

APPENDIX G

Simulator Log

Simulator Log

3/31/00 PM
T.M.

Systems demo

March 30, 2000

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File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓=flying)	Scenario #	FDR Start Time (✓diff. than 1255 sec.)	Comments
eggt-demo -26.dnr	1	2:37	7	12	1a	ET = 6 sec	Open Session "Hands off" (Some SW added by captain)
	2		✓7	12	1b	~5 sec	Recover IMMEDIATELY 32,600 ft (lowest alt.) 7: "Heaven How Normal"
	3		✓7	12	1c 5 sec	6 sec	5 sec delay before recovery Lowest ALT: 31800 ft
	4	2:45	✓7	12	1c 10 sec	~5 sec	10 sec PILOT Delay Lowest ALT: 30800 ft
	5	2:49	✓7	6	1c 20 sec	~5 sec	20 sec delay Lowest ALT: 24770 ft
	6		7	6 ✓	1b	~5 sec	Immediate recovery Lowest alt.: 32700 ft

Enclosure 6
BE326-C00-029
Pg. 1 of 13

Pilots:
1. Capt. P.D. Weston
2. Dr. Brenner
3. Dr. Elias
4. Dr. Bolte

5. Mr. John O' Callaghan
6. Capt. El Missiry
7. Capt. Kelada
8. Capt. Tafs

9. Capt. John Cashman
10. Capt. Buzz Nelson
11. Capt. Gus Stearns
12. Mr. Handy

Scenarios:
1 = dual disconnect
2 = 1 disconnect, 1 jam
3 = dual DCV jam
1 = backdrive only, column follows push
2 = backdrive only, column follows pull
3 = backdrive w/interrupt, pilot pulls
4 = backdrive w/interrupt, co-pilot pushes

a) Free Response
b) IMMEDIATE RESPONSE

Simulator Log

3/31/00 PM

T.M

Failure Time

File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓=flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt-demo -26.dcr	7	~2:52 PM	7	6 ✓	1C 5sec	~5 sec	5 sec delay Lowest alt: 31800 Ft
	8		7	6 ✓	1C 20sec	~5 sec	20 sec delay Lowest alt: 24100 ft
	9	2:56	7	6 ✓	1C 2410ft	~5 sec	Recover initiated @ 24000 ft Lowest alt: 18420 ft
	10	3:00	✓1	12	1B	~5 sec	8 minutes recovery
	11		✓1	12	1C 5sec	5 sec	5 sec Delay Lowest alt: 31660 Ft New FDR Yld's. AM ON 20 sec delay
	12		✓1	12	1C 20sec	~5 sec	Lowest alt: 23900 ft

Pilots:

1. Capt. P.D. Weston
2. Dr. Brenner
3. Dr. Elias
4. Dr. Bolte

5. Mr. John O' Callaghan
6. Capt. El Missiry
7. Capt. Kelada
8. Capt. Tafs

9. Capt. John Cashman
10. Capt. Buzz Nelson
11. Capt. Gus Stearns
12. Mr. Mandy

Scenarios:

- 1 = backdrive only, column follows push
 - 2 = backdrive only, column follows pull
 - 3 = backdrive w/interupt, pilot pulls
 - 4 = backdrive w/interupt, co-pilot pushes
- a) Free Response
b) Immediate

Simulator Log

3/31/00 PM
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Failure @ Time

File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓ = flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt-demo -26.dmr	13	3:03 PM	✓ 1	12	"1b"	*	* Failure inserted while pilot manually flying. used SA TRIM &/or SA TRIM COMBINATIONS
	14		1	12✓	1b	-5sec	Immediate response
	15		1	12✓	1c 5sec	-5sec	5 sec delay lowest alt:
	16		1	12✓	1c 20sec	-5sec	20 sec delay lowest alt:
	17		1	13✓	1b		Immediate response
	18		1	13✓	1c 5sec		5 sec delay lowest alt: 31350 ft

Enclosure 6
BE326-C00-029
Pg. 3 of 13

Pilots:

- 1. Capt. P.D. Weston
- 2. Dr. Brenner
- 3. Dr. Elias
- 4. Dr. Bolte
- 5. Mr. John O' Callaghan
- 6. Capt. El Missiry
- 7. Capt. Kelada
- 8. Capt. Tafs

- 9. Capt. John Cashman
- 10. Capt. Buzz Nelson
- 11. Capt. Gus Stearns
- 12. MR HANBY

Scenarios:

- 1 = dual disconnect
 - 2 = 1 disconnect, 1 jam
 - 3 = dual jam
 - 1 = backdrive only, column follows push
 - 2 = backdrive only, column follows pull
 - 3 = backdrive w/interrupt, pilot pulls
 - 4 = backdrive w/interrupt, co-pilot pushes
- a) Free Response
b) Immediate recovery
c) dual...

Simulator Log

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Systems Demo

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Failures@home

File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓ = flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egyp- demo 26.dmr	19		1	13 ✓	1c 20sec	5sec	20 sec delay lowest alt: 25240 ft
	20		1	13 ✓	"1c"		Wait for overspeed warning overspeed: 17 sec after failure
	21	3:15	1	6	2a	7sec	Free response
	22		✓1	6	2b	6sec	Immediate response lowest alt: 32580 ft
	23		✓1	6	2c 5sec	7sec	5 sec delay lowest alt: 31280 ft
	24		✓1	6	2c 20sec	~7sec	20 sec delay lowest alt: 22380 ft 1: " & hence aft column at the stop

Enclosure 5
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Pilots:

1. Capt. P.D. Weston
2. Dr. Brenner
3. Dr. Elias
4. Dr. Bette

5. Mr. John O' Callaghan
6. Capt. El Missiry
7. Capt. Kelada
8. Capt. Tafs

9. Capt. John Cashman
10. Capt. Buzz Nelson
11. Capt. Gus Stearns
12. Mr. Blomely
13. Mr. ...

Scenarios:

- 1 = dual disconnect
- 2 = backdrive only, column follows push
- 3 = backdrive w/interrupt, pilot pulls
- 4 = backdrive w/interrupt, co-pilot pushes

- a) = Free response
- b) = Immediate response
- c) = Delayed response

Simulator Log

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Systems Demo

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Failure @ time

File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓ = flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt_demo - 26.dvr	25		1	6✓	2b		Immediate recovery lowest alt: 32580 ft
	26	3:21	1	6✓	2c 5sec	6sec	5 sec delay lowest alt: 30850 ft
	27		1	6✓	2c 20sec	6sec	20 sec delay lowest alt: 22600 ft
	28		1	6✓	"2c" 24k'	6sec	* Recovery Initiated starting at 24000 ft. lowest alt: ~17500 ft
	29	3:28	7	12	2a	6sec	Free Response
	30		✓7	12	2b		Immediate Response lowest alt 31960 ft (?)

Enclosure 6
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Pilots:

- | | | |
|----------------------|--------------------------|-----------------------|
| 1. Capt. P.D. Weston | 5. Mr. John O' Callaghan | 9. Capt. John Cashman |
| 2. Dr. Brenner | 6. Capt. El Missiry | 10. Capt. Buzz Nelson |
| 3. Dr. Elias | 7. Capt. Kelada | 11. Capt. Gus Stearns |
| 4. Dr. Bolte | 8. Capt. Tafs | 12 Mr Namely |

Scenarios:

- | | | |
|------------------------|--|-----------------------|
| 1 = dual disconnect | 1 = backdrive only, column follows push | a) = Free Response |
| 2 = lossconnect, 1 fan | 2 = backdrive only, column follows pull | b) Immediate Response |
| 3 = dual fan | 3 = backdrive w/interrupt, pilot pulls | c) Delayed |
| | 4 = backdrive w/interrupt, co-pilot pushes | |

Simulator Log

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PM

Systems Demo

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"ET"
Failure@time

File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓=flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt-demo 26.dmr	31	3:30	✓7	12	2c 5sec		5 sec delay L.A. = 31150 ft (lowest altitude)
	32		✓7	12	2c 20sec		20 seconds delay. L.A. =
	33		✓7	12	2c 24K"		MANUALLY FLYING testing to see if jerk @ failure is noticeable: yes Recovery initiated at 24000 feet L.A. = 16300 FT
	34		7	12✓	2b	0sec	Immediate recovery L.A. = 32320 ft
	35		7	12✓	2c 5sec		5 second delay L.A. = 31680 ft
	36		7	12✓	2c 20sec		20 second delay L.A. = ~22750 ft

Enclosure 6
BE326-C00-039
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Pilots:

1. Capt. P.D. Weston
2. Dr. Brenner
3. Dr. Elias
4. Dr. Bolte

5. Mr. John O' Callaghan
6. Capt. El Missiry
7. Capt. Kelada
8. Capt. Tafs

9. Capt. John Cashman
10. Capt. Buzz Nelson
11. Capt. Gus Stearns
12. Mr. Namely

Scenarios:

- 1 = dual disconnect
- 2 = 1 disconnect, 1 jam
- 3 = dual jam

- 1 = backdrive only, column follows push
- 2 = backdrive only, column follows pull
- 3 = backdrive w/interrupt, pilot pulls
- 4 = backdrive w/interrupt, co-pilot pushes

- a) = Free response
- b) = Immediate response
- c) = Delayed

Simulator Log

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Failure@time

File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓=flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt-dem -26.dn	37	3:39 pm	14	13✓	2b		Immediate response
	38		14	13✓	2c 5sec		5 sec delay
	39		14	13✓	2c 20sec		20 sec delay LA = 23450 ft. (lowest alt)
end of egypt-dem -26.dn	40		✓14	13	2c 20sec		20 second delay L.A. =

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Pilots:

- | | | |
|----------------------|--------------------------|-----------------------|
| 1. Capt. P.D. Weston | 5. Mr. John O' Callaghan | 9. Capt. John Cashman |
| 2. Dr. Brenner | 6. Capt. El Missiry | 10. Capt. Buzz Nelson |
| 3. Dr. Elias | 7. Capt. Kelada | 11. Capt. Gus Stearns |
| 4. Dr. Bolte | 8. Capt. Tafs | 12. Mr. Namely |

Scenarios:

- | | | |
|-----------------------|--|-------------------------|
| 1 = dual disconnect | 1 = backdrive only, column follows push | a) = Free response |
| 2 = disconnect, 1 fan | 2 = backdrive only, column follows pull | b) = Immediate response |
| 3 = dual fan | 3 = backdrive w/interrupt, pilot pulls | c) = Delayed |
| | 4 = backdrive w/interrupt, co-pilot pushes | |

Simulator Log

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Systems Demo

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File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓ = flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt_demo -27.dmr (New File)	1	3:46	7	6	3a	5.5 sec	Free Response
	2		✓7	6	3b	5.5	Immediate response LA = 32200 ft (lowest alt) = "Very little roll off"
	3	3:50	✓7	6	3c 5 sec	6.5 sec	5 second delay
	4		✓7	6	3c 20 sec	7 sec	20 second delay LA = 20800 ft
	5		✓7	6	3c "0"		Feeling response in hands - enough to get your attention (Whole body jerked)
	6		7	6✓	3b		Hands on when failure input, immediate recovery.

Failure @ time

Enclosure 5
BE326-C00-029
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Pilots:

- 1. Capt. P.D. Weston
- 2. Dr. Bremner
- 3. Dr. Elias
- 4. Dr. Bette
- 5. Mr. John O' Callaghan
- 6. Capt. El Missiry
- 7. Capt. Kelada
- 8. Capt. Tafs
- 9. Capt. John Cashman
- 10. Capt. Buzz Nelson
- 11. Capt. Gus Stearns
- 12. MA Hamely

Scenarios:

- 1 = dual disconnect
- 2 = 1ohsconnect, 1 fan
- 3 = dual fan
- 1 = backdrive only, column follows push
- 2 = backdrive only, column follows pull
- 3 = backdrive w/interrupt, pilot pulls
- 4 = backdrive w/interrupt, co-pilot pushes
- a) = Free response
- b) = Immediate response
- c) = Delayed

Simulator Log

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Systems Demo

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File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓=flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt-demo -27.dmr	7	3:55 PM	7	6✓	3C 5sec		5 second delay
	8	3:57	7	6✓	3C 20sec	7sec	20 second delay LA = 20200 ft (due to Failure) Tested w/ Hands off (Column Fwd), CAN'T TRIM UP
	9	4:00	7	6✓	3C 24k'	6sec	Recovery initiated @ 24000 ft. LA = 18050 ft Some trim at the end.
	10	4:05	1	12	3a		Free Response
	11		✓1	12	3b	~5sec	Immediate Recovery - Flying FLIGHT DIRECTOR
	12		✓1	12	3C 5sec	15sec	5 sec delay

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Pilots:

- | | | |
|----------------------|--------------------------|-----------------------|
| 1. Capt. P.D. Weston | 5. Mr. John O' Callaghan | 9. Capt. John Cashman |
| 2. Dr. Brenner | 6. Capt. El Missiry | 10. Capt. Buzz Nelson |
| 3. Dr. Elias | 7. Capt. Kelada | 11. Capt. Gus Stearns |
| 4. Dr. Bolte | 8. Capt. Tafs | 12 Mr Namely |

Scenarios:

- | | | |
|------------------------|--|-----------------------|
| 1 = dual Disconnect | 1 = backdrive only, column follows push | a) = Free Response |
| 2 = lossconnect, 1 fan | 2 = backdrive only, column follows pull | b) Immediate response |
| 3 = dual fan | 3 = backdrive w/interrupt, pilot pulls | c) Delayed |
| | 4 = backdrive w/interrupt, co-pilot pushes | |

Simulator Log

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Systems Demo

March 30, 2000

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Failure time

File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓=flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt-demo -27.du	13		✓1	12	3c 20sec	6.5	20 second delay 1: "Flight director bars are not your friend." CHASING Flight Director
	14		1	12✓	3b		Immediate recovery 12" Much heavier focus
	15		1	12✓	3c 5sec		5 second delay
	16		1	12✓	3c 20sec	~9sec?	20 second delay LA = 21760 ft (downstalt.)
	17		✓1	12	3b	6sec	Immediate recovery ≠ USING TRIM
	18		1	12	3a	36sec	Free Response with Autothrottles engaged.

Enclosure 6
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Pilots:

- | | | |
|----------------------|--------------------------|-----------------------|
| 1. Capt. P.D. Weston | 5. Mr. John O' Callaghan | 9. Capt. John Cashman |
| 2. Dr. Brenner | 6. Capt. El Missiry | 10. Capt. Buzz Nelson |
| 3. Dr. Elias | 7. Capt. Kelada | 11. Capt. Gus Stearns |
| 4. Dr. Bolte | 8. Capt. Tafs | 12. Mr. Namely |

Scenarios:

- | | | |
|-------------------------|--|-------------------------|
| 1 = dual disconnect | 1 = backdrive only, column follows push | 2) = Free Response |
| 2 = 1 disconnect, 1 jam | 2 = backdrive only, column follows pull | 3) = Immediate Response |
| 3 = dual jam | 3 = backdrive w/interrupt, pilot pulls | 4) = Delayed |
| | 4 = backdrive w/interrupt, co-pilot pushes | |

Simulator Log

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Systems Demo

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Envelope

File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓=flying)	Scenario #	FDR Start Time (if diff. than 123 sec.)	Comments
egyp-demo -27.daw	19	4:22 pm	1	6 ✓	3c 5sec		5 sec delay Auto throttles on (armed) LA = 28340 ft "6: a little higher with AT"
	20	4:25	1	13 ✓	3b		Immediates Recovery (no AT)
	21		1	13 ✓	3c 5sec		5 second delay
	22		1	13 ✓	3c 20sec	5	20 second delay Following Flight Director
egyp-demo -27	23		1	13 ✓	3c 10sec	20sec	10 sec Recovery Pound Throttles Back
	24	4:31	5	14 ✓	3c 20sec	~11sec	20 Second Delay Pulled Throttles Back LA = 17570 ft

Enclosure 6
BE326-C00-029
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Pilots:
 1. Capt. P.D. Weston
 2. Dr. Brenner
 3. Dr. Elias
 4. Dr. Bolte

5. Mr. John O' Callaghan
 6. Capt. El Missiry
 7. Capt. Kelada
 8. Capt. Tafs

9. Capt. John Cashman
 10. Capt. Buzz Nelson
 11. Capt. Gus Stearns
 12. MA Namoby
 13. Scott Warden

Scenarios:
 1 = dual Disconnect
 2 = 1 on disconnect, 1 jam
 3 = dual jam
 1 = backdrive only, column follows push
 2 = backdrive only, column follows pull
 3 = backdrive w/interrupt, pilot pulls
 4 = backdrive w/interrupt, co-pilot pushes

a) = Force Response
 b) = Manual Response
 c) = Disrupt

Simulator Log

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Systems Demo

March 30, 2000

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File Name (if recorded)	Case #	Clock Time	Left Seat (✓=flying)	Right Seat (✓=flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt-demo 27.dcu	25	4:33	✓5	14	3C 7sec	7sec	7 second delay Pulled throttles back Pulled 9/B immediately
	26 27 28	-					Test Case for 3 PCU JAM
	29	4:55	✓8				3 PCU FAILURE on 1 side 11° Se jammed (left se) Can use trim TEST CASE
	30	4:57	✓8				11° Se jam Videos off
	31	4:58	✓8				6° Se jam Used Stab Trim
	32		✓8				6° Se jam no trim pulling 120 lbs Videos off

Enclosure 6
BEE26-000-020
Pg. 12/13

Pilots:

- | | | |
|----------------------|--------------------------|-----------------------|
| 1. Capt. P.D. Weston | 5. Mr. John O' Callaghan | 9. Capt. John Cashman |
| 2. Dr. Brenner | 6. Capt. El Missiry | 10. Capt. Buzz Nelson |
| 3. Dr. Elias | 7. Capt. Kelada | 11. Capt. Gus Stearns |
| 4. Dr. Bolte | 8. Capt. Tafs | 12 MR Namely |

Scenarios:

- | | | |
|-------------------------|--|-------------------------|
| 1 = dual disconnect | 1 = backdrive only, column follows push | a) = Free response |
| 2 = 1 disconnect, 1 jam | 2 = backdrive only, column follows pull | b) = Immediate response |
| 3 = dual jam | 3 = backdrive w/interrupt, pilot pulls | c) = Delayed |
| | 4 = backdrive w/interrupt, co-pilot pushes | |

Simulator Log

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File Name (if recorded)	Case #	Clock Time	Left Seat (✓ = flying)	Right Seat (✓ = flying)	Scenario #	FDR Start Time (if diff. than 1235 sec.)	Comments
egypt.dem 27.dem	33		✓6				6" Se jam Throttle Back NO TRIM (Video, ON)
	34		✓6				6" Se jam Recovery 6 - 4000 Throttle Back NO TRIM
egypt.dem	35		✓11				6" Se jam 5 sec delay Throttle Back End of Video
egypt.dem -27.dem	36	5:06 PM	✓17				6" Se jam Seat slt back -4000 Recovery

Enclosure 6
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Pilots:
 1. Capt. P.D. Weston
 2. Dr. Brenner
 3. Dr. Elias
 4. Dr. Bolte
 5. Mr. John O' Callaghan
 6. Capt. El Missiry
 7. Capt. Kelada
 8. Capt. Tafs
 9. Capt. John Cashman
 10. Capt. Buzz Nelson
 11. Capt. Gus Stearns
 12. Mr. Nandy

Scenarios:
 1 = dual Disconnect
 2 = 1 disconnect, 1 jam
 3 = dual jam
 1 = backdrive only, column follows push
 2 = backdrive only, column follows pull
 3 = backdrive w/interrupt, pilot pulls
 4 = backdrive w/interrupt, co-pilot pushes

2) = Force Response
 3) = Manual Response
 4) = Deliberate