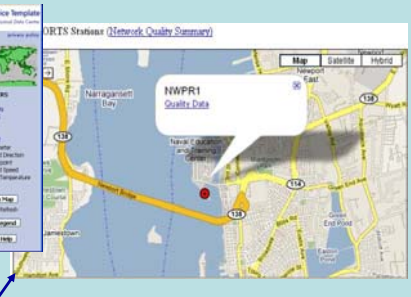
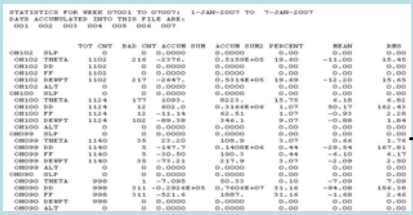
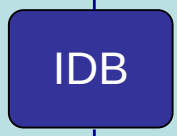






MADIS quality text files contain quality statistics for station observations. For this prototype 9 weeks of reports for 5 networks were ingested into a spatial database at NGDC and made accessible to users through several web based views.

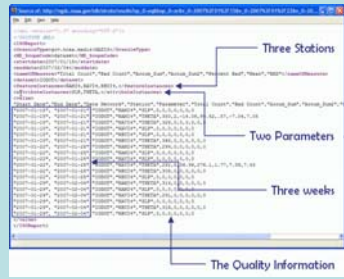
DATA ACCESS and VISUALIZATION:
The Meteorological Assimilation Data Ingest System (MADIS) retrieves and integrates weather observations from ~ 150 mesonet networks, and generates statistics that measure the quality of the observations. For this prototype, nine weeks of quality statistics were ingested into an NGDC database, spatially enabled, and made available to users through a variety of web interfaces. These interfaces include an ArcIMS interactive map veiwer, Google Maps and Google Earth viewers, and several report views of the quality statistics. These views were implemented to increase the accessibility and usability of MADIS quality control statistics for the purpose of improving the accuracy and reliability of weather observations.



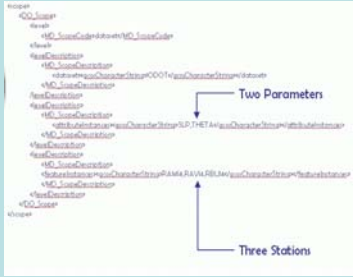
ISO REPORT GENERATION:
The Interface Database (IDB) is an NGDC tool for generating dynamic web pages. Below the IDB is generating a series of search and display web pages for the purpose of creating user defined ISO data quality reports. A report is produced by selecting a combination of dates, stations, and parameters for a given network. This selection produces a human readable HTML view of the result set. A machine readable ISO view of the results set (beef) can be generated by clicking the ISO link. The ISO generator combines the beef with quasi-static metadata (bun) to produce a standard ISO report.

Select network, date, station and parameter

Query results are displayed in an html table



ISO DQ snippet (beef) is created from the query results set



Standard ISO Data Quality Report: DQ_Scope

Standard ISO Data Quality Report: DQ_QuantitativeResult