



الهيئة العامة للطيران المدني
GENERAL CIVIL AVIATION AUTHORITY

Callsign Confusion – Sheikh Zayed Air Navigation Center (SZC)

Presented by
United Arab Emirates

رؤيتنا: منظومة طيران مدني آمنة ورائدة ومستدامة
OUR VISION: A LEADING, SAFE, SECURE AND SUSTAINABLE CIVIL AVIATION SYSTEM



Agenda:

- Background
 - Current issues
 - Future issues
 - Actions by SZC
 - Questions
 - Conclusion
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Background

- Information contained in ICAO DOC 9956 (Global and Regional 20-year forecasts) and work carried out by the UAE National Airspace Advisory Committee (NASAC) Working Group 3 suggests that an annual increase in traffic of up to 7.4% is expected within the UAE Flight Information Region (FIR) and the Middle East over the next 20 years.
 - The total number of flights within the UAE FIR will increase from 644,457 flights in the year 2010 to an estimated 1,856,909 flights by the year 2030
 - Callsign confusion poses a major safety related issue today within the Middle East Regional Network and with the projected traffic growth for our major airline operators, this issue, unless a workable solution can be found, will also multiply.
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Background - UAE FIR Movements

Reference UAE NASAC estimated traffic growth forecast

YEAR	TOTAL Over flight	TOTAL Daily	Total Flights
2010	140,821	1,765	644,457
2015	167,972	2,424	884,799
2020	212,345	3,314	1,209,605
2030	305,373	5,087	1,856,909

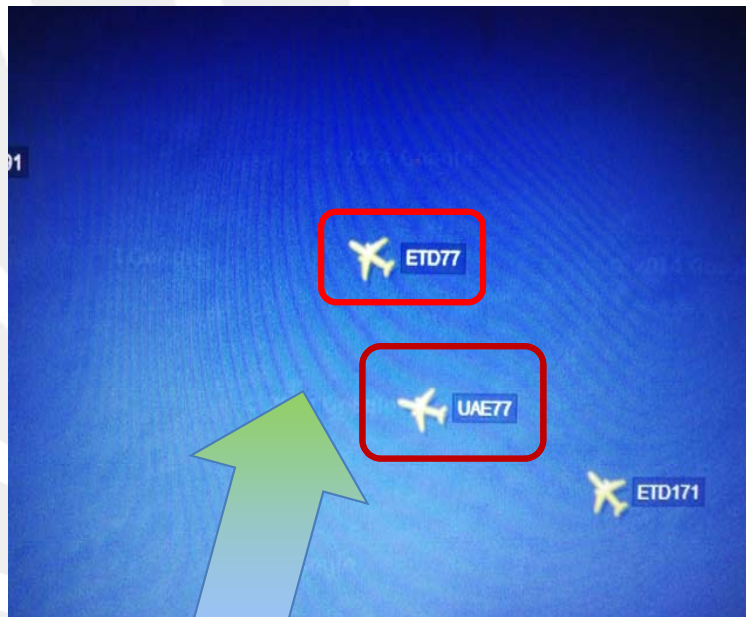
PERIOD	GROWTH
2010 – 2015	7.4%
2015 – 2020	5.4%
2020 - 2030	7%



Current Issues

- Safety related incidents reported with causal factors associated to similar callsigns.
 - Regular occurrences of callsign confusion where there was no loss of prescribed ATC separation but there was some deviation, *or*, there was no deviation from operating procedures.
 - Common routes and growth patterns across our major airlines generating similar departure/arrival times, coupled with similar callsign allocation methodology being adopted.
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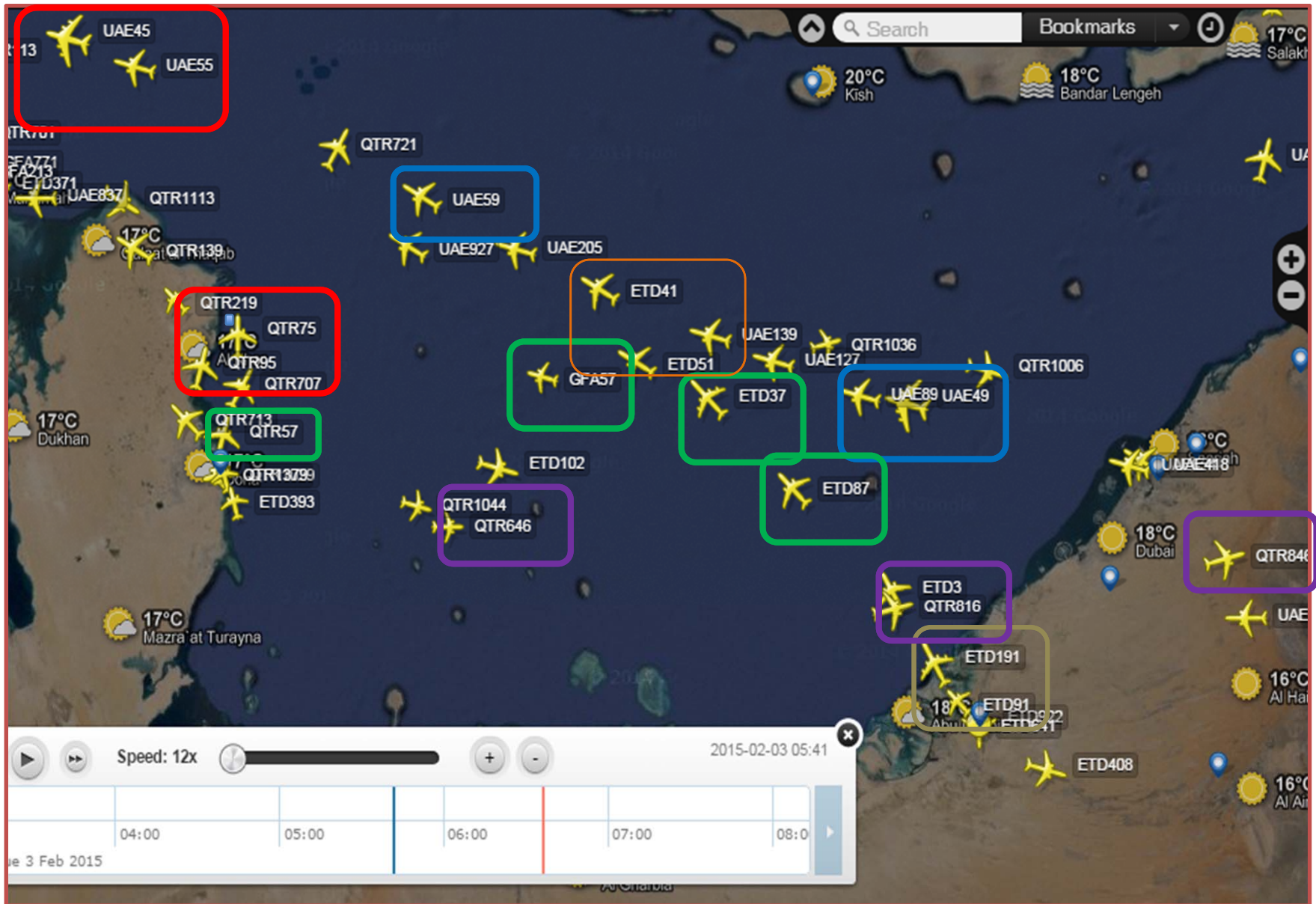
Current Issues - Daily examples of Callsign Confusion



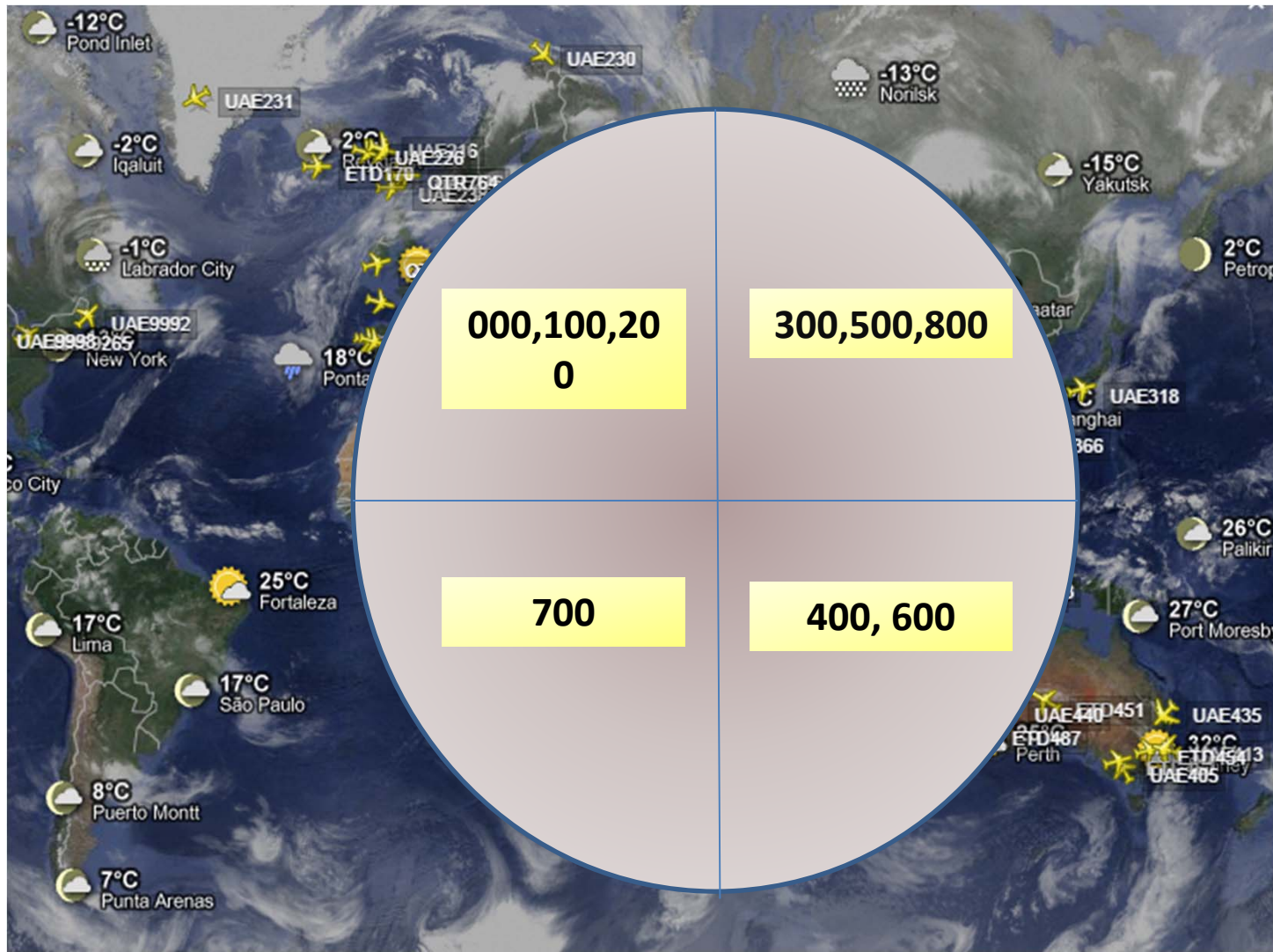
ETD77 & UAE77



UAE97 & ETD97
ETD55 & FDB55



03/02/15 @0545z – Colours signify similar callsigns.



UAE, ETD & QTR Global Callsign Similarity.....(generally)

Future Issues

- Rapid growth increases frequency congestion and 'clipping'.
 - Current Callsign allocation methodology used with common growth markets.
 - Doubled traffic level growth by 2030 from current traffic figures will increase callsign confusion with at least a similar ratio to growth.
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Actions by SZC

- Similar callsigns were included during 2013 and 2014 Emergency & Competency Training. The below outcomes were coordinated with ATCOs via SMS:

Incorrect Read Back of Level:

- I. 195 Incorrect read backs made by pilots
- II. 168 Detected – 86%
- III. 27 Not detected – 14%

In comparison to:

Similar Callsigns:

- I. 146 Cases of Similar callsigns
 - II. 94 advised – 64%
 - III. 52 not advised – 36%
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Actions by SZC

Local Air Traffic Service Instructions (LATSI) References:

Point 2.9.4 - *'When a sector is manned by an Executive Controller and a Planner, the responsibilities of the Planner are as follows: (i) Point out similar callsigns to the Executive Controller'.*

Point 2.22.4 - *'To avoid confusion, when similar callsigns are on frequency at the same time, one of the following phrases shall be used: - "[1st callsign] be advised [2nd callsign] also on frequency" or "[callsign] [callsign] [instruction]"*



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Actions by SZC

UAE Working Paper:

ICAO ATM SG/1 (Cairo, Egypt 9-12 June 2014)



International Civil Aviation Organization
MIDANPIRG ATM Sub-Group
First Meeting (ATM SG-1)
(Cairo, Egypt, 9-12 June 2014)

ATM SG-1-WP/29
05/06/2014

Agenda Item 5: Airspace Management Issues

CALLSIGN CONFUSION ACROSS THE UAE FIR

(Presented by United Arab Emirates)

SUMMARY

The purpose of this working paper is to put forward the efforts by UAE to reduce the safety risks associated from Callsign Confusion as it is a general safety area which requires development at a regional level.
Action by the meeting is at paragraph 3.

1. INTRODUCTION

- 1.1 Callsign confusion is a very significant safety risk within the ATM network and requires addressing by all stakeholders. As traffic levels increase and commonality of routes also increases, airlines and ATS providers need to work collaboratively to ensure that safety significant events are minimized associated to callsign confusion.
- 1.2 Callsign Confusion is not solely a national issue, but a system wide global problem. Similar callsigns have been adopted over the years for many reasons such as flights to Asia containing the number '8', as this is seen as a lucky number or similar callsigns being used for routings to certain destinations for simplicity within flight planning & scheduling. For the UAE a lot of the commonality emanated from the rise of the UAE carriers such as Emirates and Etihad. The expansion of these airlines contained the adoption of basic flight planning principles used for callsign selection with certain destinations or routes.
- 1.3 Safety risks associated with callsign confusion - The dangers associated with callsign confusion are not new and have been well documented globally. In 2003 the French ATM services reported 800 safety occurrences concerning similar callsigns ([Eurocontrol Action Plan 2006](#)). Such events lead to wrong and unsafe levels being assigned, wrong headings or routings being acknowledged, double transmissions blocking congested frequencies, extra mental workload for controllers and for pilots alike and losses of separation.

2. Discussion

- 2.1 The role of minimizing safety implications related to callsign confusion does not just rest with one ANSP or with one airline. System wide collaboration is required from all stakeholders to firstly understand the issues and then work in harmony to formulate the agreed solutions.
- 2.2 Work has already taken place over the years by various nations creating solutions such as Eurocontrol's Callsign Similarity Tool and the implementation of Alpha Numeric Callsigns.
- 2.3 The UAE recognizes the safety implications associated with callsign confusion and has worked on various activities to address some of these issues. These activities will focus on

ATM SG-1-WP/29

current traffic levels whilst also focus proofing solutions to cater for the predicted growth within its airspace.

-2-

PRISMA II Project - RTCS is a System FPL (SFP) field next to the Callsign field designed to be used to avoid callsign confusion on frequency by changing the callsign in the track label without changing the actual callsign in the system for filing and DMC Logs.

For example, if you had UAEI and UAE11 on frequency you can change the UAEI callsign to UAE11Y in the SFP, the typing (UAE11Y) in the RTCS callsign and the track label will change to UAE11Y. This will then be communicated to the aircraft using standard ICAO phraseology in doc 4444.

Alpha Numeric Callsigns - During periods of high congestion within the Dubai CTA callsign confusion within Emirates Airlines alone was common. During these periods pilots may select an alpha numeric callsign according to the final two letters of the aircraft's registration e.g. UAE113 will become UAE113AG

Level 1 - With a 7% increase in traffic within the UAE month on month callsign confusion is becoming more apparent. Sheikh Zayed Air Navigation Centre has published a procedure to advise crews of similar callsigns on frequency to ensure that pilots are alert to the chance of potential issues.

Flight Collection Exercise - Controllers at Sheikh Zayed Air Navigation Centre over one month collated large amount of information with regards to callsign confusion which occur within the UAE FIR. This information will be used in conjunction with the airlines to de-conflict as much as possible callsign confusion occurrences.

Group 7 - As part of the NASAC's specific working group has been established to deal with Callsign Confusion. This working group has been formed from various stakeholders across the UAE.

www.mca.gov.ae/air-traffic-control

effort and measures undertaken by UAE to mitigate the risks and take action as appropriate.

-END-



Actions by SZC

- Callsign confusion data collection exercise over 1 month.
- Consultation with the development of a 'Callsign Confusion' AIC publication.
- Active member of NASAC WG7 (Callsign Confusion).
- Briefings to staff of incidents involving callsign confusion.
- Callsign confusion Survey.
- GCAA Air Navigation Services (ANS) Safety Newsletter raising awareness about Callsign Confusion.

And....

- ATC System upgrade.
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Actions by SZC – ATC System Upgrade

Add Radio Telephony Callsign (RTCS) to the system Flight Plan

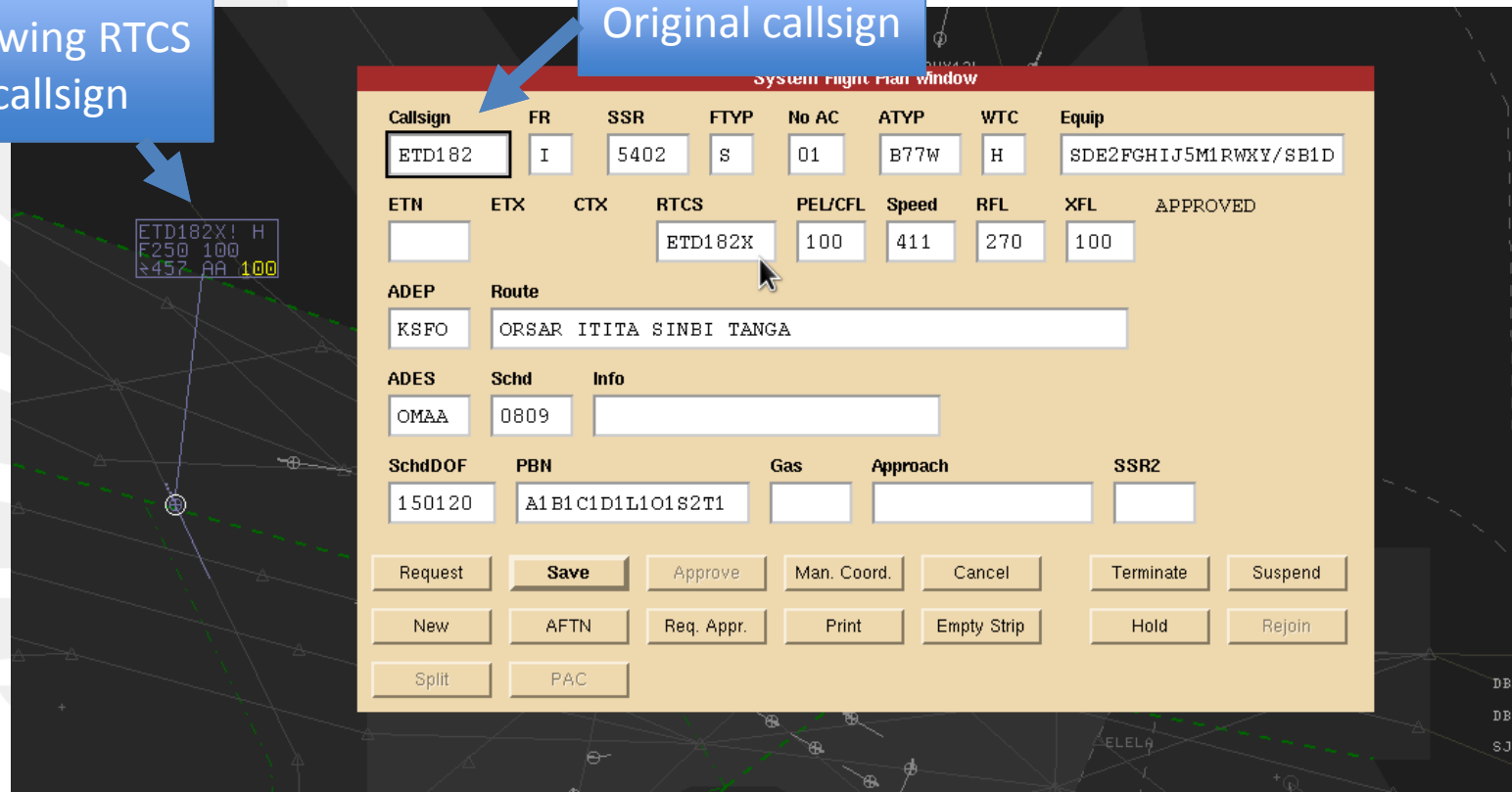
- To counter callsign confusion the controller gets the possibility to enter a RTCS to a flight plan. This is done with an additional field in the system FPL window. Once an RTCS has been added, it is shown in the label instead of the callsign.
- The original callsign, however, is still maintained internally as it is used for billing and logging.

Actions by SZC – ATC System Upgrade

Add Radio Telephony Callsign (RTCS) to the system Flight Plan

Label showing RTCS callsign

Original callsign



The screenshot shows a 'System Flight Plan window' with the following fields:

Callsign	FR	SSR	FTYP	No AC	ATYP	WTC	Equip
ETD182	I	5402	S	01	B77W	H	SDE2FGHIJ5M1RWXY/SB1D

ETN	ETX	CTX	RTCS	PEL/CFL	Speed	RFL	XFL	APPROVED
			ETD182X	100	411	270	100	

ADEP: KSFO
Route: ORSAR ITITA SINBI TANGA

ADES: OMAA
Schd: 0809
Info:

SchdDOF: 150120
PBN: A1B1C1D1L1O1S2T1
Gas:
Approach:
SSR2:

Buttons: Request, Save, Approve, Man. Coord., Cancel, Terminate, Suspend, New, AFTN, Req. Appr., Print, Empty Strip, Hold, Rejoin, Split, PAC

Label: ETD182X! H
F250 100
457 AA 100



Questions

- When do we expect the next ICAO New Flight Plan Format (INFPL) change and can this Working Group influence this decision?
 - Should a solution to the Callsign similarity issue wait for the next Global aviation change and is it possible for this group to pave the way for the World?
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Conclusion

- GCAA supports and commends the intentions of this group to develop a suitable and sustainable solution to the issue of Callsign Confusion across the MID Region States and beyond.
 - GCAA would like to promote the previous work delivered across SZC and the rewards that were gained as well as to also reflect on the commendable work previously presented through ICAO MIDANPIRG.
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Thank you شكرا