D Differentiated Test Frames

The test frames in this appendix were generated in a manner similar to those of Appendix C.

This appendix contains differentiated test frames. For this specification, the differentiated test frames are only slightly different from the base test frames. This is due to the table structure from which the S specification was generated.

In some interations, some of the test frames were found to be redundant. This occurs when the stimuli for two or more test frames subsume the stimuli of another. In this appendix, 161 of the 176 test frames do not contain non-primitives and can be used to derive test steps.

D.1 Test Frames for "Separation Exists"

–Test Frame 1(1):

Stimuli	Response
1. VerticallySeparated (A , B) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (LongitudinallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 2(2):

Stimuli	Response
1. LaterallySeparated (A , B) 2. ¬ (VerticallySeparated (A , B)) 3. ¬ (LongitudinallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 3(3):

Stimuli	Response
1. LongitudinallySeparated (A , B) 2. ¬ (VerticallySeparated (A , B)) 3. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

D.1.1 Vertical Separation

–Test Frame 4(1):

Stimuli	Response
1. 450 $<$ FlightLevel A 2. 450 $<$ FlightLevel B 3. IsSupersonic A 4. 4000 $<$ ABS (FlightLevel A $-$ FlightLevel B) 5. $\neg$ (LaterallySeparated (A , B)) 6. $\neg$ (LongitudinallySeparated (A , B)) 7. $\neg$ (IsSupersonic B)	1. "are separated" (A , B)

–Test Frame 5(2):

Stimuli	Response
1. $\neg$ (IsSupersonic A) 2. $\neg$ (IsSupersonic B) 3. 2000 $<$ ABS (FlightLevel A $-$ FlightLevel B) 4. $\neg$ (LaterallySeparated (A , B)) 5. $\neg$ (LongitudinallySeparated (A , B)) 6. 450 $<$ FlightLevel A 7. 450 $<$ FlightLevel B	1. "are separated" (A , B)

–Test Frame 6(3):

Stimuli	Response
1. FlightLevel A $\leq$ 280 2. 1000 $<$ ABS (FlightLevel A $-$ FlightLevel B) 3. $\neg$ (LaterallySeparated (A , B)) 4. $\neg$ (LongitudinallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 7(4):

Stimuli	Response
1. 1000 $<$ ABS (FlightLevel A $-$ FlightLevel B) 2. 280 $<$ FlightLevel A 3. FlightLevel B $\leq$ 280 4. $\neg$ (LaterallySeparated (A , B)) 5. $\neg$ (LongitudinallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 8(5):

Stimuli	Response
1. 280 $<$ FlightLevel A 2. FlightLevel A $\leq$ 450 3. 2000 $<$ ABS (FlightLevel A $-$ FlightLevel B) 4. $\neg$ (LaterallySeparated (A , B)) 5. $\neg$ (LongitudinallySeparated (A , B)) 6. 450 $<$ FlightLevel B 7. IsSupersonic A	1. “are separated” (A , B)

–Test Frame 9(6):

Stimuli	Response
1. 280 $<$ FlightLevel B 2. FlightLevel B $\leq$ 450 3. 2000 $<$ ABS (FlightLevel A $-$ FlightLevel B) 4. $\neg$ (LaterallySeparated (A , B)) 5. $\neg$ (LongitudinallySeparated (A , B)) 6. 450 $<$ FlightLevel A 7. IsSupersonic A	1. “are separated” (A , B)

–Test Frame 10(7):

Stimuli	Response
1. 450 $<$ FlightLevel A 2. 450 $<$ FlightLevel B 3. 4000 $<$ ABS (FlightLevel A $-$ FlightLevel B) 4. IsSupersonic B 5. $\neg$ (LaterallySeparated (A , B)) 6. $\neg$ (LongitudinallySeparated (A , B)) 7. $\neg$ (IsSupersonic A)	1. “are separated” (A , B)

D.1.2 Lateral Separation

–Test Frame 11(1):

Stimuli	Response
1. $80 <$ "RouteSegment Degrees" A 2. $80 <$ "RouteSegment Degrees" B 3. "LateralSeparation RequiredInMiles" (A , B) $<$ ABS (LateralPositionInMiles A $-$ LateralPositionInMiles B) 4. $\neg$ (VerticallySeparated (A , B)) 5. $\neg$ (LongitudinallySeparated (A , B)) 6. "LatChange Per10DLong LessThanOrEq3" A 7. "LatChange Per10DLong LessThanOrEq3" B	1. "are separated" (A , B)

–Test Frame 12(2):

Stimuli	Response
1. $70 \leq$ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A ≤ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. "LateralSeparation RequiredInDegrees" (A , B) $<$ ABS (LateralPositionInDegrees A $-$ LateralPositionInDegrees B) 6. $\neg$ (VerticallySeparated (A , B)) 7. $\neg$ (LongitudinallySeparated (A , B)) 8. "RouteSegment Degrees" B < 70	1. "are separated" (A , B)

–Test Frame 13(3):

Stimuli	Response
1. 58 < "RouteSegment Degrees" A 2. "RouteSegment Degrees" A < 70 3. ¬ ("LatChange Per10DLong LessThanOrEq2" B) 4. 58 < "RouteSegment Degrees" B 5. "RouteSegment Degrees" B < 70 6. "LateralSeparation RequiredInMiles" (A , B) < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 7. ¬ (VerticallySeparated (A , B)) 8. ¬ (LongitudinallySeparated (A , B)) 9. "LatChange Per10DLong LessThanOrEq1" A	1. "are separated" (A , B)

–Test Frame 14(4):

Stimuli	Response
1. "RouteSegment Degrees" A ≤ 58 2. ¬ ("LatChange Per10DLong LessThanOrEq3" B) 3. "RouteSegment Degrees" B ≤ 58 4. "LateralSeparation RequiredInMiles" (A , B) < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 5. ¬ (VerticallySeparated (A , B)) 6. ¬ (LongitudinallySeparated (A , B)) 7. "LatChange Per10DLong LessThanOrEq1" A	1. "are separated" (A , B)

–Test Frame 15(5):

Stimuli	Response
1. ¬ (“LatChange Per10DLong LessThanOrEq3” A) 2. ¬ (“LatChange Per10DLong LessThanOrEq1” B) 3. “LateralSeparation RequiredInMiles” (A , B) $<$ ABS (LateralPositionInMiles A $-$ LateralPositionInMiles B) 4. ¬ (VerticallySeparated (A , B)) 5. ¬ (LongitudinallySeparated (A , B)) 6. “RouteSegment Degrees” A $\leq$ 58 7. 58 $<$ “RouteSegment Degrees” B 8. “LatChange Per10DLong LessThanOrEq1” A	1. “are separated” (A , B)

–Test Frame 16(6):

Stimuli	Response
1. “RouteSegment Degrees” A $\leq$ 58 2. “LatChange Per10DLong LessThanOrEq3” A 3. “LatChange Per10DLong LessThanOrEq3” B 4. “LateralSeparation RequiredInDegrees” (A , B) $<$ ABS (LateralPositionInDegrees A $-$ LateralPositionInDegrees B) 5. ¬ (VerticallySeparated (A , B)) 6. ¬ (LongitudinallySeparated (A , B)) 7. “RouteSegment Degrees” B $<$ 70	1. “are separated” (A , B)

–Test Frame 17(7):

Stimuli	Response
1. "LatChange Per10DLong LessThanOrEq1" A 2. "LatChange Per10DLong LessThanOrEq1" B 3. 70 $\leq$ "RouteSegment Degrees" B 4. "RouteSegment Degrees" B $\leq$ 80 5. "LateralSeparation RequiredInDegrees" (A , B) < ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) 6. ¬ (VerticallySeparated (A , B)) 7. ¬ (LongitudinallySeparated (A , B)) 8. "RouteSegment Degrees" A $\leq$ 58 9. ¬ ("LatChange Per10DLong LessThanOrEq3" B)	1. "are separated" (A , B)

–Test Frame 18(8):

Stimuli	Response
1. 58 < "RouteSegment Degrees" A 2. "RouteSegment Degrees" A < 70 3. "LatChange Per10DLong LessThanOrEq2" A 4. "LatChange Per10DLong LessThanOrEq2" B 5. "LateralSeparation RequiredInDegrees" (A , B) < ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) 6. ¬ (VerticallySeparated (A , B)) 7. ¬ (LongitudinallySeparated (A , B)) 8. "RouteSegment Degrees" B < 70	1. "are separated" (A , B)

–Test Frame 19(9):

Stimuli	Response
1. ¬ (“LatChange Per10DLong LessThanOrEq3” B) 2. ¬ (“LatChange Per10DLong LessThanOrEq2” A) 3. “LateralSeparation RequiredInMiles” (A , B) < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 4. ¬ (VerticallySeparated (A , B)) 5. ¬ (LongitudinallySeparated (A , B)) 6. “RouteSegment Degrees” A ≤ 58 7. “LatChange Per10DLong LessThanOrEq1” B	1. “are separated” (A , B)

–Test Frame 20(1):

Stimuli	Response
1. 80 < “RouteSegment Degrees” A 2. 80 < “RouteSegment Degrees” B 3. ¬ (IsOnRoute Routes1 B) 4. ¬ (IsWestOf55W B) 5. 60 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 6. FlightLevel A ≤ 275 7. MeetMNPS A 8. MeetMNPS B 9. HavePartOfRouteInMNPSAirspace A 10. HavePartOfRouteInMNPSAirspace B 11. ¬ (VerticallySeparated (A , B)) 12. ¬ (LongitudinallySeparated (A , B)) 13. “LatChange Per10DLong LessThanOrEq3” A 14. “LatChange Per10DLong LessThanOrEq3” B	1. “are separated” (A , B)

–Test Frame 21(2):

Stimuli	Response
1. 80 < “RouteSegment Degrees” A 2. 80 < “RouteSegment Degrees” B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 6. IsOnRoute Routes2 A 7. IsOnRoute Routes2 B 8. IsWestOf55W A 9. IsWestOf55W B 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. “LatChange Per10DLong LessThanOrEq3” A 13. “LatChange Per10DLong LessThanOrEq3” B	1. “are separated” (A , B)

–Test Frame 22(3):

Stimuli	Response
1. 80 < “RouteSegment Degrees” A 2. 80 < “RouteSegment Degrees” B 3. ¬ (IsOnRoute Routes1 A) 4. ¬ (IsWestOf55W A) 5. IsSupersonic A 6. IsSupersonic B 7. 275 < FlightLevel A 8. 275 < FlightLevel B 9. 60 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. “LatChange Per10DLong LessThanOrEq3” A 13. “LatChange Per10DLong LessThanOrEq3” B	1. “are separated” (A , B)

–Test Frame 23(4):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. ¬ (IsOutsideMNPSAirspace B) 4. FlightLevel B $\leq$ 275 5. ¬ (HavePartOfRouteInMNPSAirspace B) 6. 120 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 7. ¬ (VerticallySeparated (A , B)) 8. ¬ (LongitudinallySeparated (A , B)) 9. "LatChange Per10DLong LessThanOrEq3" A 10. "LatChange Per10DLong LessThanOrEq3" B 11. IsOutsideMNPSAirspace A 12. IsOnRoute Routes1 B	1. "are separated" (A , B)

–Test Frame 24(5):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. ¬ (IsOutsideMNPSAirspace A) 4. ¬ (IsSupersonic B) 5. ¬ (HavePartOfRouteInMNPSAirspace A) 6. 120 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 7. ¬ (VerticallySeparated (A , B)) 8. ¬ (LongitudinallySeparated (A , B)) 9. "LatChange Per10DLong LessThanOrEq3" A 10. "LatChange Per10DLong LessThanOrEq3" B 11. IsOutsideMNPSAirspace B 12. IsOnRoute Routes1 B	1. "are separated" (A , B)

–Test Frame 25(6):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. ¬ (IsOnRoute Routes1 B) 4. ¬ (IsOnRoute Routes2 B) 5. ¬ (IsSupersonic A) 6. ¬ (MeetMNPS B) 7. 120 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LongitudinallySeparated (A , B)) 10. "LatChange Per10DLong LessThanOrEq3" A 11. "LatChange Per10DLong LessThanOrEq3" B 12. IsOutsideMNPSAirspace A 13. IsOutsideMNPSAirspace B 14. IsOnRoute Routes2 A	1. "are separated" (A , B)

–Test Frame 26(7):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. IsOnRoute Routes1 A 6. IsOnRoute Routes1 B 7. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LongitudinallySeparated (A , B)) 10. "LatChange Per10DLong LessThanOrEq3" A 11. "LatChange Per10DLong LessThanOrEq3" B 12. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 27(8):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. ¬ (IsOnRoute Routes2 A) 4. FlightLevel A ≤ 275 5. ¬ (MeetMNPS A) 6. 120 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 7. ¬ (VerticallySeparated (A , B)) 8. ¬ (LongitudinallySeparated (A , B)) 9. "LatChange Per10DLong LessThanOrEq3" A 10. "LatChange Per10DLong LessThanOrEq3" B 11. IsOutsideMNPSAirspace A 12. IsOutsideMNPSAirspace B 13. IsOnRoute Routes2 B	1. "are separated" (A , B)

–Test Frame 28(1):

Stimuli	Response
1. 70 ≤ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A ≤ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. ¬ (IsOnRoute Routes1 B) 6. ¬ (IsWestOf55W B) 7. 1 < ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) 8. FlightLevel A ≤ 275 9. MeetMNPS A 10. MeetMNPS B 11. HavePartOfRouteInMNPSAirspace A 12. HavePartOfRouteInMNPSAirspace B 13. ¬ (VerticallySeparated (A , B)) 14. ¬ (LongitudinallySeparated (A , B)) 15. "RouteSegment Degrees" B < 70	1. "are separated" (A , B)

–Test Frame 29(2):

Stimuli	Response
1. $70 \leq$ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A ≤ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. IsOutsideMNPSAirspace A 6. IsOutsideMNPSAirspace B 7. $1.5 <$ ABS (LateralPositionInDegrees A $-$ LateralPositionInDegrees B) 8. IsOnRoute Routes2 A 9. IsOnRoute Routes2 B 10. IsWestOf55W A 11. IsWestOf55W B 12. $\neg$ (VerticallySeparated (A , B)) 13. $\neg$ (LongitudinallySeparated (A , B)) 14. "RouteSegment Degrees" B < 70	1. "are separated" (A , B)

–Test Frame 30(3):

Stimuli	Response
1. $70 \leq$ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A ≤ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. $\neg$ (IsOnRoute Routes1 A) 6. $\neg$ (IsWestOf55W A) 7. IsSupersonic A 8. IsSupersonic B 9. $275 <$ FlightLevel A 10. $275 <$ FlightLevel B 11. $1 <$ ABS (LateralPositionInDegrees A $-$ LateralPositionInDegrees B) 12. $\neg$ (VerticallySeparated (A , B)) 13. $\neg$ (LongitudinallySeparated (A , B)) 14. "RouteSegment Degrees" B < 70	1. "are separated" (A , B)

–Test Frame 31(4):

Stimuli	Response
1. 70 ≤ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A ≤ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. ¬ (IsOutsideMNPSAirspace B) 6. FlightLevel B ≤ 275 7. ¬ (HavePartOfRouteInMNPSAirspace B) 8. 2 < ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) 9. ¬ (VerticallySeparated (A , B)) 10. ¬ (LongitudinallySeparated (A , B)) 11. "RouteSegment Degrees" B < 70 12. IsOutsideMNPSAirspace A 13. IsOnRoute Routes1 B	1. "are separated" (A , B)

–Test Frame 32(5):

Stimuli	Response
1. 70 ≤ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A ≤ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. ¬ (IsOutsideMNPSAirspace A) 6. ¬ (IsSupersonic B) 7. ¬ (HavePartOfRouteInMNPSAirspace A) 8. 2 < ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) 9. ¬ (VerticallySeparated (A , B)) 10. ¬ (LongitudinallySeparated (A , B)) 11. "RouteSegment Degrees" B < 70 12. IsOutsideMNPSAirspace B 13. IsOnRoute Routes1 B	1. "are separated" (A , B)

–Test Frame 33(6):

Stimuli	Response
1. 70 $\leq$ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A $\leq$ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. $\neg$ (IsOnRoute Routes1 B) 6. $\neg$ (IsOnRoute Routes2 B) 7. $\neg$ (IsSupersonic A) 8. $\neg$ (MeetMNPS B) 9. 2 < ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) 10. $\neg$ (VerticallySeparated (A , B)) 11. $\neg$ (LongitudinallySeparated (A , B)) 12. "RouteSegment Degrees" B < 70 13. IsOutsideMNPSAirspace A 14. IsOutsideMNPSAirspace B 15. IsOnRoute Routes2 A	1. "are separated" (A , B)

–Test Frame 34(7):

Stimuli	Response
1. 70 $\leq$ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A $\leq$ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. IsOutsideMNPSAirspace A 6. IsOutsideMNPSAirspace B 7. IsOnRoute Routes1 A 8. IsOnRoute Routes1 B 9. 1.5 < ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) 10. $\neg$ (VerticallySeparated (A , B)) 11. $\neg$ (LongitudinallySeparated (A , B)) 12. "RouteSegment Degrees" B < 70 13. $\neg$ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 35(8):

Stimuli	Response
1. $70 \leq$ "RouteSegment Degrees" A 2. "RouteSegment Degrees" A ≤ 80 3. "LatChange Per10DLong LessThanOrEq1" A 4. "LatChange Per10DLong LessThanOrEq1" B 5. $\neg$ (IsOnRoute Routes2 A) 6. FlightLevel A ≤ 275 7. $\neg$ (MeetMNPS A) 8. $2 <$ ABS (LateralPositionInDegrees A $-$ LateralPositionInDegrees B) 9. $\neg$ (VerticallySeparated (A , B)) 10. $\neg$ (LongitudinallySeparated (A , B)) 11. "RouteSegment Degrees" B < 70 12. IsOutsideMNPSAirspace A 13. IsOutsideMNPSAirspace B 14. IsOnRoute Routes2 B	1. "are separated" (A , B)

–Test Frame 36(1):

Stimuli	Response
1. $80 <$ "RouteSegment Degrees" A 2. $80 <$ "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. $90 <$ ABS (LateralPositionInMiles A $-$ LateralPositionInMiles B) 6. RouteDeparture A = USA 7. RouteDestination A = Caribbean 8. RouteDeparture B = USA 9. RouteDestination B = Caribbean 10. IsWestOf55W A 11. IsWestOf55W B 12. $\neg$ (VerticallySeparated (A , B)) 13. $\neg$ (LongitudinallySeparated (A , B)) 14. "LatChange Per10DLong LessThanOrEq3" A 15. "LatChange Per10DLong LessThanOrEq3" B	1. "are separated" (A , B)

–Test Frame 37(2):

Stimuli	Response
1. 80 < “RouteSegment Degrees” A 2. 80 < “RouteSegment Degrees” B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 6. RouteDestination A = USA 7. RouteDeparture A = Caribbean 8. RouteDestination B = USA 9. RouteDeparture B = Caribbean 10. IsWestOf55W A 11. IsWestOf55W B 12. ¬ (VerticallySeparated (A , B)) 13. ¬ (LongitudinallySeparated (A , B)) 14. “LatChange Per10DLong LessThanOrEq3” A 15. “LatChange Per10DLong LessThanOrEq3” B	1. “are separated” (A , B)

–Test Frame 38(3):

Stimuli	Response
1. 80 < “RouteSegment Degrees” A 2. 80 < “RouteSegment Degrees” B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 6. RouteDeparture A = Caribbean 7. RouteDestination A = CAN 8. RouteDeparture B = Caribbean 9. RouteDestination B = CAN 10. IsWestOf55W A 11. IsWestOf55W B 12. ¬ (VerticallySeparated (A , B)) 13. ¬ (LongitudinallySeparated (A , B)) 14. “LatChange Per10DLong LessThanOrEq3” A 15. “LatChange Per10DLong LessThanOrEq3” B	1. “are separated” (A , B)

–Test Frame 39(4):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 6. RouteDeparture A = Caribbean 7. RouteDestination A = BDA 8. RouteDeparture B = Caribbean 9. RouteDestination B = BDA 10. IsWestOf55W A 11. IsWestOf55W B 12. ¬ (VerticallySeparated (A , B)) 13. ¬ (LongitudinallySeparated (A , B)) 14. "LatChange Per10DLong LessThanOrEq3" A 15. "LatChange Per10DLong LessThanOrEq3" B	1. "are separated" (A , B)

–Test Frame 40(5):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 6. RouteDestination A = Caribbean 7. RouteDeparture A = CAN 8. RouteDestination B = Caribbean 9. RouteDeparture B = CAN 10. IsWestOf55W A 11. IsWestOf55W B 12. ¬ (VerticallySeparated (A , B)) 13. ¬ (LongitudinallySeparated (A , B)) 14. "LatChange Per10DLong LessThanOrEq3" A 15. "LatChange Per10DLong LessThanOrEq3" B	1. "are separated" (A , B)

–Test Frame 41(6):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 6. RouteDestination A = Caribbean 7. RouteDeparture A = BDA 8. RouteDestination B = Caribbean 9. RouteDeparture B = BDA 10. IsWestOf55W A 11. IsWestOf55W B 12. ¬ (VerticallySeparated (A , B)) 13. ¬ (LongitudinallySeparated (A , B)) 14. "LatChange Per10DLong LessThanOrEq3" A 15. "LatChange Per10DLong LessThanOrEq3" B	1. "are separated" (A , B)

–Test Frame 42(1):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDeparture A = IberianPeninsula 6. RouteDestination A = Azores 7. RouteDeparture B = IberianPeninsula 8. RouteDestination B = Azores 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 43(2):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDestination A = IberianPeninsula 6. RouteDeparture A = Azores 7. RouteDestination B = IberianPeninsula 8. RouteDeparture B = Azores 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 44(3):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDeparture A = USA 6. RouteDestination A = BDA 7. RouteDeparture B = USA 8. RouteDestination B = BDA 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 45(4):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDeparture A = Iceland 6. RouteDestination A = Scandinavia 7. RouteDeparture B = Iceland 8. RouteDestination B = Scandinavia 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 46(5):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDestination A = USA 6. RouteDeparture A = BDA 7. RouteDestination B = USA 8. RouteDeparture B = BDA 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 47(6):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDestination A = Iceland 6. RouteDeparture A = Scandinavia 7. RouteDestination B = Iceland 8. RouteDeparture B = Scandinavia 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 48(7):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDeparture A = Iceland 6. RouteDestination A = UnitedKingdom 7. RouteDeparture B = Iceland 8. RouteDestination B = UnitedKingdom 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 49(8):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDestination A = Iceland 6. RouteDeparture A = UnitedKingdom 7. RouteDestination B = Iceland 8. RouteDeparture B = UnitedKingdom 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 50(9):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDeparture A = BDA 6. RouteDestination A = CAN 7. RouteDeparture B = BDA 8. RouteDestination B = CAN 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

–Test Frame 51(10):

Stimuli	Response
1. 80 < "RouteSegment Degrees" A 2. 80 < "RouteSegment Degrees" B 3. IsOutsideMNPSAirspace A 4. IsOutsideMNPSAirspace B 5. RouteDestination A = BDA 6. RouteDeparture A = CAN 7. RouteDestination B = BDA 8. RouteDeparture B = CAN 9. 90 < ABS (LateralPositionInMiles A − LateralPositionInMiles B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B 14. ¬ (IsWestOf55W B)	1. "are separated" (A , B)

D.1.3 Longitudinal Separation

–Test Frame 52(1):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. IsSupersonic A 3. IsSupersonic B 4. IsLevel A 5. IsLevel B 6. SameMachNumber (A , B) 7. "SameOr Diverging Tracks" (A , B) 8. 10 < ABS (TimeAtPosition A − TimeAtPosition B) 9. "Appropriate TimeSep AtCommon Point" (A , B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 53(2):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. ¬ (IsTurbojet B) 4. ¬ ("SameOr Diverging Tracks" (A , B)) 5. IsOnRoute Routes3 A 6. IsOnRoute Routes3 B 7. 20 < ABS (TimeAtPosition A − TimeAtPosition B) 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 54(3):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. IsSupersonic A 3. IsSupersonic B 4. ReportedOverCommonPoint (A , B) 5. SameType (A , B) 6. InCruiseClimb A 7. InCruiseClimb B 8. "SameOr Diverging Tracks" (A , B) 9. 10 < ABS (TimeAtPosition A − TimeAtPosition B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LaterallySeparated (A , B)) 12. ¬ ("Appropriate TimeSep AtCommon Point" (A , B))	1. "are separated" (A , B)

–Test Frame 55(4):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. ¬ (ReportedOverCommonPoint (A , B)) 4. ¬ (IsTurbojet A) 5. ¬ (IsOnRoute Routes3 B) 6. 30 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 7. ¬ (VerticallySeparated (A , B)) 8. ¬ (LaterallySeparated (A , B)) 9. IsTurbojet B	1. "are separated" (A , B)

–Test Frame 56(5):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. IsSupersonic A 3. IsSupersonic B 4. ¬ (SameMachNumber (A , B)) 5. 15 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 6. ¬ (VerticallySeparated (A , B)) 7. ¬ (LaterallySeparated (A , B)) 8. ReportedOverCommonPoint (A , B) 9. IsLevel A 10. IsLevel B	1. "are separated" (A , B)

–Test Frame 57(6):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. IsSupersonic A 3. IsSupersonic B 4. ¬ (IsLevel B) 5. 15 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 6. ¬ (VerticallySeparated (A , B)) 7. ¬ (LaterallySeparated (A , B)) 8. ReportedOverCommonPoint (A , B) 9. IsLevel A 10. SameMachNumber (A , B)	1. "are separated" (A , B)

–Test Frame 58(7):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. IsSupersonic A 3. IsSupersonic B 4. ¬ (IsLevel A) 5. ¬ (SameType (A , B)) 6. 15 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 7. ¬ (VerticallySeparated (A , B)) 8. ¬ (LaterallySeparated (A , B)) 9. ReportedOverCommonPoint (A , B) 10. IsLevel B 11. SameMachNumber (A , B)	1. "are separated" (A , B)

–Test Frame 59(8):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. "separation check time" $<$ StartTime ("turbojetOppDir NoLongSepPeriod" (A , B)) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B	1. "are separated" (A , B)

–Test Frame 60(9):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. $\neg$ (ReportedOverCommonPoint (A , B)) 3. "separation check time" $<$ ept (A , B) $-$ 15 4. "separation check time" $<$ StartTime ("turbojetOppDir NoLongSepPeriod" (A , B)) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B	1. "are separated" (A , B)

–Test Frame 61(10):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. $\neg$ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. EndTime ("turbojetOppDir NoLongSepPeriod" (A , B)) $<$ "separation check time" 6. $\neg$ (VerticallySeparated (A , B)) 7. $\neg$ (LaterallySeparated (A , B)) 8. StartTime ("turbojetOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 62(11):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. ¬ (IsTurbojet B) 4. ept (A , B) + 10 < "separation check time" 5. ¬ (VerticallySeparated (A , B)) 6. ¬ (LaterallySeparated (A , B)) 7. StartTime ("turbojetOppDir NoLongSepPeriod" (A , B)) ≤ "separation check time"	1. "are separated" (A , B)

–Test Frame 63(12):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (ReportedOverCommonPoint (A , B)) 3. ¬ (IsTurbojet B) 4. ept (A , B) + 15 < "separation check time" 5. ¬ (VerticallySeparated (A , B)) 6. ¬ (LaterallySeparated (A , B)) 7. StartTime ("turbojetOppDir NoLongSepPeriod" (A , B)) ≤ "separation check time"	1. "are separated" (A , B)

–Test Frame 64(13):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. "turbojetSameDir LongSep" (A , B) < ABS (TimeAtPosition A − TimeAtPosition B) 6. ¬ (VerticallySeparated (A , B)) 7. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 65(14):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. ¬ (IsTurbojet B) 4. ¬ ("SameOr Diverging Tracks" (A , B)) 5. ¬ (IsOnRoute Routes3 A) 6. 30 < ABS (TimeAtPosition A − TimeAtPosition B) 7. ¬ (VerticallySeparated (A , B)) 8. ¬ (LaterallySeparated (A , B)) 9. ReportedOverCommonPoint (A , B)	1. "are separated" (A , B)

–Test Frame 66(15):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. IsSupersonic A 3. IsSupersonic B 4. ¬ (ReportedOverCommonPoint (A , B)) 5. ¬ ("Appropriate TimeSep AtCommon Point" (A , B)) 6. 15 < ABS (TimeAtPosition A − TimeAtPosition B) 7. ¬ (VerticallySeparated (A , B)) 8. ¬ (LaterallySeparated (A , B)) 9. IsLevel A 10. IsLevel B 11. SameMachNumber (A , B)	1. "are separated" (A , B)

–Test Frame 67(1):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. ¬ (IsTurbojet B) 4. ¬ ("SameOr Diverging Tracks" (A , B)) 5. RouteDeparture A = USA 6. RouteDestination A = Caribbean 7. RouteDeparture B = USA 8. RouteDestination B = Caribbean 9. 20 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 68(2):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. ¬ (IsTurbojet B) 4. ¬ ("SameOr Diverging Tracks" (A , B)) 5. RouteDeparture A = BDA 6. RouteDestination A = USA 7. RouteDeparture B = BDA 8. RouteDestination B = USA 9. 20 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 69(3):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. ¬ (IsTurbojet B) 4. ¬ ("SameOr Diverging Tracks" (A , B)) 5. RouteDeparture A = Caribbean 6. RouteDestination A = CAN 7. RouteDeparture B = Caribbean 8. RouteDestination B = CAN 9. 20 < ABS (TimeAtPosition A − TimeAtPosition B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 70(4):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. ¬ (IsTurbojet B) 4. ¬ ("SameOr Diverging Tracks" (A , B)) 5. RouteDeparture A = CAN 6. RouteDestination A = BDA 7. RouteDeparture B = CAN 8. RouteDestination B = BDA 9. 20 < ABS (TimeAtPosition A − TimeAtPosition B) 10. ¬ (VerticallySeparated (A , B)) 11. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 71(1):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 5. "separation check time" $<$ StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) 6. ¬ (VerticallySeparated (A , B)) 7. ¬ (LaterallySeparated (A , B)) 8. IsSupersonic B 9. IsTurbojet B 10. MeetMNPS A 11. MeetMNPS B 12. HavePartOfRouteInMNPSAirspace A 13. HavePartOfRouteInMNPSAirspace B 14. EnterWATRSAirspaceAtSomeTime A 15. EnterWATRSAirspaceAtSomeTime B 16. IsWestOf60W A 17. IsWestOf60W B 18. MachTechniqueUsed A 19. MachTechniqueUsed B 20. OnPublishedRoute A 21. OnPublishedRoute B 22. "SameOr Diverging Tracks" (A , B)	1. "are separated" (A , B)

–Test Frame 72(2):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ (IsWestOf60W B) 5. $\neg$ (InWATRSAirspace B) 6. $\neg$ (VerticallySeparated (A , B)) 7. $\neg$ (LaterallySeparated (A , B)) 8. IsSupersonic B 9. IsTurbojet B 10. EnterWATRSAirspaceAtSomeTime A 11. EnterWATRSAirspaceAtSomeTime B 12. IsWestOf60W A 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 19. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 73(3):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ (IsWestOf60W A) 5. $\neg$ (InWATRSAirspace A) 6. $\neg$ (VerticallySeparated (A , B)) 7. $\neg$ (LaterallySeparated (A , B)) 8. IsSupersonic B 9. IsTurbojet B 10. EnterWATRSAirspaceAtSomeTime A 11. EnterWATRSAirspaceAtSomeTime B 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 19. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 74(4):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. ept (A , B) $\leq$ StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B)	1. "are separated" (A , B)

–Test Frame 75(5):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ ("SameOr Diverging Tracks" (A , B)) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 76(6):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ (OnPublishedRoute B) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. "SameOr Diverging Tracks" (A , B) 17. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 77(7):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ (OnPublishedRoute A) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute B 16. "SameOr Diverging Tracks" (A , B) 17. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 78(8):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ (MachTechniqueUsed B) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. OnPublishedRoute A 15. OnPublishedRoute B 16. "SameOr Diverging Tracks" (A , B) 17. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 79(9):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ (MachTechniqueUsed A) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed B 14. OnPublishedRoute A 15. OnPublishedRoute B 16. "SameOr Diverging Tracks" (A , B) 17. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 80(10):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ (EnterWATRSAirspaceAtSomeTime B) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B 9. EnterWATRSAirspaceAtSomeTime A 10. IsWestOf60W A 11. IsWestOf60W B 12. MachTechniqueUsed A 13. MachTechniqueUsed B 14. OnPublishedRoute A 15. OnPublishedRoute B 16. "SameOr Diverging Tracks" (A , B) 17. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 81(11):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ReportedOverCommonPoint (A , B) 3. "separation check time" $<$ ept (A , B) 4. $\neg$ (EnterWATRSAirspaceAtSomeTime A) 5. $\neg$ (VerticallySeparated (A , B)) 6. $\neg$ (LaterallySeparated (A , B)) 7. IsSupersonic B 8. IsTurbojet B 9. EnterWATRSAirspaceAtSomeTime B 10. IsWestOf60W A 11. IsWestOf60W B 12. MachTechniqueUsed A 13. MachTechniqueUsed B 14. OnPublishedRoute A 15. OnPublishedRoute B 16. "SameOr Diverging Tracks" (A , B) 17. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 18. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 82(1):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. EnterWATRSAirspaceAtSomeTime A 6. EnterWATRSAirspaceAtSomeTime B 7. IsWestOf60W A 8. IsWestOf60W B 9. MachTechniqueUsed A 10. MachTechniqueUsed B 11. OnPublishedRoute A 12. OnPublishedRoute B 13. "SameOr Diverging Tracks" (A , B) 14. ReportedOverCommonPoint (A , B) 15. ept (A , B) + 10 $<$ EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) 16. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ "separation check time" 17. ¬ (VerticallySeparated (A , B)) 18. ¬ (LaterallySeparated (A , B)) 19. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 20. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 83(2):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. EnterWATRSAirspaceAtSomeTime A 6. EnterWATRSAirspaceAtSomeTime B 7. MachTechniqueUsed A 8. MachTechniqueUsed B 9. OnPublishedRoute A 10. OnPublishedRoute B 11. "SameOr Diverging Tracks" (A , B) 12. InWATRSAirspace A 13. InWATRSAirspace B 14. ¬ (ReportedOverCommonPoint (A , B)) 15. ept (A , B) + 15 < EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) 16. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) < "separation check time" 17. ¬ (VerticallySeparated (A , B)) 18. ¬ (LaterallySeparated (A , B)) 19. ept (A , B) − 15 ≤ StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) 20. ept (A , B) − 15 ≤ "separation check time"	1. "are separated" (A , B)

–Test Frame 84(3):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (IsWestOf60W B) 6. ¬ (InWATRSAirspace B) 7. ReportedOverCommonPoint (A , B) 8. ept (A , B) + 10 < “separation check time” 9. ¬ (VerticallySeparated (A , B)) 10. ¬ (LaterallySeparated (A , B)) 11. EnterWATRSAirspaceAtSomeTime A 12. EnterWATRSAirspaceAtSomeTime B 13. IsWestOf60W A 14. MachTechniqueUsed A 15. MachTechniqueUsed B 16. OnPublishedRoute A 17. OnPublishedRoute B 18. “SameOr Diverging Tracks” (A , B) 19. ept (A , B) + 10 < EndTime (“WATRSOppDir NoLongSepPeriod” (A , B))	1. “are separated” (A , B)

–Test Frame 85(4):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. $\neg$ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. EnterWATRSAirspaceAtSomeTime A 6. EnterWATRSAirspaceAtSomeTime B 7. IsWestOf60W A 8. IsWestOf60W B 9. MachTechniqueUsed A 10. MachTechniqueUsed B 11. OnPublishedRoute A 12. OnPublishedRoute B 13. "SameOr Diverging Tracks" (A , B) 14. $\neg$ (ReportedOverCommonPoint (A , B)) 15. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ ept (A , B) + 15 16. ept (A , B) + 15 $<$ "separation check time" 17. $\neg$ (VerticallySeparated (A , B)) 18. $\neg$ (LaterallySeparated (A , B)) 19. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) $-$ 15 20. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time"	1. "are separated" (A , B)

–Test Frame 86(5):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (IsWestOf60W A) 6. ¬ (InWATRSAirspace A) 7. ReportedOverCommonPoint (A , B) 8. ept (A , B) + 10 < "separation check time" 9. ¬ (VerticallySeparated (A , B)) 10. ¬ (LaterallySeparated (A , B)) 11. EnterWATRSAirspaceAtSomeTime A 12. EnterWATRSAirspaceAtSomeTime B 13. IsWestOf60W B 14. MachTechniqueUsed A 15. MachTechniqueUsed B 16. OnPublishedRoute A 17. OnPublishedRoute B 18. "SameOr Diverging Tracks" (A , B) 19. ept (A , B) + 10 < EndTime ("WATRSOppDir NoLongSepPeriod" (A , B))	1. "are separated" (A , B)

–Test Frame 87(6):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. $\neg$ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ReportedOverCommonPoint (A , B) 6. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ ept (A , B) + 10 7. ept (A , B) + 10 < "separation check time" 8. $\neg$ (VerticallySeparated (A , B)) 9. $\neg$ (LaterallySeparated (A , B)) 10. ept (A , B) $\leq$ StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) 11. EnterWATRSAirspaceAtSomeTime A 12. EnterWATRSAirspaceAtSomeTime B 13. IsWestOf60W A 14. IsWestOf60W B 15. MachTechniqueUsed A 16. MachTechniqueUsed B 17. OnPublishedRoute A 18. OnPublishedRoute B 19. "SameOr Diverging Tracks" (A , B)	1. "are separated" (A , B)

–Test Frame 88(7):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (“SameOr Diverging Tracks” (A , B)) 6. ReportedOverCommonPoint (A , B) 7. ept (A , B) + 10 < “separation check time” 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LaterallySeparated (A , B)) 10. EnterWATRSAirspaceAtSomeTime A 11. EnterWATRSAirspaceAtSomeTime B 12. IsWestOf60W A 13. IsWestOf60W B 14. MachTechniqueUsed A 15. MachTechniqueUsed B 16. OnPublishedRoute A 17. OnPublishedRoute B 18. ept (A , B) + 10 < EndTime (“WATRSOppDir NoLongSepPeriod” (A , B))	1. “are separated” (A , B)

–Test Frame 89(8):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (OnPublishedRoute B) 6. ReportedOverCommonPoint (A , B) 7. ept (A , B) + 10 < "separation check time" 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LaterallySeparated (A , B)) 10. EnterWATRSAirspaceAtSomeTime A 11. EnterWATRSAirspaceAtSomeTime B 12. IsWestOf60W A 13. IsWestOf60W B 14. MachTechniqueUsed A 15. MachTechniqueUsed B 16. OnPublishedRoute A 17. "SameOr Diverging Tracks" (A , B) 18. ept (A , B) + 10 < EndTime ("WATRSOppDir NoLongSepPeriod" (A , B))	1. "are separated" (A , B)

–Test Frame 90(9):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. $\neg$ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. $\neg$ (OnPublishedRoute A) 6. ReportedOverCommonPoint (A , B) 7. ept (A , B) + 10 < "separation check time" 8. $\neg$ (VerticallySeparated (A , B)) 9. $\neg$ (LaterallySeparated (A , B)) 10. EnterWATRSAirspaceAtSomeTime A 11. EnterWATRSAirspaceAtSomeTime B 12. IsWestOf60W A 13. IsWestOf60W B 14. MachTechniqueUsed A 15. MachTechniqueUsed B 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. ept (A , B) + 10 < EndTime ("WATRSOppDir NoLongSepPeriod" (A , B))	1. "are separated" (A , B)

–Test Frame 91(10):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (MachTechniqueUsed B) 6. ReportedOverCommonPoint (A , B) 7. ept (A , B) + 10 < "separation check time" 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LaterallySeparated (A , B)) 10. EnterWATRSAirspaceAtSomeTime A 11. EnterWATRSAirspaceAtSomeTime B 12. IsWestOf60W A 13. IsWestOf60W B 14. MachTechniqueUsed A 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. ept (A , B) + 10 < EndTime ("WATRSOppDir NoLongSepPeriod" (A , B))	1. "are separated" (A , B)

–Test Frame 92(11):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (MachTechniqueUsed A) 6. ReportedOverCommonPoint (A , B) 7. ept (A , B) + 10 < "separation check time" 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LaterallySeparated (A , B)) 10. EnterWATRSAirspaceAtSomeTime A 11. EnterWATRSAirspaceAtSomeTime B 12. IsWestOf60W A 13. IsWestOf60W B 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. ept (A , B) + 10 < EndTime ("WATRSOppDir NoLongSepPeriod" (A , B))	1. "are separated" (A , B)

–Test Frame 93(12):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (EnterWATRSAirspaceAtSomeTime B) 6. ReportedOverCommonPoint (A , B) 7. ept (A , B) + 10 < "separation check time" 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LaterallySeparated (A , B)) 10. EnterWATRSAirspaceAtSomeTime A 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. ept (A , B) + 10 < EndTime ("WATRSOppDir NoLongSepPeriod" (A , B))	1. "are separated" (A , B)

–Test Frame 94(13):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)	1. “are separated” (A , B)
2. ¬ (IsSupersonic B)	
3. IsTurbojet A	
4. IsTurbojet B	
5. ¬ (EnterWATRSAirspaceAtSomeTime A)	
6. ReportedOverCommonPoint (A , B)	
7. ept (A , B) + 10 < “separation check time”	
8. ¬ (VerticallySeparated (A , B))	
9. ¬ (LaterallySeparated (A , B))	
10. EnterWATRSAirspaceAtSomeTime B	
11. IsWestOf60W A	
12. IsWestOf60W B	
13. MachTechniqueUsed A	
14. MachTechniqueUsed B	
15. OnPublishedRoute A	
16. OnPublishedRoute B	
17. “SameOr Diverging Tracks” (A , B)	
18. ept (A , B) + 10 < EndTime (“WATRSOppDir NoLongSepPeriod” (A , B))	

–Test Frame 95(14):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. EnterWATRSAirspaceAtSomeTime A 6. EnterWATRSAirspaceAtSomeTime B 7. IsWestOf60W A 8. IsWestOf60W B 9. MachTechniqueUsed A 10. MachTechniqueUsed B 11. OnPublishedRoute A 12. OnPublishedRoute B 13. "SameOr Diverging Tracks" (A , B) 14. ReportedOverCommonPoint (A , B) 15. ept (A , B) + 10 < EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) 16. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) < "separation check time" 17. ¬ (VerticallySeparated (A , B)) 18. ¬ (LaterallySeparated (A , B)) 19. ept (A , B) ≤ StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) 20. ept (A , B) ≤ "separation check time"	1. "are separated" (A , B)

–Test Frame 96(15):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (HavePartOfRouteInMNPSAirspace B) 6. EnterWATRSAirspaceAtSomeTime A 7. EnterWATRSAirspaceAtSomeTime B 8. IsWestOf60W A 9. IsWestOf60W B 10. MachTechniqueUsed A 11. MachTechniqueUsed B 12. OnPublishedRoute A 13. OnPublishedRoute B 14. "SameOr Diverging Tracks" (A , B) 15. ReportedOverCommonPoint (A , B) 16. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ ept (A , B) + 10 17. ept (A , B) + 10 $<$ "separation check time" 18. ¬ (VerticallySeparated (A , B)) 19. ¬ (LaterallySeparated (A , B)) 20. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 21. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time" 22. MeetMNPS A 23. MeetMNPS B 24. HavePartOfRouteInMNPSAirspace A	1. "are separated" (A , B)

–Test Frame 97(16):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. $\neg$ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. $\neg$ (HavePartOfRouteInMNPSAirspace A) 6. EnterWATRSAirspaceAtSomeTime A 7. EnterWATRSAirspaceAtSomeTime B 8. IsWestOf60W A 9. IsWestOf60W B 10. MachTechniqueUsed A 11. MachTechniqueUsed B 12. OnPublishedRoute A 13. OnPublishedRoute B 14. "SameOr Diverging Tracks" (A , B) 15. ReportedOverCommonPoint (A , B) 16. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ ept (A , B) + 10 17. ept (A , B) + 10 $<$ "separation check time" 18. $\neg$ (VerticallySeparated (A , B)) 19. $\neg$ (LaterallySeparated (A , B)) 20. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 21. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time" 22. MeetMNPS A 23. MeetMNPS B 24. HavePartOfRouteInMNPSAirspace B	1. "are separated" (A , B)

–Test Frame 98(17):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (MeetMNPS B) 6. EnterWATRSAirspaceAtSomeTime A 7. EnterWATRSAirspaceAtSomeTime B 8. IsWestOf60W A 9. IsWestOf60W B 10. MachTechniqueUsed A 11. MachTechniqueUsed B 12. OnPublishedRoute A 13. OnPublishedRoute B 14. "SameOr Diverging Tracks" (A , B) 15. ReportedOverCommonPoint (A , B) 16. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ ept (A , B) + 10 17. ept (A , B) + 10 $<$ "separation check time" 18. ¬ (VerticallySeparated (A , B)) 19. ¬ (LaterallySeparated (A , B)) 20. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $<$ ept (A , B) 21. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time" 22. MeetMNPS A 23. HavePartOfRouteInMNPSAirspace A 24. HavePartOfRouteInMNPSAirspace B	1. "are separated" (A , B)

–Test Frame 99(18):

Stimuli	Response
1. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (MeetMNPS A) 6. EnterWATRSAirspaceAtSomeTime A 7. EnterWATRSAirspaceAtSomeTime B 8. IsWestOf60W A 9. IsWestOf60W B 10. MachTechniqueUsed A 11. MachTechniqueUsed B 12. OnPublishedRoute A 13. OnPublishedRoute B 14. "SameOr Diverging Tracks" (A , B) 15. ReportedOverCommonPoint (A , B) 16. EndTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ ept (A , B) + 10 17. ept (A , B) + 10 < "separation check time" 18. ¬ (VerticallySeparated (A , B)) 19. ¬ (LaterallySeparated (A , B)) 20. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) < ept (A , B) 21. StartTime ("WATRSOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time" 22. MeetMNPS B 23. HavePartOfRouteInMNPSAirspace A 24. HavePartOfRouteInMNPSAirspace B	1. "are separated" (A , B)

–Test Frame 100(1):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (HavePartOfRouteInMNPSAirspace B) 6. EnterWATRSAirspaceAtSomeTime A 7. EnterWATRSAirspaceAtSomeTime B 8. IsWestOf60W A 9. IsWestOf60W B 10. MachTechniqueUsed A 11. MachTechniqueUsed B 12. OnPublishedRoute A 13. OnPublishedRoute B 14. "SameOr Diverging Tracks" (A , B) 15. ¬ (InCruiseClimb A) 16. ¬ (InCruiseClimb B) 17. "Appropriate TimeSep AtCommon Point" (A , B) 18. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) ≤ 0.6 19. $0.3 <$ Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 20. "WATRSSameDir LongSep" (A , B) < 10 21. "WATRSSameDir LongSep" (A , B) $<$ ABS (TimeAtPosition A − TimeAtPosition B) 22. ¬ (VerticallySeparated (A , B)) 23. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 101(2):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. ¬ (IsWestOf60W B) 10. ¬ (InWATRSAirspace B) 11. InCruiseClimb A 12. 10 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 13. Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) ≤ 0.02 14. ¬ (VerticallySeparated (A , B)) 15. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 102(3):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. ¬ (IsWestOf60W A) 10. "SameOr Diverging Tracks" (A , B) 11. ¬ (InWATRSAirspace A) 12. InCruiseClimb B 13. "Appropriate TimeSep AtCommon Point" (A , B) 14. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) ≤ 0.03 15. $0.02 <$ Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 16. $9 <$ ABS (TimeAtPosition A − TimeAtPosition B) 17. ¬ (VerticallySeparated (A , B)) 18. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 103(4):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. ¬ (OnPublishedRoute B) 10. "SameOr Diverging Tracks" (A , B) 11. "Appropriate TimeSep AtCommon Point" (A , B) 12. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) ≤ 0.04 13. $0.03 <$ Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 14. $8 <$ ABS (TimeAtPosition A − TimeAtPosition B) 15. ¬ (VerticallySeparated (A , B)) 16. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 104(5):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. ¬ (OnPublishedRoute A) 10. "SameOr Diverging Tracks" (A , B) 11. "Appropriate TimeSep AtCommon Point" (A , B) 12. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) ≤ 0.05 13. $0.04 <$ Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 14. $7 <$ ABS (TimeAtPosition A − TimeAtPosition B) 15. ¬ (VerticallySeparated (A , B)) 16. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 105(6):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (HavePartOfRouteInMNPSAirspace A) 6. EnterWATRSAirspaceAtSomeTime A 7. EnterWATRSAirspaceAtSomeTime B 8. MachTechniqueUsed A 9. MachTechniqueUsed B 10. OnPublishedRoute A 11. OnPublishedRoute B 12. "SameOr Diverging Tracks" (A , B) 13. InWATRSAirspace A 14. InWATRSAirspace B 15. ¬ ("Appropriate TimeSep AtCommon Point" (A , B)) 16. "WATRSSameDir LongSep" (A , B) < 20 17. "WATRSSameDir LongSep" (A , B) < ABS (TimeAtPosition A − TimeAtPosition B) 18. ¬ (VerticallySeparated (A , B)) 19. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 106(7):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. ¬ (EnterWATRSAirspaceAtSomeTime B) 10. "SameOr Diverging Tracks" (A , B) 11. "Appropriate TimeSep AtCommon Point" (A , B) 12. Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) ≤ 0.06 13. $0.05 <$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) 14. $6 <$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 15. ¬ (VerticallySeparated (A , B)) 16. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 107(8):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (MeetMNPS B) 6. ¬ (MachTechniqueUsed B) 7. ¬ (ReportedOverCommonPoint (A , B)) 8. 20 < ABS (TimeAtPosition A − TimeAtPosition B) 9. ¬ (VerticallySeparated (A , B)) 10. ¬ (LaterallySeparated (A , B)) 11. HavePartOfRouteInMNPSAirspace B	1. “are separated” (A , B)

–Test Frame 108(9):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (MeetMNPS A) 6. ¬ (MachTechniqueUsed A) 7. “SameOr Diverging Tracks” (A , B) 8. ¬ (InCruiseClimb A) 9. ¬ (InCruiseClimb B) 10. ReportedOverCommonPoint (A , B) 11. 15 < ABS (TimeAtPosition A − TimeAtPosition B) 12. ¬ (VerticallySeparated (A , B)) 13. ¬ (LaterallySeparated (A , B))	1. “are separated” (A , B)

–Test Frame 109(10):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. ¬ (EnterWATRSAirspaceAtSomeTime A) 10. "SameOr Diverging Tracks" (A , B) 11. "Appropriate TimeSep AtCommon Point" (A , B) 12. 0.6 $<$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) 13. 5 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 14. ¬ (VerticallySeparated (A , B)) 15. ¬ (LaterallySeparated (A , B)) 16. MachTechniqueUsed B	1. "are separated" (A , B)

–Test Frame 110(11):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (HavePartOfRouteInMNPSAirspace B) 6. MachTechniqueUsed A 7. MachTechniqueUsed B 8. Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) ≤ 0.3 9. $20 \leq$ "WATRSSameDir LongSep" (A , B) 10. $20 <$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 11. ¬ (VerticallySeparated (A , B)) 12. ¬ (LaterallySeparated (A , B)) 13. "SameOr Diverging Tracks" (A , B)	1. "are separated" (A , B)

–Test Frame 111(12):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (HavePartOfRouteInMNPSAirspace B) 6. ¬ ("SameOr Diverging Tracks" (A , B)) 7. $20 <$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 8. ¬ (VerticallySeparated (A , B)) 9. ¬ (LaterallySeparated (A , B)) 10. MeetMNPS B 11. $0.6 <$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B))	1. "are separated" (A , B)

–Test Frame 112(13):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (HavePartOfRouteInMNPSAirspace B) 6. MachTechniqueUsed A 7. MachTechniqueUsed B 8. "SameOr Diverging Tracks" (A , B) 9. ¬ (InCruiseClimb A) 10. ¬ (InCruiseClimb B) 11. "Appropriate TimeSep AtCommon Point" (A , B) 12. $0.6 <$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) 13. $5 \leq$ "WATRSSameDir LongSep" (A , B) 14. $5 <$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 15. ¬ (VerticallySeparated (A , B)) 16. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 113(14):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (HavePartOfRouteInMNPSAirspace B) 6. EnterWATRSAirspaceAtSomeTime A 7. EnterWATRSAirspaceAtSomeTime B 8. IsWestOf60W A 9. IsWestOf60W B 10. MachTechniqueUsed A 11. MachTechniqueUsed B 12. OnPublishedRoute A 13. OnPublishedRoute B 14. "SameOr Diverging Tracks" (A , B) 15. ¬ (InCruiseClimb A) 16. ¬ (InCruiseClimb B) 17. "Appropriate TimeSep AtCommon Point" (A , B) 18. 0.6 $<$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) 19. "WATRSSameDir LongSep" (A , B) $<$ 5 20. "WATRSSameDir LongSep" (A , B) $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 21. ¬ (VerticallySeparated (A , B)) 22. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 114(15):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. ¬ (HavePartOfRouteInMNPSAirspace B) 6. MachTechniqueUsed A 7. MachTechniqueUsed B 8. "SameOr Diverging Tracks" (A , B) 9. ¬ (InCruiseClimb A) 10. ¬ (InCruiseClimb B) 11. "Appropriate TimeSep AtCommon Point" (A , B) 12. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) $\leq$ 0.6 13. 0.3 < Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 14. 10 $\leq$ "WATRSSameDir LongSep" (A , B) 15. 10 < ABS (TimeAtPosition A − TimeAtPosition B) 16. ¬ (VerticallySeparated (A , B)) 17. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 115(16):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. <u>MinAll</u> (A , B) < ABS (TimeAtPosition A − TimeAtPosition B) 19. ¬ (VerticallySeparated (A , B)) 20. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 116(17):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. ¬ (MachTechniqueUsed B) 10. "SameOr Diverging Tracks" (A , B) 11. "Appropriate TimeSep AtCommon Point" (A , B) 12. $5 <$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 13. $0.06 <$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) 14. ¬ (VerticallySeparated (A , B)) 15. ¬ (LaterallySeparated (A , B)) 16. EnterWATRSAirspaceAtSomeTime A	1. "are separated" (A , B)

–Test Frame 117(1):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) ≤ 0.03 20. $0.02 <$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) 21. "WATRSSameDir LongSep" (A , B) ≤ 9 22. "WATRSSameDir LongSep" (A , B) $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 23. ¬ (VerticallySeparated (A , B)) 24. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 118(2):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) $\leq$ 0.02 19. 10 < "WATRSSameDir LongSep" (A , B) 20. 10 < ABS (TimeAtPosition A − TimeAtPosition B) 21. ¬ (VerticallySeparated (A , B)) 22. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 119(3):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) $\leq$ 0.04 20. 0.03 < Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 21. 8 < "WATRSSameDir LongSep" (A , B) 22. 8 < ABS (TimeAtPosition A − TimeAtPosition B) 23. ¬ (VerticallySeparated (A , B)) 24. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 120(4):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. ¬ (InCruiseClimb A) 20. ¬ (InCruiseClimb B) 21. 0.6 < Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 22. 5 < ABS (TimeAtPosition A − TimeAtPosition B) 23. "WATRSSameDir LongSep" (A , B) ≤ 5 24. 5 ≤ "WATRSSameDir LongSep" (A , B) 25. ¬ (VerticallySeparated (A , B)) 26. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 121(5):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) ≤ 0.05 20. $0.04 <$ Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 21. $7 <$ "WATRSSameDir LongSep" (A , B) 22. $7 <$ ABS (TimeAtPosition A − TimeAtPosition B) 23. ¬ (VerticallySeparated (A , B)) 24. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 122(6):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) $\leq$ 0.06 20. 0.05 $<$ Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 21. 6 $<$ "WATRSSameDir LongSep" (A , B) 22. 6 $<$ ABS (TimeAtPosition A − TimeAtPosition B) 23. ¬ (VerticallySeparated (A , B)) 24. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 123(7):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. 0.06 $<$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) 20. 5 $<$ "WATRSSameDir LongSep" (A , B) 21. Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) $\leq$ 0.3 22. 5 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 23. ¬ (VerticallySeparated (A , B)) 24. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 124(8):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. ¬ ("Appropriate TimeSep AtCommon Point" (A , B)) 19. "WATRSSameDir LongSep" (A , B) $\leq$ 10 20. "WATRSSameDir LongSep" (A , B) $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 21. ¬ (VerticallySeparated (A , B)) 22. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 125(9):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) $\leq$ 0.06 20. 0.05 < Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 21. InCruiseClimb A 22. "WATRSSameDir LongSep" (A , B) $\leq$ 6 23. "WATRSSameDir LongSep" (A , B) < ABS (TimeAtPosition A − TimeAtPosition B) 24. ¬ (VerticallySeparated (A , B)) 25. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 126(10):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) $\leq$ 0.05 20. 0.04 < Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 21. InCruiseClimb B 22. "WATRSSameDir LongSep" (A , B) $\leq$ 7 23. "WATRSSameDir LongSep" (A , B) < ABS (TimeAtPosition A − TimeAtPosition B) 24. ¬ (VerticallySeparated (A , B)) 25. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 127(11):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. ¬ (InCruiseClimb A) 20. ¬ (InCruiseClimb B) 21. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) $\leq$ 0.6 22. 0.3 $<$ Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 23. "WATRSSameDir LongSep" (A , B) $\leq$ 5 24. "WATRSSameDir LongSep" (A , B) $<$ ABS (TimeAtPosition A − TimeAtPosition B) 25. ¬ (VerticallySeparated (A , B)) 26. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 128(12):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) $\leq$ 0.04 20. 0.03 $<$ Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 21. InCruiseClimb A 22. "WATRSSameDir LongSep" (A , B) $\leq$ 8 23. "WATRSSameDir LongSep" (A , B) $<$ ABS (TimeAtPosition A − TimeAtPosition B) 24. ¬ (VerticallySeparated (A , B)) 25. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

–Test Frame 129(13):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. “SameOr Diverging Tracks” (A , B) 18. “Appropriate TimeSep AtCommon Point” (A , B) 19. Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) $\leq$ 0.03 20. 0.02 $<$ Mach (FirstAircraft (A , B)) $-$ Mach (SecondAircraft (A , B)) 21. 9 $<$ “WATRSSameDir LongSep” (A , B) 22. InCruiseClimb A 23. 9 $<$ ABS (TimeAtPosition A $-$ TimeAtPosition B) 24. ¬ (VerticallySeparated (A , B)) 25. ¬ (LaterallySeparated (A , B))	1. “are separated” (A , B)

–Test Frame 130(14):

Stimuli	Response
1. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 2. ¬ (IsSupersonic B) 3. IsTurbojet A 4. IsTurbojet B 5. MeetMNPS A 6. MeetMNPS B 7. HavePartOfRouteInMNPSAirspace A 8. HavePartOfRouteInMNPSAirspace B 9. EnterWATRSAirspaceAtSomeTime A 10. EnterWATRSAirspaceAtSomeTime B 11. IsWestOf60W A 12. IsWestOf60W B 13. MachTechniqueUsed A 14. MachTechniqueUsed B 15. OnPublishedRoute A 16. OnPublishedRoute B 17. "SameOr Diverging Tracks" (A , B) 18. "Appropriate TimeSep AtCommon Point" (A , B) 19. ¬ (InCruiseClimb A) 20. ¬ (InCruiseClimb B) 21. 0.6 < Mach (FirstAircraft (A , B)) − Mach (SecondAircraft (A , B)) 22. "WATRSSameDir LongSep" (A , B) < 5 23. "WATRSSameDir LongSep" (A , B) < ABS (TimeAtPosition A − TimeAtPosition B) 24. ¬ (VerticallySeparated (A , B)) 25. ¬ (LaterallySeparated (A , B))	1. "are separated" (A , B)

D.2 Test Frames for "Separation Does Not Exist"

–Test Frame 131(1):

Stimuli	Response
1. ¬ (<u>VerticallySeparated</u> (A , B)) 2. ¬ (<u>LaterallySeparated</u> (A , B)) 3. ¬ (<u>LongitudinallySeparated</u> (A , B))	1. ¬ ("are separated" (A , B))

D.2.1 Vertical Separation

–Test Frame 132(1):

Stimuli	Response
1. 450 $<$ FlightLevel A 2. 450 $<$ FlightLevel B 3. IsSupersonic A 4. ABS (FlightLevel A $-$ FlightLevel B) $\leq$ 4000 5. ¬ (LaterallySeparated (A , B)) 6. ¬ (LongitudinallySeparated (A , B)) 7. ¬ (IsSupersonic B)	1. ¬ ("are separated" (A , B))

–Test Frame 133(2):

Stimuli	Response
1. ¬ (IsSupersonic A) 2. ¬ (IsSupersonic B) 3. ABS (FlightLevel A $-$ FlightLevel B) $\leq$ 2000 4. ¬ (LaterallySeparated (A , B)) 5. ¬ (LongitudinallySeparated (A , B)) 6. 450 $<$ FlightLevel A 7. 450 $<$ FlightLevel B	1. ¬ ("are separated" (A , B))

–Test Frame 134(3):

Stimuli	Response
1. FlightLevel A $\leq$ 280 2. ABS (FlightLevel A $-$ FlightLevel B) $\leq$ 1000 3. ¬ (LaterallySeparated (A , B)) 4. ¬ (LongitudinallySeparated (A , B))	1. ¬ ("are separated" (A , B))

–Test Frame 135(4):

Stimuli	Response
1. ABS (FlightLevel A − FlightLevel B) $\leq$ 1000 2. 280 < FlightLevel A 3. FlightLevel B $\leq$ 280 4. ¬ (LaterallySeparated (A , B)) 5. ¬ (LongitudinallySeparated (A , B))	1. ¬ (“are separated” (A , B))

–Test Frame 136(5):

Stimuli	Response
1. 280 < FlightLevel A 2. FlightLevel A $\leq$ 450 3. ABS (FlightLevel A − FlightLevel B) $\leq$ 2000 4. ¬ (LaterallySeparated (A , B)) 5. ¬ (LongitudinallySeparated (A , B)) 6. 450 < FlightLevel B 7. IsSupersonic A	1. ¬ (“are separated” (A , B))

–Test Frame 137(6):

Stimuli	Response
1. 280 < FlightLevel B 2. FlightLevel B $\leq$ 450 3. ABS (FlightLevel A − FlightLevel B) $\leq$ 2000 4. ¬ (LaterallySeparated (A , B)) 5. ¬ (LongitudinallySeparated (A , B)) 6. 450 < FlightLevel A 7. IsSupersonic A	1. ¬ (“are separated” (A , B))

–Test Frame 138(7):

Stimuli	Response
1. 450 < FlightLevel A 2. 450 < FlightLevel B 3. ABS (FlightLevel A − FlightLevel B) $\leq$ 4000 4. IsSupersonic B 5. ¬ (LaterallySeparated (A , B)) 6. ¬ (LongitudinallySeparated (A , B)) 7. ¬ (IsSupersonic A)	1. ¬ (“are separated” (A , B))

D.2.2 Lateral Separation

–Test Frame 139(1):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < "RouteSegment Degrees" A 3. 80 < "RouteSegment Degrees" B 4. ABS (LateralPositionInMiles A − LateralPositionInMiles B) ≤ "LateralSeparation RequiredInMiles" (A , B) 5. ¬ (LongitudinallySeparated (A , B)) 6. "LatChange Per10DLong LessThanOrEq3" A 7. "LatChange Per10DLong LessThanOrEq3" B	1. ¬ ("are separated" (A , B))

–Test Frame 140(2):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 70 ≤ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A ≤ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) ≤ "LateralSeparation RequiredInDegrees" (A , B) 7. ¬ (LongitudinallySeparated (A , B)) 8. "RouteSegment Degrees" B < 70	1. ¬ ("are separated" (A , B))

–Test Frame 141(3):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 58 < "RouteSegment Degrees" A 3. "RouteSegment Degrees" A < 70 4. ¬ ("LatChange Per10DLong LessThanOrEq2" B) 5. 58 < "RouteSegment Degrees" B 6. "RouteSegment Degrees" B < 70 7. ABS (LateralPositionInMiles A − LateralPositionInMiles B) ≤ "LateralSeparation RequiredInMiles" (A , B) 8. ¬ (LongitudinallySeparated (A , B)) 9. "LatChange Per10DLong LessThanOrEq1" A	1. ¬ ("are separated" (A , B))

–Test Frame 142(4):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. "RouteSegment Degrees" A ≤ 58 3. ¬ ("LatChange Per10DLong LessThanOrEq3" B) 4. "RouteSegment Degrees" B ≤ 58 5. ABS (LateralPositionInMiles A − LateralPositionInMiles B) ≤ "LateralSeparation RequiredInMiles" (A , B) 6. ¬ (LongitudinallySeparated (A , B)) 7. "LatChange Per10DLong LessThanOrEq1" A	1. ¬ ("are separated" (A , B))

–Test Frame 143(5):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (“LatChange Per10DLong LessThanOrEq3” A) 3. ¬ (“LatChange Per10DLong LessThanOrEq1” B) 4. ABS (LateralPositionInMiles A − LateralPositionInMiles B) $\leq$ “LateralSeparation RequiredInMiles” (A , B) 5. ¬ (LongitudinallySeparated (A , B)) 6. “RouteSegment Degrees” A $\leq$ 58 7. 58 $<$ “RouteSegment Degrees” B 8. “LatChange Per10DLong LessThanOrEq1” A	1. ¬ (“are separated” (A , B))

–Test Frame 144(6):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. “RouteSegment Degrees” A $\leq$ 58 3. “LatChange Per10DLong LessThanOrEq3” A 4. “LatChange Per10DLong LessThanOrEq3” B 5. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) $\leq$ “LateralSeparation RequiredInDegrees” (A , B) 6. ¬ (LongitudinallySeparated (A , B)) 7. “RouteSegment Degrees” B $<$ 70	1. ¬ (“are separated” (A , B))

–Test Frame 145(7):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. "LatChange Per10DLong LessThanOrEq1" A 3. "LatChange Per10DLong LessThanOrEq1" B 4. 70 $\leq$ "RouteSegment Degrees" B 5. "RouteSegment Degrees" B $\leq$ 80 6. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) $\leq$ "LateralSeparation RequiredInDegrees" (A , B) 7. ¬ (LongitudinallySeparated (A , B)) 8. "RouteSegment Degrees" A $\leq$ 58 9. ¬ ("LatChange Per10DLong LessThanOrEq3" B)	1. ¬ ("are separated" (A , B))

–Test Frame 146(8):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 58 < "RouteSegment Degrees" A 3. "RouteSegment Degrees" A < 70 4. "LatChange Per10DLong LessThanOrEq2" A 5. "LatChange Per10DLong LessThanOrEq2" B 6. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) $\leq$ "LateralSeparation RequiredInDegrees" (A , B) 7. ¬ (LongitudinallySeparated (A , B)) 8. "RouteSegment Degrees" B < 70	1. ¬ ("are separated" (A , B))

–Test Frame 147(9):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (“LatChange Per10DLong LessThanOrEq3” B) 3. ¬ (“LatChange Per10DLong LessThanOrEq2” A) 4. ABS (LateralPositionInMiles A − LateralPositionInMiles B) $\leq$ “LateralSeparation RequiredInMiles” (A , B) 5. ¬ (LongitudinallySeparated (A , B)) 6. “RouteSegment Degrees” A $\leq$ 58 7. “LatChange Per10DLong LessThanOrEq1” B	1. ¬ (“are separated” (A , B))

–Test Frame 148(1):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < “RouteSegment Degrees” A 3. 80 < “RouteSegment Degrees” B 4. ¬ (IsOnRoute Routes1 B) 5. ¬ (IsWestOf55W B) 6. ABS (LateralPositionInMiles A − LateralPositionInMiles B) $\leq$ 60 7. FlightLevel A $\leq$ 275 8. MeetMNPS A 9. MeetMNPS B 10. HavePartOfRouteInMNPSAirspace A 11. HavePartOfRouteInMNPSAirspace B 12. ¬ (LongitudinallySeparated (A , B)) 13. “LatChange Per10DLong LessThanOrEq3” A 14. “LatChange Per10DLong LessThanOrEq3” B	1. ¬ (“are separated” (A , B))

–Test Frame 149(2):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < "RouteSegment Degrees" A 3. 80 < "RouteSegment Degrees" B 4. IsOutsideMNPSAirspace A 5. IsOutsideMNPSAirspace B 6. ABS (LateralPositionInMiles A − LateralPositionInMiles B) $\leq$ 90 7. IsOnRoute Routes2 A 8. IsOnRoute Routes2 B 9. IsWestOf55W A 10. IsWestOf55W B 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B	1. ¬ ("are separated" (A , B))

–Test Frame 150(3):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < "RouteSegment Degrees" A 3. 80 < "RouteSegment Degrees" B 4. ¬ (IsOnRoute Routes1 A) 5. ¬ (IsWestOf55W A) 6. IsSupersonic A 7. IsSupersonic B 8. 275 < FlightLevel A 9. 275 < FlightLevel B 10. ABS (LateralPositionInMiles A − LateralPositionInMiles B) $\leq$ 60 11. ¬ (LongitudinallySeparated (A , B)) 12. "LatChange Per10DLong LessThanOrEq3" A 13. "LatChange Per10DLong LessThanOrEq3" B	1. ¬ ("are separated" (A , B))

–Test Frame 151(4):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < "RouteSegment Degrees" A 3. 80 < "RouteSegment Degrees" B 4. ¬ (IsOutsideMNPSAirspace B) 5. FlightLevel B $\leq$ 275 6. ¬ (HavePartOfRouteInMNPSAirspace B) 7. ABS (LateralPositionInMiles A − LateralPositionInMiles B) $\leq$ 120 8. ¬ (LongitudinallySeparated (A , B)) 9. "LatChange Per10DLong LessThanOrEq3" A 10. "LatChange Per10DLong LessThanOrEq3" B 11. IsOutsideMNPSAirspace A 12. IsOnRoute Routes1 B	1. ¬ ("are separated" (A , B))

–Test Frame 152(5):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < "RouteSegment Degrees" A 3. 80 < "RouteSegment Degrees" B 4. ¬ (IsOutsideMNPSAirspace A) 5. ¬ (IsSupersonic B) 6. ¬ (HavePartOfRouteInMNPSAirspace A) 7. ABS (LateralPositionInMiles A − LateralPositionInMiles B) $\leq$ 120 8. ¬ (LongitudinallySeparated (A , B)) 9. "LatChange Per10DLong LessThanOrEq3" A 10. "LatChange Per10DLong LessThanOrEq3" B 11. IsOutsideMNPSAirspace B 12. IsOnRoute Routes1 B	1. ¬ ("are separated" (A , B))

–Test Frame 153(6):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < "RouteSegment Degrees" A 3. 80 < "RouteSegment Degrees" B 4. ¬ (IsOnRoute Routes1 B) 5. ¬ (IsOnRoute Routes2 B) 6. ¬ (IsSupersonic A) 7. ¬ (MeetMNPS B) 8. ABS (LateralPositionInMiles A − LateralPositionInMiles B) ≤ 120 9. ¬ (LongitudinallySeparated (A , B)) 10. "LatChange Per10DLong LessThanOrEq3" A 11. "LatChange Per10DLong LessThanOrEq3" B 12. IsOutsideMNPSAirspace A 13. IsOutsideMNPSAirspace B 14. IsOnRoute Routes2 A	1. ¬ ("are separated" (A , B))

–Test Frame 154(7):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < "RouteSegment Degrees" A 3. 80 < "RouteSegment Degrees" B 4. IsOutsideMNPSAirspace A 5. IsOutsideMNPSAirspace B 6. IsOnRoute Routes1 A 7. IsOnRoute Routes1 B 8. ABS (LateralPositionInMiles A − LateralPositionInMiles B) ≤ 90 9. ¬ (LongitudinallySeparated (A , B)) 10. "LatChange Per10DLong LessThanOrEq3" A 11. "LatChange Per10DLong LessThanOrEq3" B 12. ¬ (IsWestOf55W B)	1. ¬ ("are separated" (A , B))

–Test Frame 155(8):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 80 < "RouteSegment Degrees" A 3. 80 < "RouteSegment Degrees" B 4. ¬ (IsOnRoute Routes2 A) 5. FlightLevel A ≤ 275 6. ¬ (MeetMNPS A) 7. ABS (LateralPositionInMiles A − LateralPositionInMiles B) ≤ 120 8. ¬ (LongitudinallySeparated (A , B)) 9. "LatChange Per10DLong LessThanOrEq3" A 10. "LatChange Per10DLong LessThanOrEq3" B 11. IsOutsideMNPSAirspace A 12. IsOutsideMNPSAirspace B 13. IsOnRoute Routes2 B	1. ¬ ("are separated" (A , B))

–Test Frame 156(1):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 70 ≤ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A ≤ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. ¬ (IsOnRoute Routes1 B) 7. ¬ (IsWestOf55W B) 8. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) ≤ 1 9. FlightLevel A ≤ 275 10. MeetMNPS A 11. MeetMNPS B 12. HavePartOfRouteInMNPSAirspace A 13. HavePartOfRouteInMNPSAirspace B 14. ¬ (LongitudinallySeparated (A , B)) 15. "RouteSegment Degrees" B < 70	1. ¬ ("are separated" (A , B))

–Test Frame 157(2):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 70 ≤ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A ≤ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. IsOutsideMNPSAirspace A 7. IsOutsideMNPSAirspace B 8. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) ≤ 1.5 9. IsOnRoute Routes2 A 10. IsOnRoute Routes2 B 11. IsWestOf55W A 12. IsWestOf55W B 13. ¬ (LongitudinallySeparated (A , B)) 14. "RouteSegment Degrees" B < 70	1. ¬ ("are separated" (A , B))

–Test Frame 158(3):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 70 ≤ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A ≤ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. ¬ (IsOnRoute Routes1 A) 7. ¬ (IsWestOf55W A) 8. IsSupersonic A 9. IsSupersonic B 10. 275 < FlightLevel A 11. 275 < FlightLevel B 12. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) ≤ 1 13. ¬ (LongitudinallySeparated (A , B)) 14. "RouteSegment Degrees" B < 70	1. ¬ ("are separated" (A , B))

–Test Frame 159(4):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 70 $\leq$ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A $\leq$ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. ¬ (IsOutsideMNPSAirspace B) 7. FlightLevel B $\leq$ 275 8. ¬ (HavePartOfRouteInMNPSAirspace B) 9. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) $\leq$ 2 10. ¬ (LongitudinallySeparated (A , B)) 11. "RouteSegment Degrees" B < 70 12. IsOutsideMNPSAirspace A 13. IsOnRoute Routes1 B	1. ¬ ("are separated" (A , B))

–Test Frame 160(5):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 70 $\leq$ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A $\leq$ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. ¬ (IsOutsideMNPSAirspace A) 7. ¬ (IsSupersonic B) 8. ¬ (HavePartOfRouteInMNPSAirspace A) 9. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) $\leq$ 2 10. ¬ (LongitudinallySeparated (A , B)) 11. "RouteSegment Degrees" B < 70 12. IsOutsideMNPSAirspace B 13. IsOnRoute Routes1 B	1. ¬ ("are separated" (A , B))

–Test Frame 161(6):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 70 ≤ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A ≤ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. ¬ (IsOnRoute Routes1 B) 7. ¬ (IsOnRoute Routes2 B) 8. ¬ (IsSupersonic A) 9. ¬ (MeetMNPS B) 10. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) ≤ 2 11. ¬ (LongitudinallySeparated (A , B)) 12. "RouteSegment Degrees" B < 70 13. IsOutsideMNPSAirspace A 14. IsOutsideMNPSAirspace B 15. IsOnRoute Routes2 A	1. ¬ ("are separated" (A , B))

–Test Frame 162(7):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. 70 ≤ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A ≤ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. IsOutsideMNPSAirspace A 7. IsOutsideMNPSAirspace B 8. IsOnRoute Routes1 A 9. IsOnRoute Routes1 B 10. ABS (LateralPositionInDegrees A − LateralPositionInDegrees B) ≤ 1.5 11. ¬ (LongitudinallySeparated (A , B)) 12. "RouteSegment Degrees" B < 70 13. ¬ (IsWestOf55W B)	1. ¬ ("are separated" (A , B))

–Test Frame 163(8):

Stimuli	Response
1. $\neg$ (VerticallySeparated (A , B)) 2. 70 $\leq$ "RouteSegment Degrees" A 3. "RouteSegment Degrees" A $\leq$ 80 4. "LatChange Per10DLong LessThanOrEq1" A 5. "LatChange Per10DLong LessThanOrEq1" B 6. $\neg$ (IsOnRoute Routes2 A) 7. FlightLevel A $\leq$ 275 8. $\neg$ (MeetMNPS A) 9. ABS (LateralPositionInDegrees A $-$ LateralPositionInDegrees B) $\leq$ 2 10. $\neg$ (LongitudinallySeparated (A , B)) 11. "RouteSegment Degrees" B $<$ 70 12. IsOutsideMNPSAirspace A 13. IsOutsideMNPSAirspace B 14. IsOnRoute Routes2 B	1. $\neg$ ("are separated" (A , B))

D.2.3 Longitudinal Separation

–Test Frame 164(1):

Stimuli	Response
1. $\neg$ (VerticallySeparated (A , B)) 2. $\neg$ (LaterallySeparated (A , B)) 3. $\neg$ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. IsSupersonic A 5. IsSupersonic B 6. IsLevel A 7. IsLevel B 8. SameMachNumber (A , B) 9. "SameOr Diverging Tracks" (A , B) 10. ABS (TimeAtPosition A $-$ TimeAtPosition B) $\leq$ 10 11. "Appropriate TimeSep AtCommon Point" (A , B)	1. $\neg$ ("are separated" (A , B))

–Test Frame 165(2):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 4. ¬ (IsSupersonic B) 5. IsTurbojet A 6. IsTurbojet B 7. StartTime ("turbojetOppDir NoLongSepPeriod" (A , B)) $\leq$ "separation check time" 8. "separation check time" $\leq$ EndTime ("turbojetOppDir NoLongSepPeriod" (A , B))	1. ¬ ("are separated" (A , B))

–Test Frame 166(3):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. ¬ (IsSupersonic A) 5. ¬ (IsTurbojet B) 6. ¬ ("SameOr Diverging Tracks" (A , B)) 7. IsOnRoute Routes3 A 8. IsOnRoute Routes3 B 9. ABS (TimeAtPosition A − TimeAtPosition B) $\leq$ 20	1. ¬ ("are separated" (A , B))

–Test Frame 167(4):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 4. ReportedOverCommonPoint (A , B) 5. ept (A , B) $\leq$ "separation check time" 6. ¬ (IsTurbojet A) 7. "separation check time" $\leq$ ept (A , B) + 10	1. ¬ ("are separated" (A , B))

–Test Frame 168(5):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B) 4. ¬ (ReportedOverCommonPoint (A , B)) 5. ept (A , B) $-$ 15 $\leq$ "separation check time" 6. ¬ (IsTurbojet B) 7. "separation check time" $\leq$ ept (A , B) + 15	1. ¬ ("are separated" (A , B))

–Test Frame 169(6):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. IsSupersonic A 5. IsSupersonic B 6. SameType (A , B) 7. InCruiseClimb A 8. InCruiseClimb B 9. "SameOr Diverging Tracks" (A , B) 10. ABS (TimeAtPosition A $-$ TimeAtPosition B) $\leq$ 10 11. "Appropriate TimeSep AtCommon Point" (A , B) 12. ¬ (SameMachNumber (A , B))	1. ¬ ("are separated" (A , B))

–Test Frame 170(7):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. IsSupersonic A 5. IsSupersonic B 6. ¬ (SameMachNumber (A , B)) 7. ABS (TimeAtPosition A − TimeAtPosition B) $\leq$ 15 8. ReportedOverCommonPoint (A , B) 9. IsLevel A 10. IsLevel B	1. ¬ ("are separated" (A , B))

–Test Frame 171(8):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. IsSupersonic A 5. IsSupersonic B 6. ¬ (IsLevel B) 7. ABS (TimeAtPosition A − TimeAtPosition B) $\leq$ 15 8. ReportedOverCommonPoint (A , B) 9. IsLevel A 10. SameMachNumber (A , B)	1. ¬ ("are separated" (A , B))

–Test Frame 172(9):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. IsSupersonic A 5. IsSupersonic B 6. ¬ (IsLevel A) 7. ¬ (SameType (A , B)) 8. ABS (TimeAtPosition A − TimeAtPosition B) $\leq$ 15 9. ReportedOverCommonPoint (A , B) 10. IsLevel B 11. SameMachNumber (A , B)	1. ¬ (“are separated” (A , B))

–Test Frame 173(10):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. ¬ (IsSupersonic B) 5. ¬ (IsTurbojet B) 6. ¬ (“SameOr Diverging Tracks” (A , B)) 7. ¬ (IsOnRoute Routes3 B) 8. ABS (TimeAtPosition A − TimeAtPosition B) $\leq$ 30 9. IsOnRoute Routes3 A	1. ¬ (“are separated” (A , B))

–Test Frame 174(11):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. ¬ (IsSupersonic B) 5. IsTurbojet A 6. IsTurbojet B 7. ABS (TimeAtPosition A − TimeAtPosition B) ≤ "turbojetSameDir LongSep" (A , B)	1. ¬ ("are separated" (A , B))

–Test Frame 175(12):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. ¬ (IsSupersonic B) 5. ¬ (IsTurbojet B) 6. ¬ ("SameOr Diverging Tracks" (A , B)) 7. ¬ (IsOnRoute Routes3 A) 8. ABS (TimeAtPosition A − TimeAtPosition B) ≤ 30 9. IsOnRoute Routes3 B	1. ¬ ("are separated" (A , B))

–Test Frame 176(13):

Stimuli	Response
1. ¬ (VerticallySeparated (A , B)) 2. ¬ (LaterallySeparated (A , B)) 3. ¬ (AngularDifferenceGreaterThan90Degrees (RouteSegment A , RouteSegment B)) 4. IsSupersonic A 5. IsSupersonic B 6. ¬ (ReportedOverCommonPoint (A , B)) 7. ¬ (“Appropriate TimeSep AtCommon Point” (A , B)) 8. ABS (TimeAtPosition A − TimeAtPosition B) $\leq$ 15 9. IsLevel A 10. IsLevel B 11. SameMachNumber (A , B)	1. ¬ (“are separated” (A , B))