TAF Generation: Status and Plans

Office of Science and Technology

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Overview

- Current Capabilities
- Current Plans
- Options for the Future

Current Capability: AvnFPS

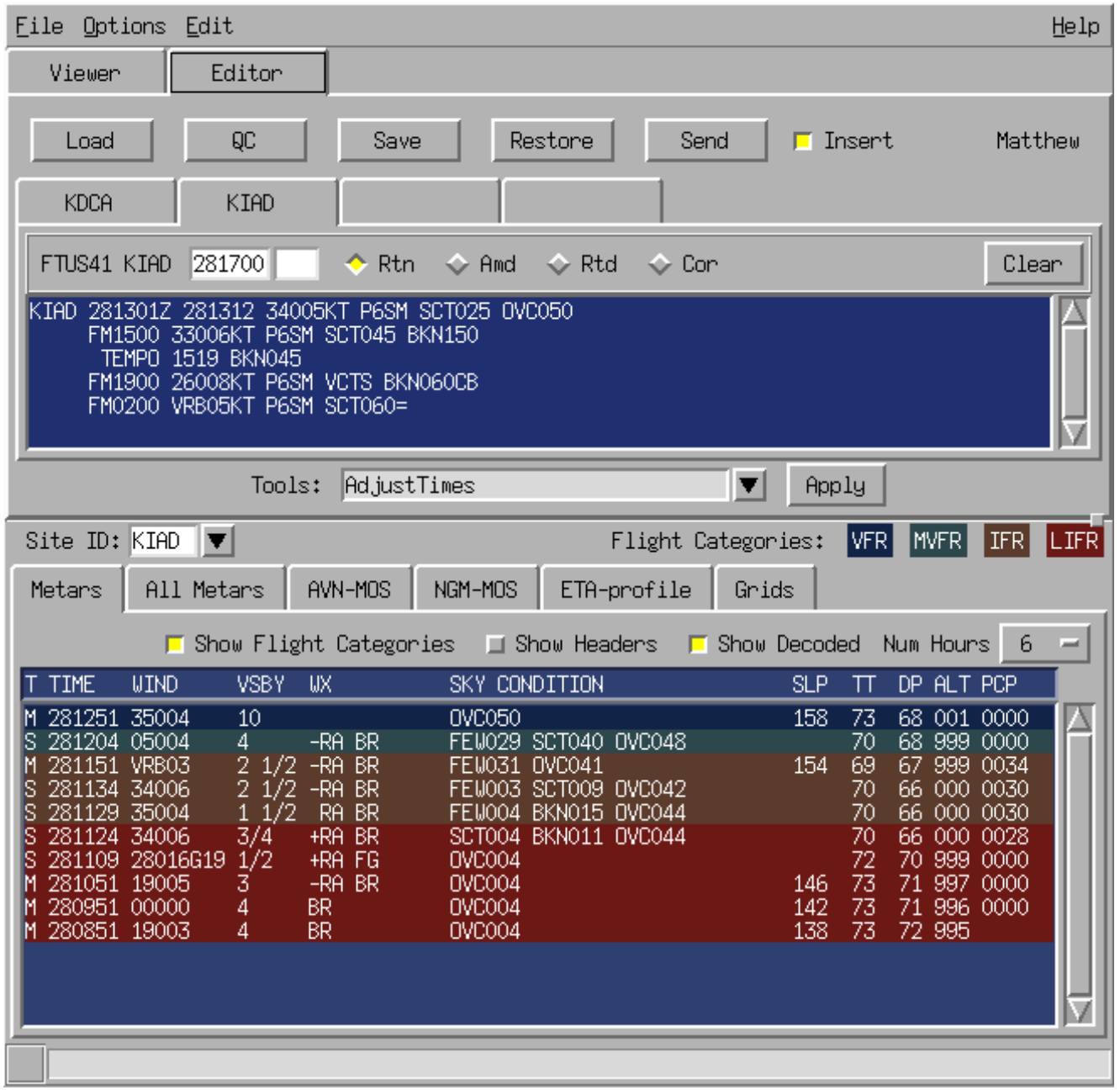
- Aviation Forecast Preparation System
  - AWIPS application
  - Used for TAF/TWEB preparation at WFOs
  - One-stop utility

AvnFPS Features

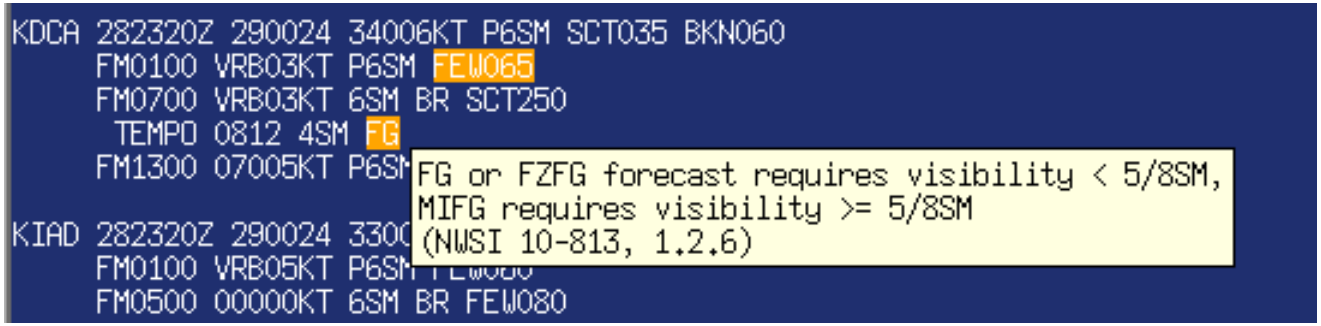
- Monitoring
- Editing
- Quality Control
  - Text
  - Climatology
- Transmission Control
- Guidance Display

AvnFPS Monitoring

AvnFPS Editing

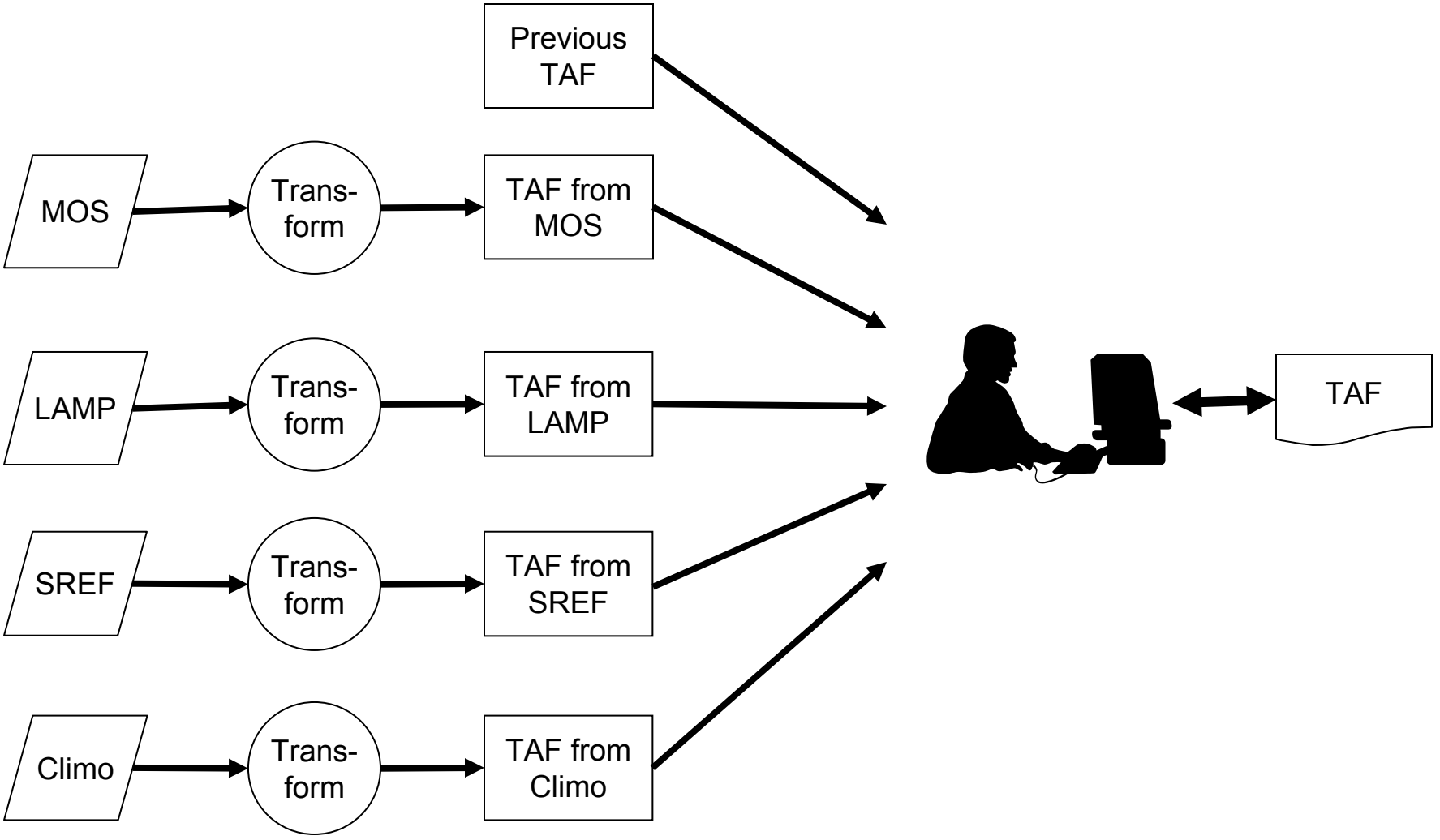


AvnFPS Text Quality Control



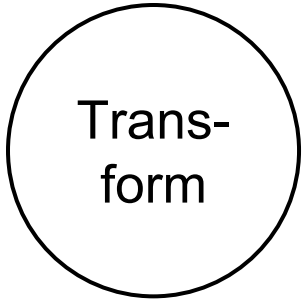
AvnFPS Guidance Display

Current Plan: Assemble TAF from Guidance "Forecaster as Integrator"



Creating TAFs from Guidance
Forecaster as Integrator

- Each guidance source has quirks. None provides *exactly* the weather elements needed in *exactly* the form needed.
  - Categories to continuous values
  - Missing weather elements
  - Three-hourly resolution
- Sources
  - NGM/AVN/Eta MOS
  - Localized Aviation MOS Program (LAMP)
    - Developed specifically for TAF needs
  - Short Range Ensemble Forecast (SREF)
  - Conditional Climatology



Forecaster as Integrator

- Presents forecaster with multiple drafts, derived from various sources.
- Forecaster “assembles” TAF by choosing among options.
- Forecaster performs final edit.

Guidance TAF Options

- MOS forecasts are valid at 3-h time projections and contain no cloud layer information.
- Each SREF run can generate 15 TAFs for each gridpoint. What's the best way to use them?
- Expect little skill from Climo beyond 2 h.
- LAMP will yield enough time projections and weather elements to generate complete TAFs.

LAMP Status

- Initial research nearing completion.
  - Cloud layers a special problem.
- Beginning forecast equation development for all weather elements for one start time.
- Each start time becomes operational as it is completed.
- Full set of 24 start times needed.

Schedule and Options

Task	**Current Schedule**	**Options**
TAF Integration Tools	Late FY05	None
1 LAMP start time	End FY05	None
6 LAMP start times	End FY06	Additional resources could help.
12 LAMP start times	End FY07	Additional resources could help.
24 LAMP start times	End FY08	Additional resources could help.

Options for the Future

- Begin to investigate software as integrator of different guidance sources.
  - Challenge: How to decide objectively among guidance sources.
  - Key to success: Improved verification techniques.