Radar Analysis Tools Requirements

This page should be considered a draft.

This page discusses requirements for a suite of software that will be used to analyze radar data. Typically these are the processing steps:

1. Translation
2. QC and Editing
3. Gridding
4. Analysis

Each one of this steps may use one or more programs and data formats to accomplish thier tasks. A goal of new development will be provide an easier more flexible system of software then what currently exists.

Translation

When radar data is collected it is many times stored in a file format specific to that radar. A translation to a common data format is usually required.

Current software tools: xltrsii and sweep_trans.

QC and Editing

This step covers a wide variety of procedures and processing. It includes:

- Removal of ground clutter.
- Unwrapping velocity data.
- Calibration

Current software tools: ppi, solloii and parts of reorder.

Gridding

Gridding is the process of converting the radar data collected in spherical coordinate system to a three dimension rectangular coordinate system. There is probably no best way to grid radar data so there exist a number of algorithms. Another complication is that algorithms vary based on the platform the radar is on (stationary vs. airborne).

Current software tools: reorder and sprint.

Analysis

The gridded data is processed to produced products such as 3 dimensional wind and convergence fields. These fields along with the original gridded data are analyzed with visualization tools.

Current software tools: cedric and cidd.