International Civil Aviation Organization

MIDANPIRG Communication Navigation and Surveillance Sub-Group (CNS SG)

Sixth Meeting
(Tehran, Iran, 9 – 11 September 2014)

Agenda Item 5: Performance Framework for CNS Implementation in the MID Region

AIRCRAFT CALL-SIGN CONFUSION

(Presented by IATA/CANSO)

SUMMARY

This working paper highlights the operational difficulties airlines are facing as a result of use of similar call-signs by aircraft operating in the same area and on the same radio frequency which would create a potential to flight safety incidents, and proposes solution to alleviate the call-sign confusion.

Action by the meeting is at paragraph 3.

1. INTRODUCTION

1.1 The use of similar call-signs by aircraft operating in the same area and on the same radio frequency has potential to flight safety incidents, also known as "call-sign conflicts" or "call-sign confusion". The danger of an aircraft taking and acting on a clearance intended for another aircraft due to call-sign confusion is a common occurrence.

2. DISCUSSION

2.1 As per ICAO, an aircraft call-sign consists of a group of alphanumeric characters used to identify an aircraft in air-ground communications

2.2 The new amended ICAO PAN-ATM Doc 4444 **Appendix A** which became applicable on 15 November 2012 stipulates aircraft identification in item 7 of FPL not exceeding 7 **alphanumeric characters** and without hyphens or symbols".

2.3 The provisions for the use of call-signs are contained in Annex10, Volume II, and Chapter 5 and suggest the full call- signs consists the telephony designator of the aircraft operating agency, followed by the flight identification.

2.4 Airlines normally use three numerical characters for flight identification on schedule flight and left the last character for adding "D" as suffix to identify the delayed flight.

2.5 The use of similar call-signs by aircraft operating in the same ATC environment has the potential to create safety incidents. Reports in this regards (**Appendix "A"** to this working paper) have been raised by Airline Operators of common incidents related to call-sign conflicts on a global and regional level.

2.6 Call-sign confusion can be either:

- aural (frequency)
- visual (radar displays, flight progress strip)
- both.

2.7 Studies have indicated that a good way to reduce call-sign confusion is to eliminate or reduce the chance of having two (or more) aircraft with similar call-signs on the same radio frequency at the same time.

2.8 In order to reduce the level of operational call-sign confusion events, and therefore improve levels of safety, several Airline operators have changed their philosophy of only using a numeric (commercial) call-sign (e.g. UAE503) to that of applying an 'alpha-numeric' ATC call-sign (e.g. UAE59CG). This is now common practice in the European Region.

2.9 However, the implementation of ATC call-signs cannot be dealt with in isolation, as besides of the ATC environment, ATC call-signs also have an impact on procedures and systems outside the air traffic control environment, such as:

- Overflight Permissions
- Landing Permissions
- Airport environment

2.10 IATA member Emirates Airline has recently conducted a survey amongst a number of International Airlines (**Appendix "B"** to this working paper). It was pointed out that the application of 'alpha-numeric' ATC call-signs in the majority of countries in the ICAO MID East Region is not accepted due to rejections in applying for overflight permissions, landing permissions and in the airport environment.

2.11 Following the provisions in ICAO Annex 10 and ICAO Doc 4444, all related stakeholders systems and procedures (even outside the air traffic control environment) shall accept and process alpha-numeric call-signs in conformance with ICAO provisions.

2.12 Based on the above and in order to alleviate the current situation and to expedite corrective action, the meeting is invited to agree on the following conclusion:

CONCLUSION 6/XX: CALL-SIGN CONFUSION

That,

a) ICAO conduct a Survey of MID States to ascertain which, if any, are unable to accept / process "alpha numeric" ATC Call-signs;and

b) urge MID States that are unable to accept/process "alpha numeric" ATC Call-signs to upgrade their systems and processes so as to accept the alpha numeric call-signs.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) consider the content of this working paper; and

b) endorse Draft Conclusion in 2.11 above.

Occurrence Status for 01-Jan-12 to 31-Dec-13

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type
O256-12	Closed	**1/20/2012 04:45**	THREE SIMILAR ETIHAD CALLSIGNS ON FREQUENCY	No	Medium		A6-EIE	ASR

Departing AUH at 04:45as EY321, we were on frequency 124.4 and 120.0 with EY371 and EY301.

EY 371 stayed with us on frequency 132.12 and 127.85.

Recommend changing two callsigns.

As a more thorough and permanent solution, we could have 2 callsigns per flight; the commercial callsign (EY321) and a more random alpha-numeric callsign (eg EY 4AC) for ATC use.
This would quickly eliminate most callsign confusion.
Any future reports of similar callsigns could be easily fixed by a simple change to the ATC callsign.

Investigation: Statistical Information

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type
O369-12	Closed	**1/28/2012 11:20**	SIMILAR CALL SIGNS ON ROUTE IN THE SAME FREQUENCY CREATING CONFUSION	No	Medium		A6-EYN	ASR

There were call similar call signs with different aircraft on the same routing, following each other creating confusion at times.
This was also identified and warned by several ATC's.
Our call sign was Etihad 042 followed by Qatari 042 on the same route at the same flight level (FL390) just behind us as well as Emirates 042 who just happened to be ahead of us.
This has been an ongoing issue and we have been facing the same issue on most routings almost everyday, (e.g, ETD 610, and Gulfair 610 on the same route, CMN-AUH.

Investigation: Statistical Information

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type
O1378-12	Closed	**3/19/2012 00:00**	LOST CONTACT WITH ATC	Yes	Medium		A6-EYF	ASR

Approaching position KABAN at 0747Z in IRAQ airspace I tried to call Bagdad control for frequency change but we were already out of VHF range. Immediately i start calling next FIR sector ANKARA on various frequencies obtained from chart. It took about 10 minutes to
establish communication with correct sector and a full position report was given at 0800Z.
Please note our call sign "EY055" being similar to other operator's call sign and might have contribute to the event. EK055, EK045,QR025, QR095, QR045, QR085, QR051 all flying to Europe same time on same or similar routing. It is possible that other traffic hadacknowledged our hand over or some other error occurred due to the similar call signs.

Investigation: Statistical Information

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type
O1928-12	Closed	**4/17/2012 23:28**	CALL SIGN CONFUSION	No	Medium		A6-EYQ	ASR

At 2329z, two aircraft having similar call sign ETD 057 and QR 57 were on Tehran on 133.40 (ETD 057 was FL 320).
QR 57 was at FL 270 and received CL to CLB FL 300, this CL was revised to CLB FL 340.
QR 57 was a few miles behind us and i noticed this climb which was stopped at 1500 on TCAS while QR 057 questioned ATC about this conflicting CL.
ATC confused the two traffic and probably cleared QR57 instead of ETD 057.
Thanks to TCAS and both crew and ATC are aware a possible collision was prevented.

Number	Status	Date/Time UTC		Event Title	ROSI	Risk	Location	Reg	Type

Note :It is my flight (5) ASR on the subject risk involved with similar call signs.
Risk involved with similar call signs. No follow up received.

Investigation: Statistical Information

O4093-12	Closed	**7/5/2012**	**20:00**	NON TECHNICAL ASR - KARACHI CONTROL 128.3 FREQUENCY INCOMPREHENSIBLE	No	Medium		A6-EIH	ASR

NOTE : FLIGHT DISPATCH FORMS WERE NOT GIVEN WITH THE BRIEFING PACKAGE AND NO HARDCOPY ASRs IN THE ONBOARD DOCUMENT LIBRARY

ENROUTE AT FL330 AFTER HANDOVER FROM TEHRAN CONTROL TO KARACHI CONTROL THE VHF COMMUNICATIONS ON 128.3 WERE AT BEST MUFFLED AND INCOMPREHENSIBLE. SEVERAL ATTEMPTS WERE MADE TO UNDERSTAND THE CONTROLLER WITH THE GREATEST OF DIFFICULTY. THIS WAS COMPOUNDED BY SEVERAL AIRCRAFT ON THE FREQUENCY INCLUDING EY 286 (AUH-BLR) WITH SIMILAR CALLSIGN HAVING DIFFICULTY IN COMMUNICATING WITH THE FREQUENCY.

Investigation: Statistical Information

O4196-12	Closed	**8/8/2012**	**22:10**	SIMILAR CALL SIGNS	No	Medium		A6-AFE	ASR

I know that this issue has been reported several times, but since nothing happened and the number of similar callsigns is significant I would like to report this again.
During our flight we encountered 3 other similar callsigns. In Abu Dhabi EY 053 and EY 323. With Ankara Control EY 022. It causes unnecessary confusion.
Suggest to use random callsigns and to detach these from areas of operation, e.g. all European flights start with 0.

Investigation: Statistical Information

O6136-12	Closed	**11/1/2012**	**21:07**	ATC CONFUSION BETWEEN ETD216 AND ETD206	Yes	Medium		A6-EIB	ASR

During cruise at time 2107Z - FL350 between way points DOSTI and KAJAL ATC asked us (ETD216) to descend to FL310. We confirmed the request very clearly since it was kind of unusual. The ATC reconfirm with affirm descend FL310. Before initiating the descend we asked for the reason why ATC want us to descend. The reason was due to traffic longer flight maintains FL350. After 3 times of confirmation we initiated descend.

While approaching FL328 ATC asked to confirm our level and we advised that we are descending to FL310. ATC advised us that the descend request was for ETD206 and not for ETD216. We ask the ATC what does he want us to do and ATC requested us to climb to FL350. We highlighted that we will file a report and the request was made to ETD216 not ETD206. ATC responds was that this request was made to ETD206. Then ETD206 came on the frequency and received the clearance. We spoke to ETD206 on frequancy123.45 the flight crew confirmed that they heard the clearance instructed to ETD216. We highlighted to the ATC that we will file Air Safety Report.

During descend and climb again there was no sign of other traffic around our route on TCAS.

On the return sector at time 0050Z the ATC apologized for the misunderstanding. We accepted the apology and advised that we still have to file the report as per to our company and authority regulation. Then the ATC responded that he appreciate if we don't report this incident. We advised again that this is our company and authority regulation and we have to comply.

Number	Status	Date/Time UTC		Event Title	ROSI	Risk	Location	Reg	Type

Investigation: Statistical Information

O7342-12	Closed	**12/26/2012**	**06:40**	SIMILAR CALLSIGNS	No	Medium		A6-EYM	ASR

During our flight to Munich Qatari 003 and Etihad 007 were on the same frequency on several occasions.
'Similar callsign' was never advised by ATC.

Investigation: Statistical Information

O7402-12	Closed	**12/30/2012**	**00:00**	SIMILAR CALL SIGNS	No	Medium		A6-EHB	ASR

During our flight Qatari 051, Etihad 041, Emirates 151 and Etihad 151 were on the same frequency on several occasions.
'Similar callsign' was never advised by ATC.

Investigation: Statistical Information

O1210-13	Closed	**3/2/2013**	**00:00**	ALTITUDE EXCURSION	No	Medium	CAI	A6-EIC	ASR

AFTER PASSING KITOT POINT WE WERE IDENTIFIED BY CAIRO ATC ON 126.6 CLEARED VIA FPL TO MAINTAIN FL 360 TO HECA. 1 MINUTE LATER WE WERE INSTRUCTED TO LEAVE FL360 AND DECENT FL 310. TCAS SHOWED TRAFFIC IN VICINITY 2000' BELOW US. WE RECONFIRMED THE INSTRUCTION AGAIN. CAIRO ATC CONFIRMED THE DESCENT. FO SELECTED -500'/MIN ROD. AFTER CROSSING LEVEL 356, CAIRO CONTROL INTERVENED AND INSTRUCTED US TO MAINTAIN.

FL 360. HE CONFUSED THE CALL SIGNS WITH ANOTHE AIRLINE. WE IMMEDIATELY CLIMED BACK TO FL 360. NO FURTHER EVENT.

Investigation: Abridged Investigation

No.	Priority	Status	Actual Start/End Dates		Target Start/End Dates		Investigators
13/AI/656	Medium	Closed	04-Mar-13	14-Apr-13	04-Mar-13	04-Apr-13	Azwan Sairin Prasitha Nair Yassin Aboueleish Andreas Wiegand Simone Gramegna Mohd Rasidin Kasan Ammar M A Share

O2254-13	Closed	**4/3/2013**	**00:00**	CALL SIGN CONFUSION / MISCOMMUNICATION	No	Medium	MUC	A6-ETN	ASR

Same flight number of ETD 003 was Qater 003 to MUC. Our crew called the attention of ATC because we were right behind Qatar 003.
There was one or more instances of miscommunication. The last one of which MUC AP slowed us down to 170 kts on approach and then told us to go back on spd of 200 kts. MUC ATC apologised.

Investigation: Statistical Information

O4221-13	Closed	**6/29/2013**	**19:28**	ATC CLEARANCE ISSUED TO THE WRONG CALL SIGN	Yes	Medium		A6-EIJ	ASR

Frequency 120.3
Time: 19.28 Z, ATC asked which level available for cruise

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type

Requesting FL 330
ETD 286 cleared to FL 330
ROC selected 600 ft min to climb to FL 330.
Passing FL 300 the controller advised that the ATC was issue to ETD 268.
Climb was stopped, return to FL 290.
The controller was very busy, similar call sign.

Investigation: Abridged Investigation

No.	Priority	Status	Actual Start/End Dates		Target Start/End Dates		Investigators
13/AI/2108	Medium	Closed	02-Jul-13	16-Jul-13	02-Jul-13	02-Aug-13	Azwan Sairin Prasitha Nair Yassin Aboueleish Andreas Wiegand Simone Gramegna Mohd Rasidin Kasan Lawrence John McCready Ammar M A Share Ahmed Saleh Ahmed Hus

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type
O5057-13	Closed	**8/5/2013** **00:00**	SIMILAR CALL SIGN LEADING TO WRONG FRQ CHANGE	No	Medium	NRT	A6-EYS	ASR

Radar vectors for arrical into Narita airport with X2 A/C similar callsign.
Frequency change for other A/C was mistaken for ETD878 124.4 and 120.2
We changed frequencies and accepted a new heading and level change. Comms was re established on Freq 121.5 and we reverted to previous controller.
No warning of similar callsign was given by ATC and heavy accent was an attributable factor.

Investigation: Statistical Information

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type
O5632-13	Closed	**8/31/2013** **10:00**	SIMILAR CALL SIGNS FOR SAME DESTINATION AND SAME A/C TYPE	No	Medium		A6-EIO	ASR

For the second time on the same week 2 flights were dispatched with similar call signs to the same destination, same type A/C and same time.
- ETD 311, A6-EIO A320, STD 0925, dest JED..
- ETD 2311, A6-EIJ A320, STD 0950 (aprox), dest JED.
Extreme confusion with ATC sending ATC clearances to wrong A/C
ATC complained several times and requested to notify company. Sme issue on return flights ETD 312 and ETD 2312. Same issue 3 days ago.

Investigation: Statistical Information

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type
O6162-13	Closed	**9/25/2013** **00:00**	SIMILAR CALL SIGN LED TO CLEARANCE MISUNDERSTOOD	No	Medium		A6-EIQ	ASR

While descending to be level at FL 290 at position RESAR, we hear a clearance to descend at FL 250 for EY603 (our call sign 306). We selected FL 250 and after couple of seconds we realize the error and set it back to FL 290, the A/C over shooted the FL by 200 ft, and we climbed up at FL 290 immediately.

Investigation: Abridged Investigation

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type

Investigation: Abridged Investigation

No.	Priority	Status	Actual Start/End Dates		Target Start/End Dates		Investigators
13/AI/3004	Medium	Closed	26-Sep-13	29-Sep-13	26-Sep-13	26-Oct-13	Azwan Sairin Prasitha Nair Yassin Aboueleish Andreas Wiegand Mohd Rasidin Kasan Lawrence John McCready Ammar M A Share Ahmed Saleh Ahmed Hus

O6880-13 Closed **10/22/2013** **04:00** MULTIPLE CALL SIGN CONFUSION No Medium A6-AFA ASR

At various times and on various frequencies, call sign confusion was experienced and also observed between the following aircraft identifiers:

ETIHAD - 007/037/077/087/097
EMIRATES - 077
QATAR - 077

Investigation: Statistical Information

O6841-13 Closed **10/24/2013** **11:06** LEVEL DEVIATION DUE TO CALL SIGN CONFUSION No Medium A6-AFE ASR

We descended to FL080 from FL140 over 'REDBU' point due to call sign confusion with Qatari 003.
Max altitude deviation 136ft, confirmed by ATC.
No report required by Munich RADAR.

Investigation: Abridged Investigation

No.	Priority	Status	Actual Start/End Dates		Target Start/End Dates		Investigators
13/AI/3315	Medium	Closed	27-Oct-13	27-Oct-13	27-Oct-13	27-Nov-13	Azwan Sairin Prasitha Nair Yassin Aboueleish Andreas Wiegand Mohd Rasidin Kasan Lawrence John McCready Ammar M A Share Ahmed Saleh Ahmed Hus

O7688-13 Closed **12/2/2013** **06:45** SIMILAR CALLSIGN No Medium A6-ETQ ASR

As requested in EAAP6 I'd like to report a similar callsign issue:

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type

ETD 151, ETD 101 and ETD 131 are leaving Abu Dhabi at the same time following the same route and thus are on the same ATC frequencies. From UAE, Bahrain, Kuwait, Iraq, etc....

Investigation: Statistical Information

O8126-13	Closed	**12/17/2013**	**00:00**	COMMUNICATION ERROR DUE TO SIMILAR CALL SIGNS	No	Medium	A6-EYE	ASR

With Bahrain control 127.525 when cleared to IVONI via direct from point VEDOS to maintain speed and at IVONI to maintain mach .92. At the same time Bahrain cleared ETD 007 to IVONI. We did read back the complete clearance to Bahrain with our call sign ETD 077, with no correction from Bahrain. Now when the transmission was completed Bahrain transferred us to Kuwait 125.3. About 6 minutes before reaching IVONI, this was read back with no objection from Bahrain. Every flight there are issues with callsigns that are similar. Mistakes being made by pilots and ATC. At this specific case Bahrain blamed us. But we are quite sure that we are not the only ones at blame in this case. Would it be possible to add a letter to the callsign when similiar callsigns are used in the same area.

Investigation: Statistical Information

O8149-13	Closed	**12/23/2013**	**07:33**	LEVEL BUST	Yes	Medium	A6-EYF	ASR

EY470 A6-EYF 23-DEC-13
Level Bust in UAE airspace

UAE ATC 129.5VHF cleared us FL270 & read back done accordingly. At position KANIP passing FL215 ATC advised to maintain FL210 as our cleared altitude. Aircraft managed accordingly to descend back to FL210.
We advised ATC that our read back was FL270 according to the received clearance where the ATC admitted that they are sorry & most probably was a mistake done from their side. Level bust by 600ft with no effect on safety or any other traffic around.

Possible confusion from our side or ATC side could be for the following:
- confusion between EY470, EY416 & EY472 as couple of wrong altitudes & frequencies were given to them & us in UAE & MUSCAT FIR

Investigation: Abridged Investigation

No.	Priority	Status	Actual Start/End Dates		Target Start/End Dates		Investigators
13/AI/3886	Medium	Closed	24-Dec-13	30-Dec-13	24-Dec-13	24-Jan-14	Azwan Sairin Prasitha Nair Andreas Wiegand Mohd Rasidin Kasan Lawrence John McCready Ammar M A Share Christopher Courtenay Ahmed Saleh Ahmed Hus

Number	Status	Date/Time UTC	Event Title	ROSI	Risk	Location	Reg	Type

Note: This Report only includes occurrences which meet the following criteria:

Occurrence Date From 1/1/2012 to 12/31/2013; Occ Type = ASR; Selected Event Descriptors;

Incidents in 2014- Call Sign Confsuion

1. We under radar control with UAE centre (believe frequency 128.25) and understood that they instructed us to descend to 10,000ft on QNH 1001. The instruction was clearly read back with our call sign. A gradual descent was commenced with a low vertical speed. After perhaps 20 seconds there was a slightly confusing call from ATC to EY024 issuing the same clearance and we had a feeling there was some call sign confusion (unsure if this was a mistake from our side or theirs). Before we had a chance to ask they then advised it was for EY024 and asked us to climb back to FL250. We were passing about 24,200 at this time. We immediately climbed back to 250. As per SOP we had set the QNH and due to the immediate corrective action taken on the FCU we forgot to set standard back and due to difference of 12mb resulted in a 300ft difference which ATC advised us was now reportable (although it seems the first incident was not). We then set standard and descended the 300ft back to FL250. There were 2 clear voices (controllers) so not sure if there was a shift swapping in progress or controller under training.

2. In cruise at FL340, VFH contact with Colombo radar 124.9, at 2050z and sw of position HC we requested climb FL360 due A/C performance, the response was standby ETD455, 3 minutes later controller clears ETD455 to FL360, we requested this clearance back very clearly and was acknowledged. Controller asked for our passing level which was FL348, this controller responded that this previous clearance was for Qatari 955 and not Etihad 445, controller then called us back to FL340, we informed this controller that was shall be filing as ASR. Summary of event: 1- Upon chislk in we were not notified of similar call signs on frequency. 2- Level of English from controller was average to poor. 3- To avoid confusion when clearances was given, purposely read back the clearance slowly and clearly. 4- Climb clearances was confirmed by controller

EK Flight Operations Support

-Call-Sign Confusion-

Use of alpha-numeric Call-Signs

(Airline Survey APR' 2014)

Airline Survey

-Aircraft Call-Sign Confusion-

and

-Use of alpha-numeric Call-Signs-

(→ Survey Period: April 2014)

EK Flight Operations Support

-Call-Sign Confusion-
Use of alpha-numeric Call-Signs

(Airline Survey APR' 2014)

1. Introduction "Aircraft Identification"

Air Traffic Control (ATC) and Airlines have become increasingly concerned about being confronted with the use of similar/identical call-signs – this can refer to the same Airline Operator and also to different Airline Operators, operating at the same time in the same piece of airspace or at an airport.

Airline call signs ("Aircraft Identification") consist of a 3 letter prefix (i.e. the airline designator (e.g. "UAE" for Emirates (- according to ICAO Doc 8585 "Designators for Aircraft Operating Agencies") followed by the flight identification consisting of between 1 and 4 alpha-numeric characters (not using any without hyphens or symbols.

The rules of RTF call sign construction are detailed in ICAO Annex 10 Chapter 5, ICAO Doc 4444, Appendix 2 -FLIGHT PLAN- defines the 'Aircraft Identification' to be used in the ICAO ATS Flight Plan, Item 7.

ITEM 7: AIRCRAFT IDENTIFICATION (MAXIMUM 7 CHARACTERS)

INSERT one of the following aircraft identifications, not exceeding 7 alphanumeric characters and without hyphens or symbols:

a) the ICAO designator for the aircraft operating agency followed by the flight identification (e.g. KLM511, NGA213, JTR25) when in radiotelephony the call sign to be used by the aircraft will consist of the ICAO telephony designator for the operating agency followed by the flight identification (e.g. KLM511, NIGERIA 213, JESTER 25);
OR
b) the nationality or common mark and registration mark of the aircraft (e.g. EIAKO, 4XBCD, N2567GA), when:
1) in radiotelephony the call sign to be used by the aircraft will consist of this identification alone (e.g. CGAJS), or preceded by the ICAO telephony designator for the aircraft operating agency (e.g. BLIZZARD CGAJS);
2) the aircraft is not equipped with radio.

Note 1.— Standards for nationality, common and registration marks to be used are contained in Annex 7, Chapter 2.
Note 2.— Provisions for the use of radiotelephony call signs are contained in Annex 10, Volume II, Chapter 5. ICAO designators and telephony designators for aircraft operating agencies are contained in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

-Call-Sign Confusion-
Use of alpha-numeric Call-Signs

(Airline Survey APR' 2014)

2. The Problem

The use of similar call signs by aircraft operating in the same ATC environment has the potential to create safety incidents.

Reports in this regards have been raised by Airline Operators and Air Navigation Service Providers of common incidents related to call-sign conflicts on a global level.

Call sign confusion can be either…

- aural (frequency)
- visual (radar displays, flight progress strip)
- both.

The use of similar call signs by aircraft operating in the same area and on the same radio frequency has potential to flight safety incidents, also known as "call-sign conflicts" or "call-sign confusion". The danger of an aircraft taking and acting on a clearance intended for another due to call sign confusion is a common occurrence.

Per ICAO an aircraft call sign consists of a group of alphanumeric characters used to identify an aircraft in air-ground communications. The rules governing the use of aircraft call signs are laid down in ICAO Annex 10: Aeronautical Communications, Volume II - Communication Procedures, Chapter 5 (Radiotelephony call signs for aircraft) and in ICAO Doc 4444 "Air Traffic Management", Appendix 2 (Instructions for the completion of the flight plan form).

Studies have indicated that a good way to reduce call sign confusion is to eliminate or reduce the chance of having two (or more) aircraft with similar call signs on the same radio frequency at the same time.

In order to reduce the level of operational call sign confusion events and therefore improve levels of safety several Airline operators have changed their philosophy to only use a numeric (commercial) call-sign (e.g. UAE503) by applying an 'alpha-numeric' ATC call-sign (e.g. UAE59CG) for their flights – this philosophy is especially used in the ICAO European Region.

The implementation of alpha-numeric ATC call-sign (e.g. UAE59CG) can reduce the risk of call-sign conflicts, as the European example has proven.

3. Side aspects and challenges for using alpha-numeric call-signs

The use/application of alpha-numeric ATC call-signs cannot be dealt with isolated, as beside of the ATC environment, the ATC call-signs also have an impact on procedures and systems outside the air traffic control environment, such as:

- Overflight Permissions
- Landing Permissions
- Airport Slots
- Airport environment (e.g. Flight Display Board)

Investigations have to be initiated where the use of 'alpha-numeric' ATC call-signs is not fully supported due to rejections or problems in applying for overflight permissions, landing permissions and in the Airport environment.

Following the provisions in ICAO Annex 10 and ICAO Doc 4444, all related stakeholders, systems and procedures (even outside the air traffic control environment) shall accept and process alpha-numeric call-signs (in ICAO conformance) and shall not reject any permission request or messages related to this.

4. The Emirates Survey: 9 Questions to International Airlines for the use of alpha-numeric call-signs

Emirates Flight Operations Support sent a questionnaire out to International Airlines on all continents in order to evaluate where alpha-numeric ("ATC") call-signs are already used and which problems and challenges have been experienced.

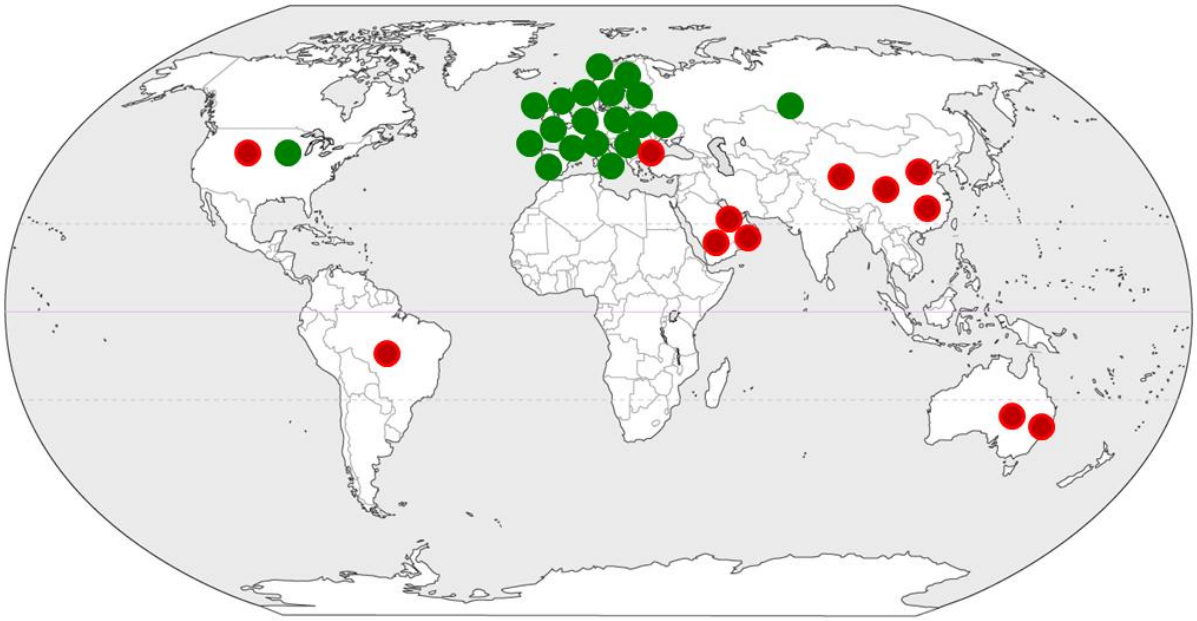
The following questions were raised:

1.) Is your Airline using alpha-numeric ATC call-signs (in the ATS FPL/ATC communication)?
2.) Do you make parallel use of an 'commercial' (numeric) call-sign in parallel to an "alpha-numeric" ATC call-sign?
3.) Are you using 'alpha-numeric' ATC call-signs only in specific ICAO Regions?
4.) Have you experienced problems requesting/accepting overflight permissions when making use of 'alpha-numeric' ATC call-signs? Y/N
5.) Have you experienced problems when using 'alpha-numeric ATC call-signs' with Airline internal systems/interfaces/departments?

-Call-Sign Confusion-
Use of alpha-numeric Call-Signs
(Airline Survey APR' 2014)

6.) Have you experienced problems (in cockpit/cabin) when using 'alpha-numeric ATC call-signs' (in parallel to the numeric (commercial) call-sign with Aircraft internal applications?
7.) Have you experienced problems when making use of 'alpha-numeric' ATC call-signs in the Airport environment? (i.e. did Airports report problems in their systems/messaging when Airlines make use of an 'commercial' (numeric) call-sign in parallel to an "alpha-numeric" ATC call-sign?
8.) Should you have not considered to make use of alpha-numeric ATC call-signs, what is the main reason for this?
9.) Looking back after having implemented alpha-numeric call-signs in our Airline operations, what were the biggest problems you faced?

The survey received responses from 32 worldwide operating Airlines.

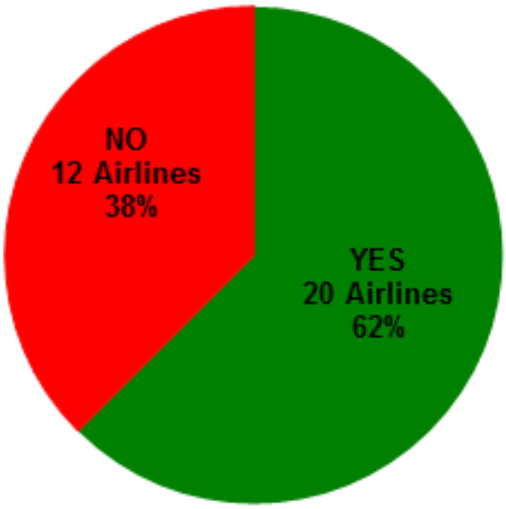


Airlines that make use of alpha-numeric call-signs (homebase)

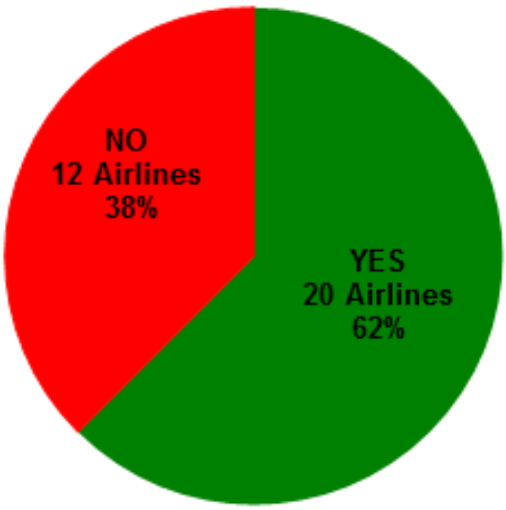
Airlines that make NOT use of alpha-numeric call-signs (homebase)

5. Analysis of the responses

5.1. Is your Airline using alpha-numeric ATC call-signs (in the ATS FPL/ATC communication)?



5.2. Do you make parallel use of a 'commercial' (numeric) call-sign in parallel to an "alpha-numeric" ATC call-sign?



-Call-Sign Confusion-
Use of alpha-numeric Call-Signs

(Airline Survey APR' 2014)

5.3. **Are you using 'alpha-numeric' ATC call-signs only in specific ICAO Regions?**

a)	**Europa:**	**Y/N** (excl.:	)
b)	**Asia & Pacific:**	**Y/N** (excl.:	)
c)	**Africa:**	**Y/N** (excl.:	)
d)	**North America:**	**Y/N** (excl.:	)
e)	**South America:**	**Y/N** (excl.:	)
f)	**Middle East:**	**Y/N** (excl.:	)

The following table indicates either the entire region or individual countries, where Airlines specifically pointed out to <u>not use</u> alpha-numeric call-signs (- number of votings in brackets).

EUR	ASPAC	AFI	NAM	SAM	MID
	Region (8)	Region (5)	Region (6)	Region (6)	Region (5)
Turkey (7)	China (1)	Algeria (1)			Afghanistan (1)
Russia (6)	Pakistan (1)	Tunisia (1)			Egypt (3)
Azerbaijan (1)					Iraq (1)
Georgia (1)					U.A.E. (1)
Israel (3)					
Spain (1)					
Kosovo (1)					
Albania (1)					
Belarus (1)					

5.4. **Have you experienced problems requesting/accepting <u>overflight permissions</u> when making use of 'alpha-numeric' ATC call-signs?**

The following table indicates either the entire region or individual countries, where Airlines specifically pointed out to not use alpha-numeric call-signs because problems in obtaining O – Overflight Permissions and/or L – Landing Permissions (- number of votings in brackets).

EUR	ASPAC	AFI	NAM	SAM	MID
	Region (1)			Region (1)	Region (1)
L/O - Russia (4)	L - Bangladesh (1)	L - Ethiopia (1)		L - Brasil (1)	L - Kuwait (2)
L - Kazakhstan (1)	L - Indonesia (1)	O - Niger (1)			L/O - U.A.E. (1)
L - Kyrgystan (1)	L - Japan (2)	O - Nigeria (1)			O - Lebanon (1)
L - Israel (2)	L - Korea (1)	O - Tanzania (1)			O - Qatar (1)
L/O - Turkey (2)	O - Malaysia (1)	O - Egypt (1)			O - Saudi Arabia (2)
O - Albania (1)	O - Nepal (1)	O - Djibouti (1)			O - Libya (1)
O - Iceland (1)		O - Seychelles (1)			O - Iraq (1)
		O - Sudan (1)			O - Syria (1)
					O - Yemen (1)

5.5. **Have you experienced problems when using 'alpha-numeric ATC call-signs' with Airline internal…**

a) Systems? Y/N If YES, what kind of Systems?
b) Interfaces? Y/N If YES, what kind of Interfaces?
c) Departments? Y/N

The following table indicates, where Airlines experienced problems/challenges in using alpha-numeric call-signs – all of these issues have been resolved (- number of votings in brackets).

Systems	Interfaces	Departments
CPDLC (1)	Slot Manager (1)	Aircrew (1)
Company Reports (1)	FDM Software (1)	Operations (2)
Position Reports (1)		OFP (1)
NetLine (LSY) (1)		
DataLink (1)		
ACARS (1)		
Airline internal (1)		
AGL System (1)		

5.6. **Have you experienced problems when using 'alpha-numeric ATC call-signs' (in parallel to the numeric (commercial) call-sign with Aircraft internal applications?**

a) Cockpit? Y/N If YES, what kind of Systems?
b) Cabin (e.g. Flight Route display, IFE, …)? Y/N
If YES, what kind of Systems?

The following table indicates, where Airlines experienced problems/challenges in using alpha-numeric call-signs in the cockpit/cabin – all of these issues have been resolved (- number of votings in brackets).

Cockpit	Cabin
AGL Interface (1)	
Start-up (1)	
ACARS (1)	

5.7. **Have you experienced problems when making use of 'alpha-numeric' ATC call-signs in the Airport environment? (i.e. did Airports report problems in their systems/messaging when Airlines make use of an 'commercial' (numeric) call-sign in parallel to an "alpha-numeric" ATC call-sign?**

The following table indicates, where Airlines experienced initial problems/challenges in using alpha-numeric call-signs in the airport environment (-number of votings in brackets)**.**

EUR	ASPAC	AFI	NAM	SAM	MID
LL - Israel					
LEMD - Madrid					
LFPG - Paris CDG					

5.8. **Should you have not considered to make use of alpha-numeric ATC call-signs, what is the main reason for this?**

a) ATC call-sign (conflicts) not considered to be a problem?
b) Problems with internal systems/applications?
c) Problems with Overflight permission requests/acceptance?
d) Problems with Landing permission requests/acceptance?
e) Problems at ATC to accept/consider alpha-numeric call-signs?
f) High financial investment?
g) Flight Planning System not ready?
h) Other…

No Call-Sign conflicts	3
Problems with internal systems/applications	3
Problems with Overflight Permissions requests/acceptance	5
Problems with Landing Permissions requests/acceptance	6
Problems with ATC to accept alpha-numeric call-signs	1
High financial investment	1
Flight Planning System not ready	3
Other…	1

5.9. **Looking back after having implemented alpha-numeric call-signs in your Airline operations, what were the biggest problems you faced?**

Did not face big problems…	7
Change of culture (within the Airline crew/staff/departments)	4
Crews: Double alpha-numeric call-signs difficult to use	1
Changes realistically only possible for a seasonal change	1
Overflight/Landing Permit requests/acceptance	1

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Appendix 1 – Detailed Airlines Survey

1. **Is your Airline using alpha-numeric ATC call-signs (in the ATS FPL/ATC communication)?**

   Text responses:
   - *Usually not, but only if 2 flights of the same number on same day (due delay).*
   - *Yes.*
   - *Yes – Due to our varying schedule and pairings that change each season, I run a complete detection/de-confliction each season when all call-signs change. I use the call-sign similarity tool (CSST) from the CFMU to manage this task and have I worked closely with the CSMC team.*
   - *Yes, for flights that are expected to have a call-sign similarity alpha-numeric ATC call-signs are applied. We use the Eurocontrol Call-Sign Similarity Tool (CSST) to determine were conflicts may be possible. The CSST is also used to generate the alpha-numeric call-signs.*
   - *No.*
   - *Not yet.*
   - *Not standard, only if recovering delayed flights, which we don't have additional permits for.*
   - *Yes, but only the addition of an A or D to designate late (next local day) running flights. We do not have a generic application like you are proposing.*
   - *The main issue is our legacy Flight Schedule System which cannot accept alphabet.*
   - *Many FPL systems will require some modified as well as ATC flight data processing systems.*
   - *In the past we had problems with (call-sign) similarity in Europe and in the United States, in which cases we had to change the flight number.*

2. **Do you make parallel use of a 'commercial' (numeric) call-sign in parallel to an "alpha-numeric" ATC call-sign?**

   Text responses:
   - *No.*
   - *We use commercial and alpha-numeric ATC call-signs. We normally use one letter at the end of the ATC call-sign. Only for domestic flights we use 2 letters at the end.*
   - *Yes.*

- *Upon request (Crew, ANSP, Safety department) we associate an alpha-numeric call-sign to the commercial call-sign, but (this) ATC call-sign is not communicated to commercial side (sales/pax).*
- *We use a combination of normal flight numbers and alpha-numeric.*
- *Where applicable an alpha-numeric call-sign is applied to specific commercial flight numbers.*
- *This fact is due to some constraints that are in place in some countries that do not accept or partially accept the use of alpha-numeric ATC call-signs.*
- *On some routes we have numeric, on other alpha-numeric.*
- *Alpha-numeric call-signs are only used to remove detected/reported confliction. Airport systems are configured so that the Terminal screens convert (the ATC call-sign into the commercial flight number) so to the customer nothing is evident and they see what is on their itinerary.*
- *Yes, we use flight numbers as call signs and if there is a conflict between two services, I will allocate an alpha-numeric c/s to one of them.*
- *We use an alpha-numeric where we believe a conflict or clash with another call-sign exists. Some of our flights still use normal commercial flight numbers.*
- *Our commercial flight numbers are 95% totally different to our ATC call-signs.*
- *Yes, on some routes we have numeric, on other alpha-numeric.*

3. Are you using 'alpha-numeric' ATC call-signs only in specific ICAO Regions?

a)	**Europa:**	**Y/N** (excl.:	)
b)	**Asia & Pacific:**	**Y/N** (excl.:	)
c)	**Africa:**	**Y/N** (excl.:	)
d)	**North America:**	**Y/N** (excl.:	)
e)	**South America:**	**Y/N** (excl.:	)
f)	**Middle East:**	**Y/N** (excl.:	)

Text responses:

- *No, we use everywhere.*
- *Europe, excl. Turkey.*
- *Europe: for flights to Russia, Caucasus, Egypt, Turkey we use numeric.*
- *Europe: excl. Russia and Israel and especially Madrid/LEMD Airport, where ATC call-sign and commercial flight number – if not the same – seem to cause problems for airport slot matching with filed FPL.*
- *Europe.*
- *We use alpha-numeric in all regions we operate.*
- *Europe: with the exception of Russia, Pristina and Turkey.*

- *ASPAC: the ANSPs don't really understand the concept of alpha-numeric c/s different to the flight number, so I don't allocate c/s to any ops into or over this region.*
- *AFI: yes, but my allocation has to be simple (XXX57 will be allocated XXX57K) so at least there is some similarity between the flight number and the call-sign. I allocate these in time for our other departments to apply for overflight clearances using the alpha-numeric.*
- *North America: Yes.*
- *South America: Yes.*
- *MID: No – for the same reasons as ASPAC.*
- *Europe: excl. Turkey, Iceland. – While they would initially accept alpha-numeric call-signs, as soon as we had more than one aircraft in their airspace at any one time, we were advised that their systems would require us to file commercial flight numbers. I believe it would be possible to file alpha-numeric call-signs with a little more coordination, the authorities are always very helpful and prompt to reply to enquiries.*
- *AFI/MID: excl. Israel will not allow us to file alpha-numeric call-signs that are different to our submitted schedule. Egypt are fine and we are able to use alpha-numeric call-signs in/out of the country. We do have a very good ground-operations manager who is Egyptian so able to coordinate well with the local authorities.*
- *We use alpha-numeric call-signs in Europe and North Africa. For flights to Egypt and for adhoc flights we use numeric.*
- *We only apply to alpha-numeric call-signs to designations within Europe and Morocco. Because our overflight permits are requested on the commercial flight number, we do not apply alpha-numeric call-signs to destinations in Egypt, Iraq, Tunisia, Turkey, U.A.E. etc.*
- *Europe, North America: Yes*
- *Europe: excl. Turkey, Russia, Belarus*

4. Have you experienced problems requesting/accepting <u>overflight permissions</u> when making use of 'alpha-numeric' ATC call-signs?

- *We had problems in Brasil, who rejected an alpha-numeric call-sign.*
- *No, but we have kept it to a minimum and have not tried how it would be in Russia, China.*
- *Yes – in Russia, Japan, South America.*
- *No problems ever reported.*
- *Because we request our overflight permits based on the commercial numeric flight number, we do not have experience with this.*

- *No.*
- *Egypt (they have to approve the usage at the beginning of each IATA summer), Israel (denied), Russia (denied), Albania (denied).*
- *No, since only in Europe.*
- *Turkey – even when notifying the authorities of our alpha-numeric call-signs which corresponds to each commercial flight number, they would not accept. Any departures from Turkey filed using a different call-sign were refused departure until re-filed using the commercial flight number. They advised that we could use alpha-numeric call-signs but we would have to use these in our submitted schedule instead of our call-sign. We of course do not want our passengers to have these on their bookings so for now I am unable to use them. – Although I see that domestic Turkish Airlines seem to be able to do this.*
- *We do not allocate alpha-numerics east of Cyprus.*
- *No problems as far as I know.*
- *To avoid problems with Russia and Israel we don't use ATC call-signs.*
- *Yes – Bangladesh, Cape Town, Ethiopia, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Korea, Kuwait (landing permission request is not approved, but overflight permission request is approved), Lebanon, Malaysia, Nepal, Niger, Nigeria, Qatar, Saudi Arabia, Tanzania, U.A.E. do not accept alpha-numeric call-signs.*
- *Yes – in Russia e.g. you need to request permission with numeric call-signs, then send special letter with request to change to alpha-numeric. You (also) need to inform AD if it is entry permit.*
- *No, but we just do Europe currently.*
- *Our Chinese Operations folks send a message of their own.*

5. Have you experienced problems when using 'alpha-numeric ATC call-signs' with Airline internal…

a)	**Systems?**	**Y/N**	If YES, what kind of Systems?
b)	**Interfaces?**	**Y/N**	If YES, what kind of Interfaces?
c)	**Departments?**	**Y/N**	

- *CPDLC and company reports have issues. Requires pilot work around so we can get Position Reports from them.*
- *Some issues with NetLine due to complexity to load call-sign file.*
- *Slot Manager & FDM software, Aircrew/Operations staff ➔ culture*
- *No.*

- *Not a major problem, but you will require a lookup table so that Datalink flight plan/wind requests can be handled by your ACARS supplier. We use ARINC and it is not an issue, they load the initial file and again I make any changes during the season manually.*
- *No problems: I send my output file to our ground operations airport managers and/or handling/ATC contacts I have across network. Any changes within the active season I send out manually to the affected stations. I also send out lookup file to FlightRadar24 and Planefinder (Pinkfroot) so that our flights are depicted correctly in their applications.*
- *No, alpha-numeric call-sign software is prepared by company according to CFMU criteria.*
- *The H24 OPS department was having some problems in matching the flights with the new policy with the commercial flight numbers.*
- *Yes – all the internal systems would only have records of the commercial flight number, but not the alpha-numeric call-sign. This was solved by translating the alpha-numeric call-sign back to the commercial flight number for all other systems.*
- *Originally Paris commercial info boards used call-sign in terminal – resolved some years back.*
- *All ops messages use flight numbers – ATC call-signs only affect ATC FPLs.*
- *No problems but good planning in advance and good discipline is required.*
- *AGL system must be converted with a table.*
- *Commercial flight number should be available as well on the ATC FPL.*

6. Have you experienced problems when using 'alpha-numeric ATC call-signs' (in parallel to the numeric (commercial) call-sign with Aircraft internal applications?

a) Cockpit? Y/N If YES, what kind of Systems?

b) Cabin (e.g. Flight Route display, IFE, …)? Y/N
If YES, what kind of Systems?

- *AGL system must be correct.*
- *Call-signs only used in comms with ATC.*
- *No.*
- *At the start-up. Since many crew members were not familiar with this modification. The system need a month before becoming operative without problems.*
- *Not a major problem, but you will require a lookup table so that Datalink flight plan/wind requests can be handled by your ACARS supplier. We use ARINC and it is not an issue, they load the initial file and again I make any changes during the season manually.*

- *No. The call-sign will only be used internally and between (the flight crew) and the ATC authority.*

7. Have you experienced problems when making use of 'alpha-numeric' ATC call-signs in the Airport environment? (i.e. did Airports report problems in their systems/messaging when Airlines make use of an 'commercial' (numeric) call-sign in parallel to an "alpha-numeric" ATC call-sign?

- *Not lately – we did have to have 3 numeral call-sign for Madrid/MAD, but that seems to have been fixed.*
- *No.*
- *We had some problems. If AD doesn't know your call-signs, information board in AD will not show your flight data. They will not know that your are arriving.*
- *Yes – Israel needs both of alpha-numeric and commercial ATC call-sign.*
- *No – we always advise Handling Agent and Airports in due time when ATC call-signs different from commercial flight number are used. On occasion safety reports come in about conflicting ATC call-signs we then revert to the commercial flight number and this has not caused any problems.*
- *Airports that are fully A-CDM airports are not causing problems when you revert from an ATC call-sign back to your commercial call-sing (we love A-CDM).*
- *No – just assure they are aware of the c/s vs. flight number correlation so they can ensure their computers can decipher the difference between c/s and flight number (for stand planning, arrival boards etc.).*
- *No issues – all airports we serve across our network are able to accept alpha-numeric call-signs and incorporate into their systems.*
- *No, since quite common in Europe.*
- *Yes – some handlers were not expecting the a/c on arrival since a link between the ATC call-sign and the commercial flight number is missing. For this reason the handler who is working with the commercial flight number is not correctly updated by the ATC message codification.*
- *Yes – some airports require an overview of the numeric flight number and the assigned alpha-numeric call-sign.*
- *Yes – we always drop leading zeroes in call-signs and always have. This caused problems with South Korea ATC system, but now resolved.*
- *Good planning and discipline required – especially for A-CDM airports. We have seen reports of call-sign confusion between two almost similar alpha-numeric call-signs. So it is not about getting it right just once, but there is some maintenance effort with alpha-numeric call-signs (as well).*

8. Should you have not considered to make use of alpha-numeric ATC call-signs, what is the main reason for this?

a) ATC call-sign (conflicts) not considered to be a problem?
b) Problems with internal systems/applications?
c) Problems with Overflight permission requests/acceptance?
d) Problems with Landing permission requests/acceptance?
e) Problems at ATC to accept/consider alpha-numeric call-signs?
f) High financial investment?
g) Flight Planning System not ready?
h) Other…

- *No.*
- *For far east flights we don't change the ATC call-sign to simplify the process.*
- *We do consider conflicts a problem.*
- *We have not encountered any significant problems.*
- *With the implementation call-sign similarity has decreased.*
- *ATC call-sign (conflicts) not considered to be a problem?*
- *Problems with internal systems/applications?*
- *Problems with Overflight permission requests/acceptance?*
- *Problems with Landing permission requests/acceptance?*
- *Problems at ATC to accept/consider alpha-numeric call-signs?*
- *The change involves many departments of the organisation and this can cause different views.*
- *We didn't find any important issues and the implementation was very smooth. The challenge is to adopt systems/interfaces and to inform all the departments in the company affected by this change.*
- *Some flight crew resistance to alpha-numeric call-signs*
- *Cultural shift from flight crews.*

9. Looking back after having implemented alpha-numeric call-signs in your Airline operations, what were the biggest problems you faced?

- *No problems, but we are in Europe and it is SOP here.*
- *Overflight and landing permission requests/acceptance.*
- *De-conflicting is not the issue. The issue is to de-conflict and to keep them as short as possible and to find a logic, that is understandable for the Ops staff, crew and ATC at the home base.*
- *The less complex the call-sign, the better for all the users.*
- *Difference between outbound and inbound flights: Outbound: 1xx one decimal and two alphabetic characters, Inbound: 11x two decimal and one alphabetic character – this helps users to detect, if an error was made in conversion. – In case of an incident we directly know if is about an out-/inbound flight.*
- *Cultural shift for aircrew and for our external partners/customers.*
- *I made sure sufficient training and literature was provided and made sure that I was always available to chat with anyone that showed concern.*
- *Coordination to ensure that call-sign conflict was avoided and to maintain a monitor of on-going conflicts or potential conflicts.*
- *For changes we stick to a 3 character system, so it is easier for the pilots.*
- *The biggest issue I face is actually finding the call-sign conflicts prior to the season starting. I do this manually at present but I am going to have a look at the Eurocontrol c/s tool to see if it is of use.*
- *Crews do not like c/s that don't "flow" and therefore c/s such as "seven-seven-November-November" would be too difficult for them to use (so they tell me).*
- *The biggest hurdle initially was building up contacts and processes to manage the task. Based upon the (high) number of flights we operate each day we see very few genuine call-sign confusion events.*
- *Flights operating on permits are of course a different matter and for most of these I can only really raise our crews attention to a potential conflict via OFP Notes until the next season permit application is submitted.*
- *Our crews are very aware of this subject and are quick to supply me with feed-back via ACARS.*
- *We implemented the process with a tool that is used by Eurocontrol.*
- *After implementation we received various feed-back from flight crews that the double alpha-numeric call-signs were difficult to use. – Because of this feed-back we reverted back to single alpha-numeric call-signs.*
- *Eurocontrol CSST: We found that this tool did not work as expected when a sequence of limitations was entered.*
- *Our starting point for a call-sign is to start with the original commercial flight number, i.e. XXX258 to XXX25G.*
- *It is obviously hit and miss knowing when possible confusion could occur. Probably many we have introduced may not now be a problem due constantly changing schedules etc.*

-Call-Sign Confusion-

Use of alpha-numeric Call-Signs

(Airline Survey APR' 2014)

- *Our experience show, that crew like to have a relation to the commercial flight number, whenever possible, e.g. XXX536 – XXX53A.*
- *Alpha-numeric call-signs can greatly resolve call-sign change request by ATC during dep/arr.*
- *ATC call-sign conflicts not to be considered to be a problem due to additionally successive use of Datalink COM with ATC wherever available.*
- *Many FPL systems as well as ATC data processing systems require modification.*

-END-

Ekkehard Gutt, Emirates – Flight Operations Support