Participants: Alexander, Arthur, Kaber, Kaufmann, Naylor, Norman, Prinzel, Stelzer, Williams

Agenda:

10:30a-11:30a Verify simulator display content and control behavior:

Out-of-cockpit

Training – VMC, day
Testing – IMC, night; visibility 0/0 (dense moisture); breakout at 500 AFL

Brownout

Go-around - Starting at 150 ft. with 5% opacity and transitioning to 100% opacity by 100ft.

Land - Starting at 150 ft. with 5% opacity and transitioning to 50% opacity by 100ft.

Ground objects

Ensure clear visual cues from ground in land condition
Ensure realistic appearance
Review positioning of objects relative to pad

PFD

Terrain – “brown”
Background – “blue” sky
Symbology – “white”

Sink rate display (below airspeed indicator)
VSI arrow (to right of airspeed indicator)
Commanded sink rate – “Magenta” circle leading VSI arrow
SVS – “green” wireframe only
EVS – “green”
Tunnel - “magenta”
Tunnel present during descent and removed at 450 AFL
No “dog bones”

ND
Guidance cue (“white” circle) absent in descent; appears at 450 AFL (when tunnel disappears)
Control mode – HdotManual
Lateral control inputs with stick
Velocity control with hat-switch

12:30p-1:30p  Conduct sample training session(s)
Verify display configuration – VMC, day
One (1) part-task training trial
    Control mode – MANUAL+HdotAuto
Two (2) whole-task training trials
    Control mode – HdotManual

1:45p-2:45p  Conduct sample test sessions
Confirm display features, guidance failures, and brownout conditions for each case identifier
Eight (8) trials including the following conditions:

<table>
<thead>
<tr>
<th>Trial No.</th>
<th>Display clutter</th>
<th>Display Feature</th>
<th>Phase 1 Guidance Failure</th>
<th>Phase 2 Brown out</th>
<th>Case Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Phase 1 Position</td>
<td>Phase 2 Direction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Early</td>
<td>Left</td>
<td>100%</td>
</tr>
<tr>
<td>A-1</td>
<td>HC1</td>
<td>1 1 1</td>
<td>Early</td>
<td>Left</td>
<td>100%</td>
</tr>
<tr>
<td>A-2</td>
<td>LC2</td>
<td>0 0 0</td>
<td>Early</td>
<td>Right</td>
<td>50%</td>
</tr>
<tr>
<td>A-3</td>
<td>LC1</td>
<td>1 0 0</td>
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</tr>
<tr>
<td>A-4</td>
<td>MC3</td>
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</tr>
<tr>
<td>A-5</td>
<td>MC2</td>
<td>1 0 1</td>
<td>Early</td>
<td>Right</td>
<td>100%</td>
</tr>
<tr>
<td>A-6</td>
<td>HC3</td>
<td>0 1 0</td>
<td>Early</td>
<td>Left</td>
<td>50%</td>
</tr>
<tr>
<td>A-7</td>
<td>MC1</td>
<td>1 1 0</td>
<td>Early</td>
<td>Left</td>
<td>50%</td>
</tr>
</tbody>
</table>
(Note: These eight trials all include early guidance failures. They should occur at 1.5 min into the test runs. The first trial (A-1) is to be presented as a “first trial” for pilots assigned to detect a novel guidance failure under a “high clutter” display condition. The failures should extend to 1 dot of lateral deviation over 1 min. period.)

Review data output from sample test sessions:
   Verify data for selected performance measures

3:00p-4:00p  Conduct sample test sessions
   Confirm display features, guidance failures, and brownout conditions for each case identifier
   Eight (8) trials including the following conditions:

<table>
<thead>
<tr>
<th>Trial No.</th>
<th>Display clutter</th>
<th>Display Feature</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Case Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>SVS EVS Tunnel</td>
<td>Guidance Failure</td>
<td>Brown out</td>
<td>Phase 1</td>
</tr>
<tr>
<td>B-1</td>
<td>MC3</td>
<td>0 0 1</td>
<td>Late Right</td>
<td>100%</td>
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<td>case 2101</td>
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<td>50%</td>
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<tr>
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<td>100%</td>
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<tr>
<td>B-8</td>
<td>HC1</td>
<td>1 1 1</td>
<td>Late Left</td>
<td>100%</td>
<td>case 2208</td>
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(Note: These eight trials all include late guidance failures. They should occur at 3 min into the test runs. The first trial (B-1) is to be presented as a “first trial” for pilots assigned to detect a novel guidance failure under a “low clutter” display condition. The failures should extend to 1 dot of lateral deviation over 1 min. period.)

Review data output from sample test sessions:
   Verify data for selected performance measures
4:00p-5:00p Discussion of preparations for experiment
   Pilot briefing packet
      Configuration of displays and controls
      Training procedure
      Test procedure and interaction with confederate PNF
   Forms for test trials
      Pilot background survey
      Clutter rating forms
      Experimenter observation form
   Post-experiment interview and debrief
      Questionnaire and additional rating forms