

# LAPS in AWIPS 2 & GUI Plans

Linda Wharton / Paula McCaslin

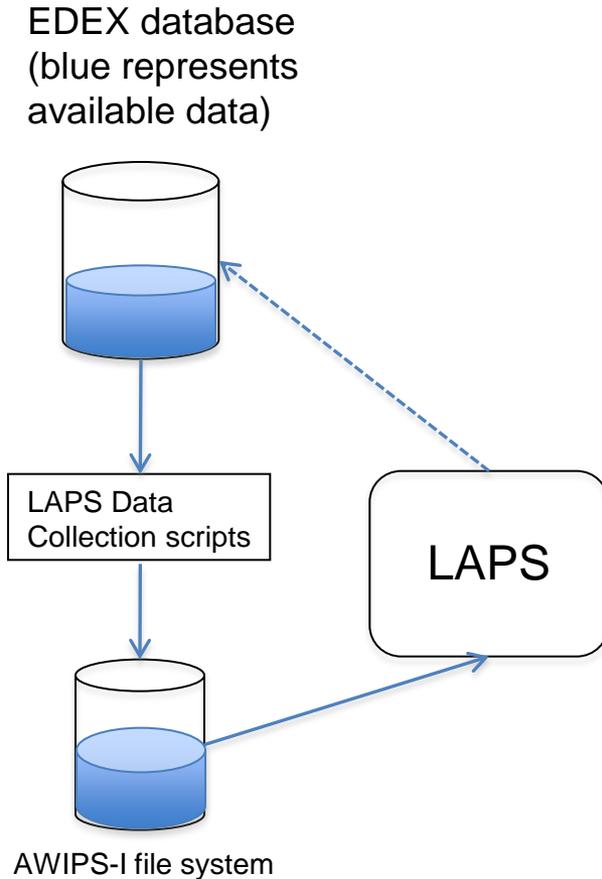
## **History of LAPS in AWIPS-I**

- LAPS has been in AWIPS since the early 1990's
- LAPS was updated with each build through OB 6 (Feb 3, 2005)
- After OB 6 LAPS upgrades were frozen due to lack of funding
- All subsequent OB builds contained the OB 6 LAPS build

## **LAPS in AWIPS-II**

- LAPS joined AWIPS-II with updated LAPS code from Mar 12, 2010
- Very limited funding was provided by NWS to implement LAPS in AWIPS-II
- To allow LAPS to run, data is pre-collected into AWIPS-I netCDF files, which LAPS could then ingest
- More significant modifications were required to satellite and radar ingest to handle changes in data formats
- The lack of funding to modify LAPS to ingest data directly from the EDEX database has resulted in LAPS in AWIPS-II providing services not up to AWIPS-I capabilities

# Current State of LAPS in AWIPS-II



- LAPS in AWIPS-II cannot directly connect to realtime data in the EDEX database
- To access data from EDEX, data collection scripts are run at 15 minutes past the top of the hour (T+15 min)
- The data collection scripts write out data in AWIPS-I format netCDF files that LAPS can read.

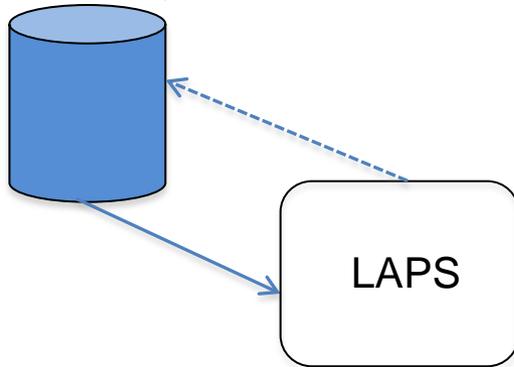
## Reduction in Data Currently Available to LAPS in AWIPS-II

Not all data is available at T+15 minutes.  
There is a substantial increase in available data if  
data is ingested directly by LAPS at runtime:

	T + 15 min avg	At LAPS runtime	% data increase
maritime	2388	2773	16.12%
raob	64	216	237.5%
aircraft	10	32	220.0%
metar	2437	3381	38.73%
acars	967	2115	118.72%
profiler	1	data not	available

# Required to Return LAPS to AWIPS-I Capabilities

EDEX database  
(blue represents  
available data)



## GSD/LAPS has a proposal in to NWS for:

- Annual or semi-annual LAPS code upgrades
- Ingest the following datasets directly from EDEX by analyses (in order of benefits gained):
  - Background model
  - Metars
  - Profiler
  - Maritime
  - Aircraft Obs
  - ACARS
  - RAOB
  - Radars
  - Satellite
- LAPS GUI

# LAPS GUI – To Allow Forecasters to Customize LAPS

## AWIPS-I Capabilities

- The LAPS GUI originated on AWIPS-I on HP machines
- Forecaster could move the fixed 61x61 10km grid as long as it remained completely in the WFO area of responsibility
- No changes were allowed to:
  - Number of gridpoints
  - Grid resolution
  - Number of vertical levels
  - Frequency of LAPS runs
- NWS never funded LAPS to upgrade the GUI to run on linux (ISB made some modifications)

# LAPS GUI – To Allow Forecasters to Customize LAPS

## Current AWIPS-II Proposal

- Forecasters will initially be allowed to modify:
  - Grid location
  - Number of gridpoints
  - Grid resolution
- Parameters will be checked to make sure modifications do not adversely affect the running of AWIPS-II
- Future plans will forecasters to also modify:
  - Number of vertical levels
  - Frequency of LAPS runs