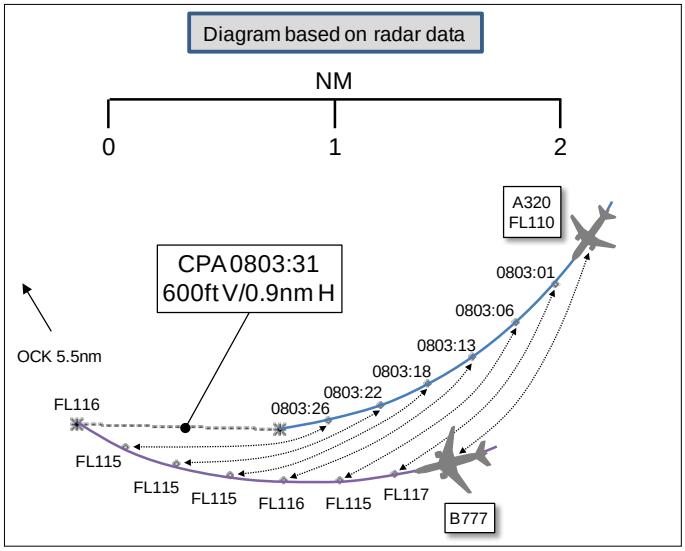
AIRPROX REPORT No 2012075

Date/Time: 2 June 2012 0804Z (Saturday)

Position: 5114N 00021W (OCK HOLD)

Airspace:	Lon TMA	(*Class: A*)
	Reporting Ac	*Reported Ac*
Type:	B777	A320
Operator:	CAT	CAT
Alt/FL:	FL120↓ (SPS 1013 hPa)	NR (SPS 1013 hPa)
Weather:	VMC NR	VMC NR
Visibility:	NR	>20km
Reported Separation:	500ft V/0.5nm H	>700ft V/ 1nm-1.5nm H
Recorded Separation:	600ft V/0.9nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE B777 PILOT reports turning R in the Ockham (OCK) hold at FL120, operating under IFR and in contact with London Heathrow (LHR) APP. The SSR transponder was selected on with Modes 3/A, C and S. The B777 pilot's C/S was [C/S A]; however, he (PNF) read back a descent clearance addressed to a B747 [C/S B], using that ac's C/S. The PF commenced descent. The ATC controller repeated the instruction for the B747 [C/S B] and the B777 pilot [C/S A] again read back the clearance using the B747's C/S. A TCAS TA occurred, whereupon he realised his mistake and the ac was climbed back to FL120.

He noted that he and the crew of the B747 [C/S B] had been on the same frequency since leaving the Moncton FIR. He had been aware of the possibility of callsign confusion for some time and had briefed his FO accordingly. He also noted that he had flown the B747's route, using [C/S B], on his previous flight.

He assessed that the risk of collision was 'Medium'.

THE A320 PILOT reports holding at OCK, operating under IFR with a RCS from LHR APP. [UKAB Note(1): This ac was not the ac with C/S B]. The navigation lights and HISLs were selected on, as was the SSR transponder, with Modes 3/A, C and S. Whilst in the hold he received a TCAS TA warning. He saw a B777 [the subject B777, C/S A] in his 12 o'clock position at approximately 1nm to 1.5nm range and 1000ft above. The TCAS display showed the ac slowly descend to approximately 700ft above him. No TCAS RA was displayed and Heathrow APP advised B777 [C/S A] to climb back up to a FL that he could not recall.

He assessed that there had been no risk of collision.

THE LTC RADAR CONTROLLER reports operating as Heathrow Intermediate (INT) Director South. He instructed B747 [C/S B] to descend to FL80 to which there was a garbled response. He first suspected that another ac, [C/S C], had also taken the call. He stated "*That call was for* [C/S B]. *Who else responded?*" There was no reply so he repeated "[C/S B] *descend FL80*".

The response was again garbled. He checked the Mode S of [C/S B] and [C/S C] whereupon his attention was drawn by STCA activation as the B777 [C/S A] commenced a descent from FL120. He realised that the crew of B777 [C/S A] had taken the descent call addressed to B747 [C/S B], instructed them to stop descent, to climb to FL120 and also issued TI. He then instructed the A320 to descend to FL100 and passed TI. The A320 pilot reported that he was visual [with the subject B777, C/S A] and that he did not have a TCAS RA. The controller confirmed his clearance again as FL100.

ATSI reports that an Airprox occurred at 0803:31 UTC, in the OCK hold, in the London TMA, between a Boeing 777 (B777 [C/S A]) and an Airbus A320 (A320). The B777 was operating IFR on a flight from N America to LHR. The A320 was operating IFR on a flight from Europe to LHR.

Concurrently, a Boeing B747 [C/S B] and another B777 [C/S C] were operating IFR on flights from N America to LHR.

All 4 ac were in receipt of a RCS from London TC, Heathrow INT South [134.975MHz]. B777 [C/S A], B777 [C/S C] and B747 [C/S B] all had similar trip numbers. Additionally, B777 [C/S A] and B747 [C/S B] had similar C/S.

CAA ATSI had access to recordings of RTF from LTC and area radar recordings together with written reports from the pilot of B777 [C/S A] and the radar controller.

At 0750:40 the B777 [C/S C] contacted Heathrow INT South, level at FL90, and was instructed to hold at Ockham with an expected delay of 10 minutes.

At 0751:00 the B747 [C/S B] contacted Heathrow INT South, level at FL100, and was instructed to hold at Ockham with an expected delay of 10 minutes.

At 0753:40 the A320 contacted Heathrow INT South, at FL110, and was instructed to hold at Ockham with an expected delay of 15 minutes.

At 0800:00 the B777 [C/S A] contacted Heathrow INT South, at FL120, and was instructed to hold at Ockham with an expected delay of 15 minutes.

At 0800:20 the B747 [C/S B] was instructed to return to Ockham and then leave Ockham heading 280°.

At 0802:20 B747 [C/S B] was instructed to descend to FL80. There was a garbled response. The controller's report stated that his initial reaction was that B777 [C/S C] had taken the call. The controller transmitted, "*that's two at once there that was for the* [C/S B] *who was the other station".* There was no response and the controller transmitted, "[C/S B] *just confirm flight level eight zero".* Again the response was blocked before one of the ac transmitted, "*sorry that's my fault start again".*

At 0802:40 the controller re-iterated the instruction to B747 [C/S B] to descend to FL80 which was read back correctly by the pilot of B747 [C/S B].

The controller's report stated that he checked the Mode S selected flight level of B777 [C/S C] and B747 [C/S B] to confirm that they were correct.

At 0802:55 STCA was activated due to B777 [C/S A] in the hold at Ockham descending from FL120 to FL80 while A320 was at FL110, 1.4nm behind B777 [C/S A].

The controller instructed B777 [C/S A] to climb to FL120 and acknowledge. The B777 [C/S A] pilot acknowledged the instruction to climb to FL120. The controller reiterated the instruction to climb to FL120 and gave traffic information on the A320, stating it was 2nm behind B777 [C/S A] before transmitting, "*break, break"* and instructing the A320 to descend to FL100 and giving traffic

information on B777 [C/S A]. The A320 pilot informed the controller that he was visual with B777 [C/S A] and had it on TCAS but had no RA.

At 0803:31 (CPA) B777 [C/S A] was climbing through FL116 to FL120 and the A320 was at FL110; the lateral distance between the two ac was 0.9nm

At 0804:40 B777 [C/S A] contacted the Heathrow INT controller and advised, "*I am very sorry about that just to be clear we both heard what we wanted to hear so it's entirely our error but no TCAS RA from us but I will be filing".*

In summary, the controller instructed B747 [C/S B] to descend to FL80. The crew of B777 [C/S A] took the instruction to descend to FL80 at the same time as the crew of B747 [C/S B]. The controller was aware of the potential that another ac had taken the call due to the blocked transmission during the read-back from B747 [C/S B] but did not know which other ac until STCA activated. Once it became evident that B777 [C/S A] had taken the call the controller took steps to resolve the situation. Although the term "avoiding action" was not used, the action taken was prompt, effective and resolved the situation quickly.

CAP493 the Manual of Air Traffic Services, Section 8, Chapter 2, Page 3, Paragraph 5.2 states:

> 'Human Factors experts describe slips in the following terms: The intention is correct but is not carried out as planned, e.g. callsign confusion or a Freudian slip, like unintentionally clearing an aircraft to an occupied level because that level is on the controller's mind. These are hard to correct, but are likely to be one-off instances.'

It is likely that, despite the increased vigilance by the crew, the awareness of the possibility of callsign confusion led to the other callsign being on the crew's mind.

The Airprox occurred in Class A airspace in the vicinity of the OCK hold when the crew of B777 [C/S A] took an instruction meant for a B747 [C/S B] with a similar callsign and flew into conflict with an A320.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The civilian pilot Board Members were of the opinion that this incident was probably due to a combination of well-understood human factors. An airline pilot Member advised the Board that a sequence of schedules involving overnight eastbound trans-Atlantic flights and morning arrivals into Heathrow could be very tiring and crews were required to guard against low arousal levels. Ironically, it may have been the Captain's briefing on potential C/S confusion that highlighted the other ac's C/S, leading the crew to 'hear what they wanted to hear' and react accordingly. Although the Board Members agreed on the insidious nature of this incident, they were also of the opinion that the descent clearance from C/S A's level in the OCK holding stack directly to the bottom could reasonably have been expected to alert the crew of [C/S A] to their error.

The civilian ATC Board Members questioned whether the issue of similar C/Ss was addressed at a company level and that to do so would reduce risk, not least in the busy TMA environment. The SRG Advisor stated that work was underway within EASA to address this issue.

The Board Members were unanimous in their endorsement of the LTC Radar Controller's handling of the incident.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The B777 crew actioned an ATC instruction intended for another aircraft and descended into conflict with the A320.

Degree of Risk: C.