Segment 3 – Flight Operation Weather Impacts

Airline Data Access Issues: Impact Information

Presented to: FPAW
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Core ATM-Weather Integration Concept

1. With guidance from user community, translate weather into ATM impacts

2. Working inside user community teams, make the ATM impacts part of the DST logic
Weather Impacts

• A new kind of weather-related information
  – Not the state of the atmosphere, but resulting user decision parameters
  – E.G. not a line of thunderstorms, but a reduction in NAS capacity
## Conceptual Flow

<table>
<thead>
<tr>
<th>State of the Atmosphere</th>
<th>Translated Impact Parameters</th>
<th>Decision Rules</th>
<th>Decision System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Examples:</strong></td>
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<td><strong>Examples:</strong></td>
</tr>
<tr>
<td>• Convective wx forecast</td>
<td>• CWAM (Convective Weather Avoidance Model)</td>
<td>• Acceptable severity level</td>
<td>• TFMS (Traffic Flow Management System)</td>
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<tr>
<td>• Turbulent EDR (Eddy Dissipation Rate)</td>
<td>• EDR index to aircraft type, weight, speed</td>
<td>• SFO (San Francisco Airport) parallel approach</td>
<td>• TBFM (Time-Based Flow Management)</td>
</tr>
<tr>
<td><strong>From:</strong> weather systems</td>
<td><strong>From:</strong> Appendix B</td>
<td><strong>From:</strong> user community, with support from Appendix B</td>
<td><strong>From:</strong> users, and cataloged in Appendix A</td>
</tr>
<tr>
<td><strong>Ownership:</strong> wx community with requirements from users</td>
<td><strong>Ownership:</strong> wx community with user guidance</td>
<td><strong>Ownership:</strong> Users, with support from weather community</td>
<td><strong>Ownership:</strong> users</td>
</tr>
<tr>
<td><strong>Located:</strong> 4D Weather Data Cube</td>
<td><strong>Located:</strong> multi-use in network service; unique in user systems</td>
<td><strong>Located:</strong> multi-use service; unique in user systems</td>
<td><strong>Located:</strong> user systems</td>
</tr>
</tbody>
</table>
Impacts to be made available

- Network enabled
- In real time
- Not directive for airline decisions
- To be basis of ANSP decisions
Questions?