



Terminal Ceiling & Visibility

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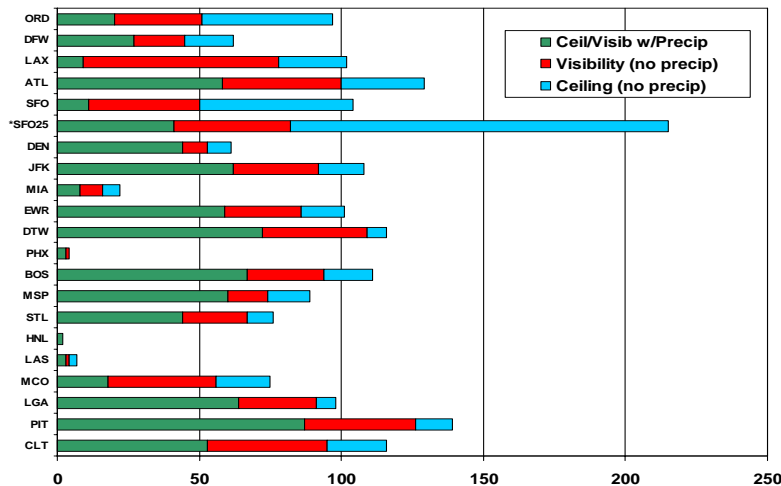
FPAW Forum – Orlando, FL

19 October 2006

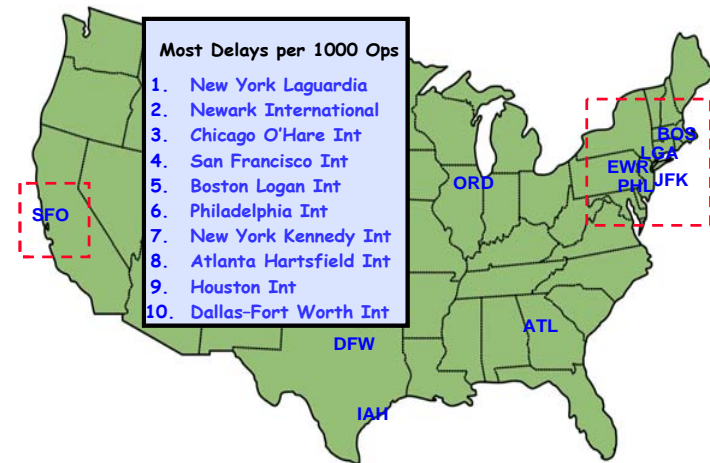


Terminal Ceiling & Visibility

- Purpose: Increasing effective NAS capacity through efficient commercial Traffic Flow Management
 - Avoid unused available capacity at transitions into and out of IMC
 - Manifested through efficient Ground Delay Programs (GDPs)
 - Target efficiency gains at high impact terminals where delay impact extends throughout NAS (e.g. downstream effect)



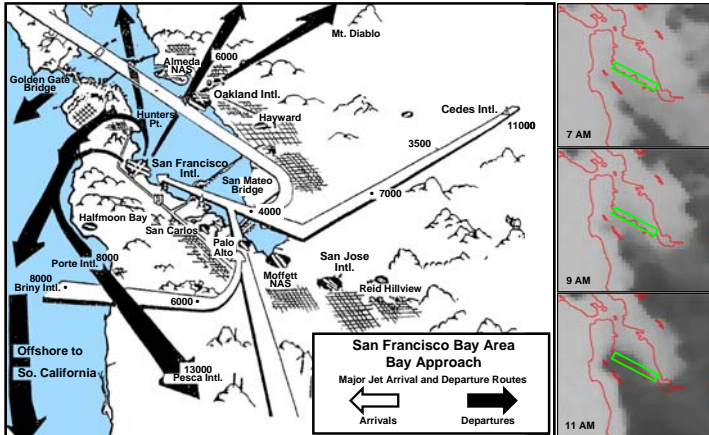
Annual C&V event frequency at high delay airports



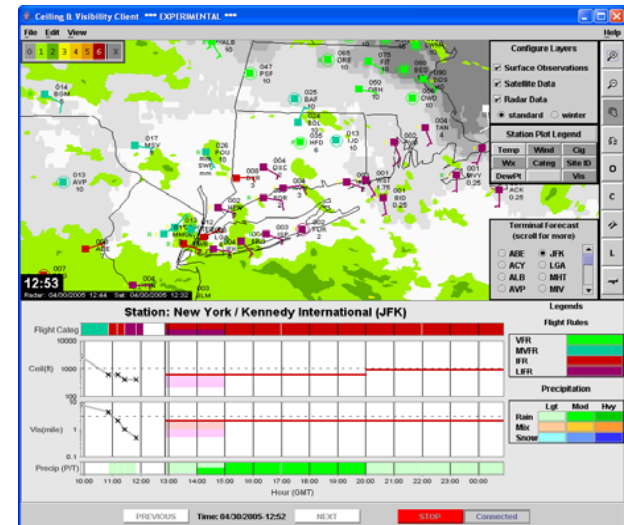
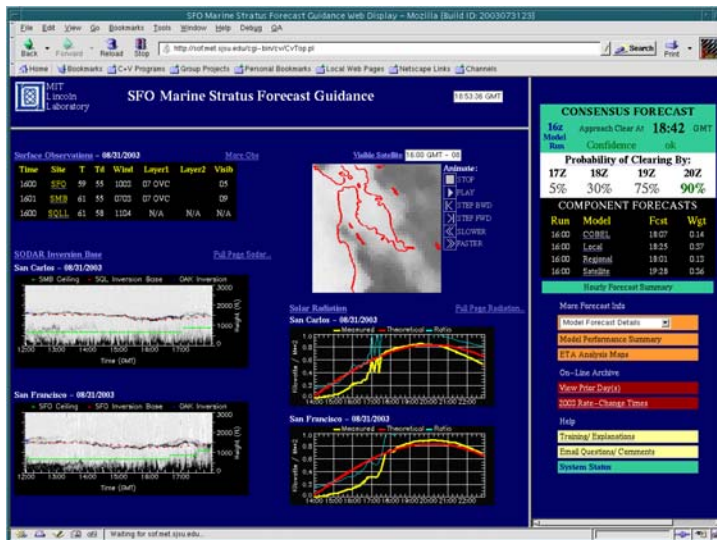
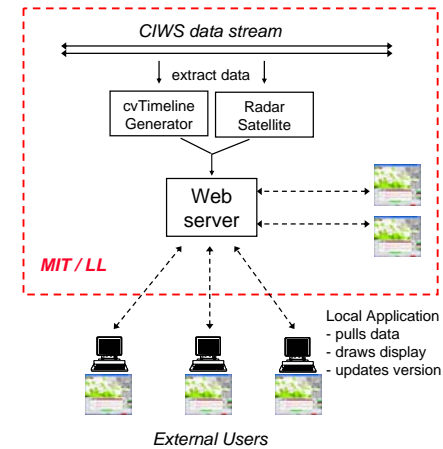


Projects to Date

SFO Marine Stratus Forecast System



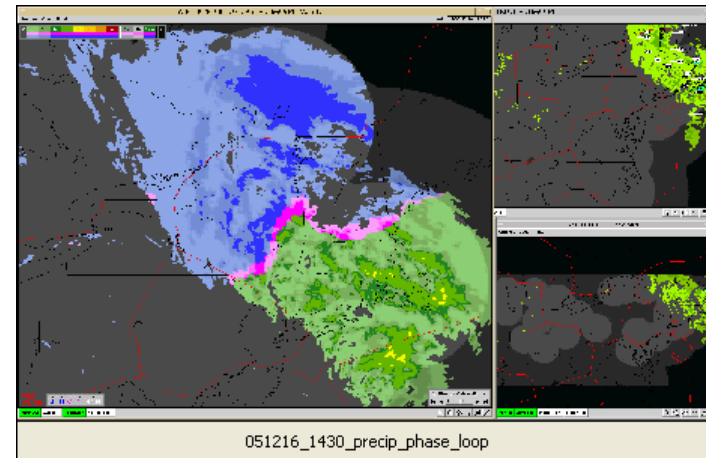
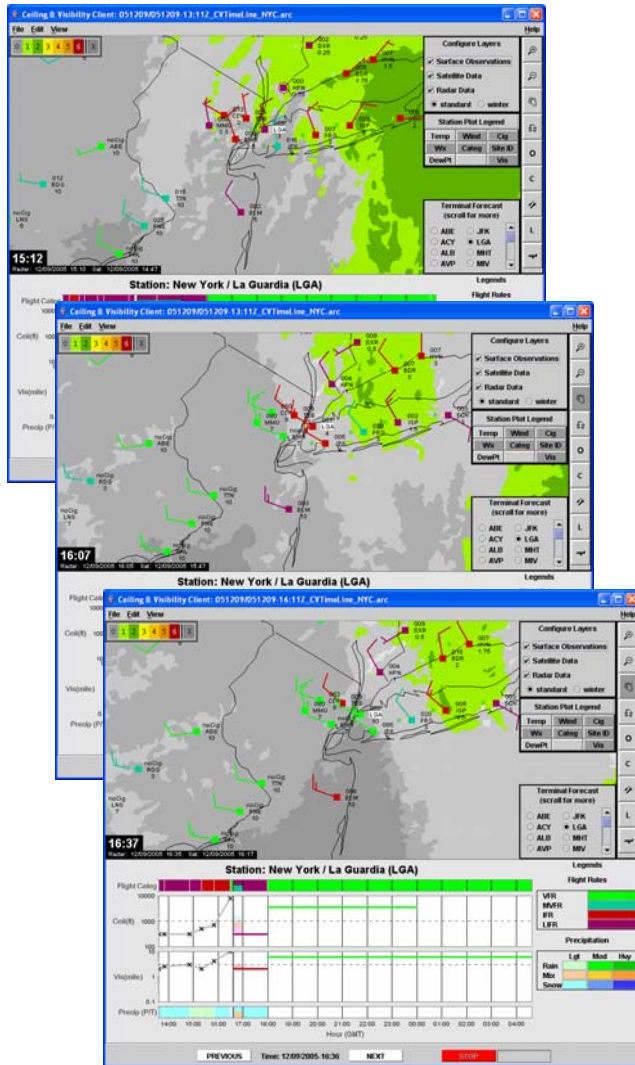
Northeast Winter Ceiling & Visibility





Recent Work: Improving tactical C&V forecasts

- Adapting approach used for development of precipitation phase forecast



- Exploit high resolution data
 - Radar, satellite, and frequent (1-min) surface obs
 - Relies on stable, statistically-derived diagnosis
 - Adapt track and advect technology
- Provide a stable, frequently updated forecast based on evolution of regional conditions



Benefiting from forecast improvements

- Traffic Flow Management policy must adapt to benefit from improvements to forecast and movement toward probabilistic representation
- In San Francisco...
 - TFM reluctant to proactively end delay programs
 - From individual ATM perspective, risk outweighs reward
 - Implies need for explicit (pre-defined), collaborative risk management of “missed” forecasts
 - SFO candidate trial platform for automated GDP algorithm
- Vision
 - *Complete* terminal forecast, including all capacity-restrictive wx (C&V, wind, wet runways, etc.)
 - Integrate operational information (runway configuration, airport acceptance rate, traffic demand)
 - Incremental step toward NGATS “Evaluator”

CONSENSUS FORECAST				
16z	Approach Clear at 17:29			
	Confidence			Good
Probability of Clearing By:				
17Z	18Z	19Z	20Z	
35%	85%	95%	95%	
Run	Model	Fcst	Wgt	
16z	<u>COBEL</u>	17:19	0.22	
16z	<u>Local</u>	17:31	0.32	
16z	<u>Regional</u>	17:18	0.16	
16z	<u>Satellite</u>	17:40	0.31	

SFO Stratus Forecast