Optimization of Airspace and Procedures in the Metroplex (OAPM)

SoCal OAPM Design Progress

By: Robert Henry, SoCal D&I Integration Manager
    Jose Gonzalez, SoCal NATCA D&I Lead

Date: 01/08/14
Thursday, August 12, 2013
11,404 tracks

Blue – Jets
Yellow – Turboprops
Red – all others
SoCal OAPM Procedures
Agenda

• Introductions
• OAPM Purpose
• Out of Scope Issues
• SoCal OAPM Abbreviated Work Plan
• D&I Team progress report and accomplishments to date
• Next Steps
• Questions?
OAPM Purpose

• RTCA’s Task Force 5 recommendations for NextGen implementation included:
  − Focus on major metropolitan areas
  − Optimize flight paths and climb/descent profiles
  − Institute collaborative teams to broadly proliferate existing PBN experience and expertise
  − Promote RNAV “everywhere” and RNP (Required Navigational Performance) “where beneficial”
  − Integrate airspace and procedure design
  − Decouple operations arriving and departing adjacent airports
  − Use 3 NM and terminal separation rules wherever possible
Out of Scope Issues

• Some issues considered out of scope of OAPM process
  − RNAV visual approaches
  − PSP operations revert to ZLA overnight
  − Lack of radar coverage
  − Extended service volume for ONT ILS
  − Reverse flows over GMN
  − Class B, Class C, TRSA changes
  − NTD airspace transfer
  − Restructure of T-routes in SCT terminal airspace
This figure shows the six primary airports including BUR, LAX, LGB, ONT, SAN and SNA along with CRQ, PSP, SMO and VNY
SoCal OAPM Abbreviated Work Plan

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry Week 2</td>
<td>JAN 13, 2014</td>
</tr>
<tr>
<td>Industry Week 3</td>
<td>FEB 10, 2014</td>
</tr>
<tr>
<td>Final Design Report</td>
<td>MAR 28, 2014</td>
</tr>
<tr>
<td>Begin Evaluation Processes</td>
<td>APR 4, 2014</td>
</tr>
<tr>
<td>SMS Process Start</td>
<td>JUN 23, 2014</td>
</tr>
<tr>
<td>Final Design Complete</td>
<td>JUN 9, 2014</td>
</tr>
</tbody>
</table>
Current Tasks

- More than seventy SIDs and STARs have been developed
- Where practical runway transitions will be established to join instrument approach procedures
- Airline Industry partners have used their flight simulators to evaluate and provide feedback for proposed SIDs and STARs
- Human-In-The-Loop Simulations (HITLs) will be conducted to ensure operational feasibility
- Airspace boundary changes (vertical and lateral) necessary to support procedure design have been initiated
Other SoCal STARs and SIDs

• In addition to LAX operations, operations at seven key SCT airports were examined closely
  - San Diego International Airport (SAN)
  - Bob Hope Airport (BUR)
  - Ontario International Airport (ONT)
  - John Wayne Airport/Orange County (SNA)
  - Long Beach/Daugherty Field (LGB)
  - Santa Monica Municipal Airport (SMO)
  - Van Nuys Airport (VNY)

• Other airports were also considered
Key Airport STARS and SIDs

- The SoCal OAPM team developed STARs with OPDs into other SCT airports
  - The Design Team has worked closely with airlines to determine the best procedures to maximize efficiency, reduce flight deck/controller workload and provide predictable routes
    - Where appropriate STARs will terminate on an instrument approach procedure
    - Other STARs will terminate on a course and receive radar vectors to the airport
- SIDs from other key airports will be RNAV off the ground or radar vectors based on industry feedback and/or geographic limitations within the terminal area
Composite of all NW LAX/BUR/VNY/SMO/SNA/LGB STARs

• These STARs are deconflicted from each other using radar separation and vertical windows
Composite of LAX/ONT STARs from Offshore
Composite of
LAX/BUR/VNY/SNA NE SIDs
Composite of LAX/SMO/SNA SIDs
SoCal OAPM Work Plan and Schedule

• The evaluation phase will begin April 4, 2014
  – This phase includes operational evaluation, environmental, and safety reviews
QUESTIONS?