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Aircraft accident investigation bureau

Final Report No. 1904 by the Aircraft Accident Investigation Bureau

concerning the serious incident (airprox)

between NJE 2754, Raytheon Hawker 800XP, CS-DNJ

and IBE 3500 A320-214, EC-HAB

on 21 April 2004

6 NM S/W KLO DVOR/DME

Final Report

This report has been prepared solely for the purpose of accident/incident prevention. The legal assessment of accident/incident causes and circumstances is no concern of the incident investigation (Art. 24 of the Air Navigation Law). The masculine form is used in this report regardless of gender for reasons of data protection.

All times in this report are in UTC format (local time -2 h)

Place/date/time	Zurich, 6 NM S/W Kloten, 21.04.04, 08:48 UTC
Aircraft	NJE 2754, Raytheon Hawker 800XP, CS-DNJ, NetJets Transportes Aéreos S.A. Northolt (EGWU) – Lugano-Agno (LSZA) IBE 3500, A320, EC-HAB, IBERIA Lineas Aéreas de Espana Madrid/Barajas (LEMD) – Frankfurt/Main (EDDF)

Crews	NJE 2754	CMDR
		FO
	IBE 3500	CMDR
		FO

ATC unit	Zurich Area Control Centre
Air traffic controllers	Radar Executive M2 (RE-M2) Radar Planning M2 (RP-M2)

Airspace	C
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1. History

1.1 History of the flight

On Wednesday 21 April 2004, the crew of IBE 3500 were making a scheduled flight from Madrid to Frankfurt. The commander (CMDR) was pilot flying (PF) and the first officer (FO), as pilot not flying (PNF), made contact with Sector M2 in Zurich at 08:37:27 UTC on frequency 132.815 MHz. The Radar Executive M2 (RE-M2) identified the aircraft and instructed the crew to remain at FL 320 and fly via route KORED-BERSU-KUDES-LADOL.

On that day, the crew of NJE 2754 (call sign Skyshare) were making a flight from Northolt to Lugano-Agno. The aircraft flew at FL 350 via waypoint NATOR into Zurich airspace, where the CMDR as PNF made contact with Sector M3 on frequency 134.605 MHz. The crew were instructed to fly to Lugano via route TRA – ODINA. As the aircraft would later have to be handed over to Milan Control, the air traffic control unit responsible for Lugano Approach, in a descent to FL 150, shortly before it passed the TRA VOR the M3 Sector air traffic controller (ATCO) issued it with a first clearance to descend to FL 330. For further descent, the crew were instructed to contact Sector M2, as the latter was responsible for the next lower airspace from FL 325-FL286.

Contact with the Radar Executive M2 took place at 08:45:07 UTC with the words: *"Zurich good morning, NJE two seven five four, passing level three four four for three three zero, passing Trasadingen"*. The RE-M2 instructed the crew to remain at FL330 once they had reached this altitude. The CMDR answered: *"maintain three three zero, NJE two seven five four"*.

At the same time a Ryanair B737-800, call sign RYR 3745, was on the frequency in Sector M2. This aircraft was also flying on the TRA-ODINA route; it was approximately 35-40 NM in front of NJE 2754 and was descending to FL 310. RYR 3745 with destination Pisa would later have to be handed over from the RE-M2 to Milan at FL 290.

At 08:46:33 UTC, the RE-M2 again contacted the crew of IBE 3500 and instructed them to maintain their current heading, which according to the crew statements was 054°. The reason for this measure was to enable an Air France B737-500 flying from Munich to Paris to climb earlier.

At 08:46:49 UTC, the RE-M2 gave the following instruction: *"RYR three seven four five, descend to flight level two niner zero be leveled overhead ODINA"*. However, instead of the Ryanair aircraft, Skyshare 2754 answered at 08:46:55 *"Level two nine zero, to be level at ODINA, NJE two seven five four"*.

After a further radio conversation by the RE-M2 with an Alitalia crew, RYR 3745 reported at 08:47:06 with the words: *"confirm, that was for Ryanair three seven four five, descending to level two niner zero to ODINA?"*. The RE-M2 answered: *that is correct, for you and..."*.

According to his statements, the FO of NJE 2754 had switched on the traffic collision avoidance system (TCAS) on the NAV system. Apparently he soon realised that an aircraft was approaching from the right, but it was 1000 ft lower. However, on receiving a TCAS traffic advisory (TA), he realised that the vertical separation to this aircraft had reduced to 800 ft. The CMDR then immediately took over control of the aircraft, switched off the autopilot and began to maintain the aircraft at its current altitude. He himself was able to establish visual contact with the other aircraft within a few seconds.

The FO further stated that he had subsequently taken back control of the aircraft and switched on the autopilot. At the time, the vertical separation to the other aircraft would have been 700 ft. He was apparently just on the point of climbing back to FL 330 when a TCAS resolution advisory (RA) sounded. He then switched the autopilot off again and followed the TCAS instruction.

At 08:48:33 UTC, the CMDR of NJE 2754 reported that their aircraft was now again at FL 330.

At the time when the vertical separation between the two aircraft was 700 ft and the crews received a TCAS-RA, the two aircraft were about 7 seconds or 0.9 NM from the crossing point.

At 08:48:37 UTC, when the encounter with NJE 2754 had already taken place, the RE-M2 instructed the crew of IBE 3500 again to maintain FL 320: *"IBE three five hundred, maintain flight level three two zero"*. The FO answered that they had had to descend briefly because of a TCAS-RA, as another aircraft had been above them with a vertical separation of less than 800 ft.

1.2 Radar Executive Sector M2

On the first contact, the RE-M2 had instructed NJE 2754 to maintain FL 330, as according to his information he had realised that the aircraft would cross the flight path of IBE 3500.

After instructing RYR 3745 to descend to FL 290 he had observed that at 08:47:28 NJE 2754 was indicating an altitude of FL 329 on his radar monitor. On the basis of this fact, he wanted to obtain confirmation once again from the crew that the aircraft was actually maintaining FL330. However, he was prevented from making contact because at the same time RYR 3745 reported and informed him that NJE 2754 was probably descending.

At 08:47:32 UTC the RE again instructed the crew of NJE 2754 to maintain FL 330. The latter did not answer. Only after a second call at 08:47:40 UTC did the CMDR answer that they had in the meantime received a TCAS-RA, as they had found themselves on a collision course with another aircraft.

The RE-M2 repeated the instruction to NJE 2754 to maintain FL 330 with the information that another aircraft was below them at FL 320.

Several radio conversations then ensued. In the course of these, the CMDR of NJE 2754 informed the RE-M2 that he had received clearance to descend to FL 290 and had also confirmed this. Thereupon the RE-M2 responded that this clearance had been intended for RYR 3745.

The RE-M2 had failed to notice that after he had instructed RYR 3745 to descend to FL290, NJE 2754 had acknowledged this instruction. The subsequent query from the crew of RYR 3745 as to whether the clearance to descend to FL 290 applied to them was therefore answered by the RE-M2 with *"that is correct, for you and..."* and he then immediately turned to another aircraft.

1.3 Radar Planner Sector M2

Sector M2 was occupied by two air traffic controllers. The radar planner (RP-M2) was sitting next to the RE-M2. He had taken over his workstation a few minutes before the incident.

According to his statements he had first made certain that all aircraft in their area of responsibility were separated. Once he had also ascertained that there was vertical separation between NJE 2754 and IBE 3500, he then occupied himself with setting up his workstation.

However, when taking over his workstation, he was unable to find any writing materials. According to his statements, to get these, he had to leave his workstation for approximately ten seconds.

He also stated: *"When I got back to my workstation, I could still hear RYR3745 requesting confirmation that they should descend to FL 290 and that they had to reach this flight level over ODINA at the latest. After I heard my RE confirm this, I could not see any further problems. Only when RYR 3745 mentioned on the radio that NJE 2754 might possibly have made the readback did I become aware of this problem and I immediately recognised the possible consequences. I heard my RE react immediately and instruct NJE 2754 to maintain FL 330. The whole incident took place very quickly and I had no possibility of intervening as RP."*

1.4 Weather according to MeteoSwiss

Upper winds on 21.04.2004 at FL 320/330:

Sensor: Payerne 00z wind 320 degrees at 60 kt, temp -50°C

Sensor: Payerne 12z wind 300 degrees at 30 kt, temp -52°C

2. Analysis

2.1 IBE 3500

The crew of IBE 3500 were able to monitor the impending conflict situation on their TCAS system because of a TCAS traffic advisory (TA). In addition, they had visual contact with the other aircraft.

Shortly before they crossed, a TCAS-RA instructed the crew to descend. According to the digital flight data recorder (DFDR), their descent began approximately 10 seconds before crossing the NetJets Hawker 800XP, which took place at 08:47:47 UTC. According to the radar recording, NJE 2754 crossed IBE 3500 precisely above its flight path. At that time, according to the flight data recorder (DFDR), IBE 3500 was already at 31,760 ft and descending. Three seconds later, the aircraft began to climb back to 32,300 ft, until it was finally stabilised again at FL 320 at 08:48:38 UTC.

The CMDR was of the opinion that the very good visibility conditions and the perfect TCAS information had contributed considerably to defusing the situation.

2.2 NJE 2754

When the crew of NJE 2754 switched to the sector M2 frequency 134.605 MHz, they found that there was heavy traffic on this frequency. Both pilots were of the opinion that the instruction to Ryanair 3745 to descend to FL 290 was intended for them. They became even more certain of this when there was no reaction from the RE-M2 after the CMDR had read back the instruction.

The crew of NJE 2754 then initiated their descent. However, shortly after the aircraft had left FL 330, the crew received a TCAS-TA and immediately after this a TCAS-RA with an instruction to climb. The Hawker 800XP then climbed rapidly to FL 342 and was stabilised again at FL 330 at 08:48:38 UTC.

In the radio recording, it was possible to hear a brief "crackle", as if the frequency had been briefly keyed. Ryanair 3745 may possibly have wanted to start the readback after receiving the clearance to descend and may have already keyed the frequency but aborted this procedure immediately as the crew had just heard that another crew were beginning a radio conversation. This aircraft was NJE 2754, which mistakenly believed that the clearance to descend given to the Ryanair aircraft applied to them and which had begun the readback a fraction of a second earlier.

Ryanair 3745 subsequently had the clearance to descend confirmed by the RE-M2.

One possible reason for the confusion may have been that the call signs "Skyshare" and "Ryanair" sound similar. In addition, the sound of the numbers "3745" (three seven four five) and 2754 (two seven five four) are also potentially very confusing. Although radio quality was essentially good, there was at the time a phase with many radio conversations, and this may have further contributed to the misunderstanding. Moreover, the crew of NJE 2754 were anticipating a clearance to descend, as they were aware that they would have to fly over ODINA significantly lower than FL 290 in order to make an approach to Lugano-Agno.

2.3 ATCO's Sector M2

When, at 08:47:28 UTC, as part of normal traffic surveillance, the RE-M2 noted an altitude indication for NJE 2754 of FL 329 on his radar monitor (radar-scanning) and had additionally realised that the two aircraft would cross with one precisely above the other, according to his statements he wanted to have NJE 2754 confirm once again that the aircraft would actually maintain FL 330.

However, the RE-M2 was no longer able to clarify this over the radio, as at that moment RYR 3745 reported "*I think, the Skyshare descended instead of the Ryanair*".

Immediately afterwards, at 08:47:32 UTC, 15 seconds before the two aircraft crossed, the RE-M2 again instructed the crew of NJE 2754 to maintain FL 330. Since he received no reply, he called NJE 2754 again a few seconds later. The CMDR of NJE 2754 then reported with the information that they had just received a TCAS-RA.

A few seconds before the two aircraft crossed, approximately at the time the CMDR of NJE 2754 reported receiving a TCAS-RA, the short term conflict alert (STCA) in Sector M2 also triggered an alert. At this time, however, the RE-M2 no longer had any possibility of intervening, as the two aircraft were crossing during the radio conversation by the CMDR of NJE 2754.

Because of his brief absence from the sector, the RP had not heard how his RE had cleared RYR 3745 to descend to FL 290 and how this was acknowledged in error by NJE 2754. When the RP was able to monitor events in the sector (loop), he was able to hear how RYR 3745 asked for confirmation that the clearance to descend applied to them.

It must remain open whether the RP, if he had been present at his workstation, would have been able to monitor the radio conversations and therefore prevent the incident.

The planning air traffic controller is in principle responsible for traffic planning in a sector and for the tasks delegated to him. He has to be sufficiently acquainted with the traffic situation so that he is able to support the RE appropriately. This also includes monitoring the sector frequency, as far as possible.

2.4 TCAS

The TCAS in both aircraft functioned according to specification. According to TCAS logic, in the altitude range from 20,000 ft to 42,000 ft in which the incident occurred, a minimum altitude difference of 600 ft (vertical miss distance – ALIM) must be established at the closest point of approach (CPA) by means of vertical manoeuvres. In such a case, the TCAS logic arranges flight paths which avoid vertical convergence, i.e. the higher aircraft must start to climb and the lower one must start to descend. As soon as the TCAS computer calculations, which take place with a period of one second, establish that this minimum vertical distance has been reached on the basis of the resolution advisories which are issued, they minimise the rates of climb and descent respectively of the aircraft concerned by means of amended resolution advisories, known as weakening RAs. By means of these weakening RAs, the original rate of climb or descent is reduced so that an ALIM of 600 ft at the CPA is guaranteed but if possible no other aircraft in adjacent flight levels are brought into the conflict.

The reaction of the crew of NJE 2745 to the initial resolution advisory with the transition to an initial climb at 4000 ft/min meant that this calculated minimum vertical distance at the crossing point was not only achieved but was exceeded. At the closest point of approach (CPA), the altitude difference was 1800 ft, with a lateral separation of 0.3 NM. As a result of this, the TCAS systems issued a weakening of the initial RA (a weakening RA) or even a "clear of conflict". In the case of IBE 3500 this meant that after an initial "descend descend" RA it descended a mere 200-300 ft. The crew of NJE 2745, on the other hand, showed a disproportionate reaction, which led to a 1200 ft overshoot of the original altitude, at an average rate of climb of about 4000 ft/min. This high rate of climb by NJE 2745 did indeed minimise the risk of a collision of these two aircraft. Such a large overshoot might have involved other aircraft above NJE 2745.

Crew reactions to TCAS resolution advisories must be assessed in three regards:

1. the time required to effect the change in the vertical flight path
2. the direction of the change in the flight path (upward sense/downward sense)
3. the extent of the change in the flight path

Both crews reacted immediately and manoeuvred their aircraft in the correct direction. The crew of IBE 3500 reacted immediately and to the correct extent to the initial RA and the subsequent weakening RA and "clear of conflict". However, the crew of NJE 2745 reacted disproportionately and in the process clearly overshoot the altitude which

was considered by the TCAS logic as sufficient to re-establish the required vertical separation.

3. Conclusions

3.1 Findings

- Both aircraft were flying according to instrument flight rules (IFR) and were in uninterrupted radio contact with the competent air traffic controller (RE-M2).
- The volume of traffic was average.
- Both the flight crews and the air traffic controllers were in possession of the licences necessary to exercise their activities.
- The crew of IBE 3500 had received a TCAS-TA. A TCAS-RA with the instruction to descend followed a little later.
- The RE-M2 twice instructed the crew of NJE 2754 to maintain FL 330.
- RYR 3745, a B737-800, was on the Sector M2 frequency at the same time as NJE 2754. It was flying approximately 35-40 NM ahead of NJE 2754 in the same direction.
- At 08:46:49 UTC, the RE-M2 instructed the crew of RYR 3745 to descend to FL 290. This instruction was acknowledged by the crew of NJE 2754.
- The RE-M2 did not notice that the instruction to descend was confirmed by the crew of NJE 2754, not by RYR 3745.
- At the time the RE-M2 gave RYR 3745 clearance to descend to FL 290, the planning air traffic controller was not at his workstation and had not heard the relevant radio conversations.
- The crew of NJE 2754 received a TCAS-TA after leaving FL 330. A TCAS-RA with the instruction to climb followed immediately.
- NJE 2754 was equipped with a Honeywell TCAS 2000 Version 7, part number 751-7900-55002.
- IBE 3500 was equipped with a TCAS II ACSS-THALES, Type RT-950, part number 751-7900-10003.
- Visibility conditions were such that each of the two crews could establish visual contact with the other aircraft.
- Before the incident, the RE-M2 did not transmit traffic information either to IBE 3500 or to NJE 2754.
- The two aircraft crossed at 08:47:47 UTC. IBE 3500 was at 31,760 ft (DFDR) and descending, and NJE 2754 had passed FL 330 in a climb.

3.2 Cause

The incident is attributable to the fact that:

- the crew of NJE 2754 erroneously believed that a clearance to descend which was not addressed to them was intended for them, acknowledged it and then initiated a descent. Neither of the two cockpit crew members had realised that the clearance to descend was intended not for them but for an aircraft which was flying ahead of them.
- the RE-M2 did not notice that NJE 2754 had acknowledged the clearance to descend instead of RYR 3745.

Berne, 6 June 2006

Aircraft Accident Investigation Bureau

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**TRANSCRIPT OF TELEPHONY
OR RADIOTELEPHONY COMMUNICATION TAPE-RECORDINGS**

Investigation into the **incident** that occurred on **21.04.2004**

- Subject of transcript:	NJE2754 / IBE3500
- Centre concerned:	Swiss Radar Area East
- Designation of unit:	M2
- Frequency / Channel:	132.805
- Date and period (UTC) covered by attached extract:	21.04.2004 08:37-08:51 UTC
- Date of transcript:	29.04.2004
- Name of official in charge of transcription:	Nicholas SCHERRER

- Certificate by official in charge of transcription:

I hereby certify:

- That the accompanying transcript of the telephony or radiotelephony communication tape-recordings, retained at the present time in the premises of the Analysis Department, has been made, examined and checked by me.
- That no changes have been made to the entries in columns 2, 3 and 4, which contain only clearly understood indications in their original form.

Nicholas SCHERRER

Abbreviations

Sector Designation of sector

M2 - Upper 2

<u>Aircraft</u>	-	<u>Callsign</u>		<u>Type of acft</u>	<u>Flight rules</u>	<u>ADEP</u>	-	<u>ADES</u>
2754	-	NJE2754	Skyshare	H25B	IFR	EGWU	-	LSZA
3500	-	IBE 3500	Iberia	A320	IFR	LEMD	-	EDDF
3534	-	IBE3534	Iberia	A320	IFR	LEMD	-	EDDM
9579	-	BER9579	Air Berlin	B738	IFR	LEPA	-	EDDS
400	-	AZA400	Alitalia	E145	IFR	LIRF	-	EDDF
2522	-	GW12522	German Wings	A319	IFR	EDDS	-	LEBL
259	-	OAL259	Olympic	B734	IFR	LGAV	-	EGLL
126	-	AZA126	Alitalia	MD82	IFR	LIMC	-	EKCH
14E	-	DLH14E	Lufthansa	A319	IFR	EDDF	-	LEBB
1WF	-	DLH1WF	Lufthansa	RJ85	IFR	LIRQ	-	EDDF
87E	-	DLH87E	Lufthansa	A321	IFR	EDDF	-	LEBL
1523	-	AFR1523	Air France	B735	IFR	EDDM	-	LFPG
3745	-	RYR3745	Ryan Air	B738	IFR	EBCI	-	LIRP

TRANSCRIPT SHEET

Occurrence: NJE2754 / IBE3500 of 21.04.2004



To <u>Col.1</u>	From <u>Col.2</u>	Time <u>Col.3</u>	Communications <u>Col.4</u>	Observations <u>Col.5</u>
M2	3500	08:37:27	Zurich, good morning, IBE three five zero zero, maintaining flight level three two zero on course KORED	
3500	M2	:34	IBE three five zero zero, swiss radar, "Grüezi", identified, to KORED, BERSU, KUDES, LADOL, flight level three two zero	
M2	3500	:39	Roger, BERSU, eh, LADOL, IBE three five zero zero, maintaining three two zero	
3500	M2	:46	KORED, BERSU, KUDES, LADOL for the time being	
M2	3500	:51	KORED, BERSU, KUDES, LADOL, IBE three five zero zero	
3534	M2	:55	IBE three five three four, descend now to flight level two niner zero	
M2	3534	:57	Down to flight level two nine zero, IBE three five three four	
M2	9579	:38:07	Radar from BER nine five seven niner, flight level three hundred inbound KORED	
9579	M2	:12	BER nine five seven niner, Zurich, "Grüezi", KORED, BERSU, GARMO; ARSUT, flight level three hundred	
M2	9579	:21	KORED, BERSU, SUREP, und ARSUT, confirm?	
9579	M2	:25	KORED, BERSU, GARMO, ARSUT	
M2	400	:35	Radar, good morning, AZA four hundred	
9579	M2	:40	BER nine five seven niner, did you copy, KORED, BERSU, GARMO, ARSUT	
M2	9579	:43	BERSU, GARMUR, ARSUR, BER nine five seven ninre	
9579	M2	:48	Yes, that's after KORED	
M2	2522	:52	Zurich, good morning, GWI two five two two, out of two six five, climbing two eight zero	
2522	M2	:56	Seven five two two, swiss radar, "Grüezi", roger, climb to flight level three two zero	
M2	2522	:39:02	Flight level three two zero, GWI two five two two, requested is three seven	

Signature of person
in charge of transcription :

TRANSCRIPT SHEET

Occurrence: NJE2754 / IBE3500 of 21.04.2004



To <u>Col.1</u>	From <u>Col.2</u>	Time <u>Col.3</u>	Communications <u>Col.4</u>	Observations <u>Col.5</u>
2522	M2	08:39:03	Roger	
400	M2	:06	AZA four hundred, swiss radar "Grüezi"	
M2	259	:14	Swiss radar, good morning, OAL two five niner, flight level three two zero	
259	M2	:20	OAL two five niner, swiss radar, "Grüezi", squawk two seven four five	
M2	259	:24	two seven four five, OAL two five nine	
3534	M2	:29	IBE three five three four, contact swiss radar one three three decimal zero five, bye bye	
M2	3534	:33	one three three zero five, IBE three five three four, bye	
M2	126	:38	Radar "Bon giorno", AZA one two six	
126	M2	:39	AZA one two six, swiss radar, "Grüezi", climb to flight level two niner zero	
M2	126	:42	flight level two niner zero, AZA one two six	
126	M2	:45	And report your heading?	
M2	126	:48	Heading is three five zero, AZA one two six	
126	M2	:51	Roger, continue heading three five zero	
M2	126	:54	Ah, maintaining present heading, AZA one two six	
M2	14E	:56	Radar, hello, DLH one four Echo, approaching, maintaining flight level three two zero	
14E	M2	:40:01	DLH one four Echo, swiss radar, "Grüezi", identified, cleared OLBEN, BENOT, climb to flight level three two zero	
M2	14E	:05	Cleared OLBEN, then BENOT, climbing to flight level three two zero, DLH one four Echo, and we are requesting level three five zero	
14E	M2	:12	That's copied	
2522	M2	:14	GWJ two five two two, for higher, contact swiss radar one three four decimal six zero five, bye bye	

Signature of person
in charge of transcription :

TRANSCRIPT SHEET

Occurrence: NJE2754 / IBE3500 of 21.04.2004



<u>To</u> <u>Col.1</u>	<u>From</u> <u>Col.2</u>	<u>Time</u> <u>Col.3</u>	<u>Communications</u> <u>Col.4</u>	<u>Observations</u> <u>Col.5</u>
M2	2522	08:40:21	Frequency one two four zero five, GWI two five two two	
2522	M2	:24	Negative, one three four decimal six zero five, bye	
M2	2522	:27	Three four six zero five, GWI two five two two, bye, bye	
1WF	M2	:31	DLH one whiskey fox, fly heading three five zero	
M2	1WF	:34	DLH one whiskey fox, heading three five zero	
126	M2	:37	AZA one two six, climb to flight level three hundred	
M2	126	:40	Up level three zero zero, AZA one two six	
126	M2	:42	AZA four hundred, descend to flight level three two zero	
M2	126	:46	Down to flight level three two zero, AZA four hundred	
14E	M2	:51	DLH one four echo, for higher, swiss radar on one three four decimal six zero five, bye bye	
M2	14E	:58	one three four decimal six zero five, DLH one four echo	
9579	M2	:42:00	BER nine five seven niner, descend to flight level two niner zero	
M2	9579	:03	Descending flight level two niner zero, BER nine five seven niner	
9579	M2	:41	BER nine five seven niner, contact swiss radar one three three decimal zero five, bye bye	
M2	9579	:43	one three three zero five, nine five seven niner, bye	
259	M2	:55	OAL two five niner, you are identified, maintain flight level three two zero	
M2	259	:43:00	Thank you	
259	M2	:11	OAL two five niner, turn right direct to NEGRA, Trasadingen, Luxeuil, flight level three two zero	
M2	259	:18	Please confirm the routing for OAL two five niner	
259	M2	:22	You are cleared NEGRA due to military activity, it's November, echo, golf, romeo, alpha, then Trasadingen, Luxeuil	

Signature of person
in charge of transcription :

TRANSCRIPT SHEET

Occurrence: NJE2754 / IBE3500 of 21.04.2004



To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
M2	259	08:43:32	Okay, understand, NEGRA and then Tango, Romeo, Alpha, OAL two five ninre	
259	M2	:40	Correct, and then afterwards Luxeuil and the track to NEGRA is three three zero	
M2	259	:45	Roger, OAL two five niner	
1WF	M2	:44:03	Lufthansa one whiskey fox, fly heading three six zero	
M2	1WF	:06	Lufthansa one whiskey fox, heading north	
M2	87E	:11	"einen schönen guten Morgen, Zürich", Lufthansa eight seven echo, approaching, passing level two seven seven, climbing level three one zero	
87E	M2	:20	Lufthansa eight seven echo, swiss radar, good morning cleared OLBEN, BENOT, climb to flight level three two zero	
M2	87E	:25	Lufthansa eight seven echo, OLBEN, BENOT and continue climb level three two zero	
M2	3745	:35	RYR three seven four five, descending level three three zero on course to ODINA	
3745	M2	:39	RYR three seven four five, swiss radar, "Grüezi", roger, descend to flight level three one zero	
M2	3745	:45	Flight level three one zero, RYR three seven four five	
400	M2	:49	AZA four hundred, contact Rhine one three two decimal four zero five, bye bye	
M2	400	:55	Say again, AZA four zero zero?	
400	M2	:58	AZA four zero zero, contact Rhine on one three two decimal four zero five, bye bye	
M2	400	:45:03	Three two four zero five, AZA four zero zero, "Ciao"	
M2	2754	:07	Zurich good morning, NJE two seven five four, passing level three four four for three three zero, passing Trasadingen	
2754	M2	:11	NJE two seven five four, swiss radar, "Grüezi", roger, maintain flight level three three zero	

TRANSCRIPT SHEET

Occurrence: NJE2754 / IBE3500 of 21.04.2004



To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
M2	2754	08:45:16	Maintain three three zero, NJE two seven five four	
M2	1523	:46:19	Swiss radar, Air France one five two three, good morning, flight level two eight zero, request flight level three four zero	
1523	M2	:25	Air France one five two three, swiss radar, "Grüezi", roger, climb to flight level two niner zero	
M2	1523	:30	Climbing flight level two nine zero, Air France one five two three	
3500	M2	:46:33	IBE three five zero zero, continue present heading	
M2	3500	:36	Present heading, IBE three five zero zero, heading zero four, zero five four	
3500	M2	:41	Roger	
3745	M2	:49	RYR three seven four five, descend to flight level two niner zero be leveled overhead ODINA	
M2	2754	:55	Level two nine zero, to be level at ODINA, NJE two seven five four*	* at the beginning a short backgroundnoise of a mike being pushed
126	M2	:58	Alitalia one two six, own navigation direct to ROMIR, TANGO	
M2	3745	:47:06	Confirm, that was for RYR three seven four five, descending to level two niner zero to ODINA?	
3745	M2	:10	That is correct, for you and	
126	M2	:13	AZA one two six, own navigation direct to ROMIR, TANGO	
M2	126	:17	ROMIR, TANGO, Alitalia one two six	
1WF	M2	:21	Lufthansa one whiskey fox, own navigation direct to LADOL	
M2	1WF	:25	Lufthansa one whiskey fox, towards LADOL	
M2	3745	:28	I think, the skyshare descended instead of the Ryanair	
2754	M2	:32	NJE two seven five four, maintain flight level three	

Signature of person in charge of transcription :

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To Col.1	From Col.2	Time Col.3	Communications Col.4	Observations Col.5
			three zero	
2754	M2	08:47:40	NJE two seven five four?	
M2	2754	:42	NJE two seven five four, just had a TCAS resolution advisory, and confirm, visually we were on a collision course and only seven hundred feet above the other traffic	
2754	M2	:50	Yes, NJE two seven five four, maintain flight level three three zero, traffic below passing flight level three two zero	
M2	2754	:57	Ja, we noticed, but you did clear us to flight level two nine zero before, confirm?	
2754	M2	:48:01	Negative, I said, maintain flight level three three zero	
M2	2754	:05	Roger, well, I received this instruction, I thought, I did make a read back, descend to flight level two nine zero to reach before ODINA	
2754	M2	:13	That was for RYR three seven four five to descend to flight level two niner zero	
M2	2754	:22	Roger, well, we did make the read back, still, anyway, we are maintaining three three zero again now	
2754	M2	:29	Je, you said, call, I said to you, you have to maintain flight level three three zero	
M2	2754	:33	Affirm, we are back at flight level three three zero, NJE two seven five four	
3500	M2	:37	IBE three five hundred, maintain flight level three two zero	
M2	3500	:43	He, Mam, we maintain three two zero, anyway we musted to descend to, a little bit, because we had a Traffic less than eight hundred feet, just over, and we had an advisory of the TCAS	
3500	M2	:47	Yes, I know	
M2	3500	:49	I'm much better	
			- end of conflict, additional r/t concerning the incident:-	
2754	M2	:50:06	NJE two seven five four, descend now to flight level	

Signature of person
in charge of transcription :

TRANSCRIPT SHEET

Occurrence: NJE2754 / IBE3500 of 21.04.2004

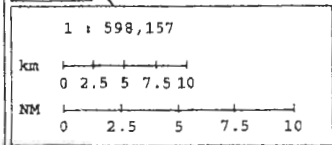
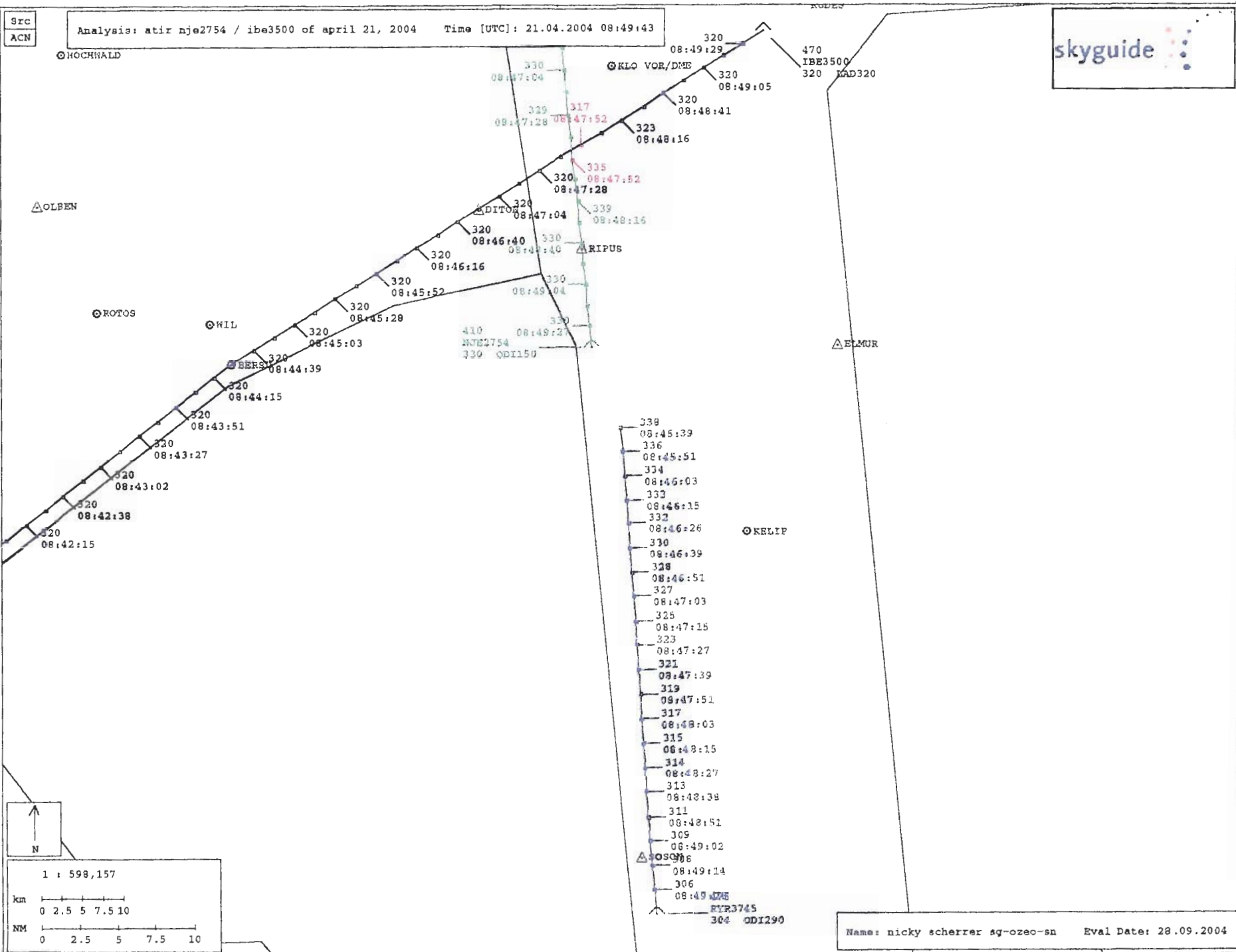


To <u>Col.1</u>	From <u>Col.2</u>	Time <u>Col.3</u>	Communications <u>Col.4</u>	Observations <u>Col.5</u>
			two niner zero	
M2	2754	08:50:09	Descending now to flight level two nine zero, NJE two seven five four	
2754	M2	:16	And, will you make a report?	
M2	2754	:18	Affirm, we'll make a report of course	
2754	M2	:20	Roger	
2754	M2	:53	NJE two seven five four contact now swiss radar one three three decimal zero five and I am very sorry about that	
M2	2754	:59	Roger, well, it's our fault too, I guess, didn't get the call sign exactly, anyway what's the frequency again?	
2754	M2	:51:03	It's one three three decimal zero five bye bye	
M2	2754	:06	Decimal zero five, NJE two seven five four, good bye	

- end-

Src
ACN

Analysis: atir nje2754 / ibe3500 of april 21, 2004 Time [UTC]: 21.04.2004 08:49:43



Name: nicky scherrer sg-ozec-sn Eval Date: 28.09.2004

