

safety bulletin

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Dear colleagues

Reporting is one of the main pillars of our safety management system (SMS), and the progress made in this area recently is outstanding.

The regional aerodromes in particular could be cited as a good example as the numbers shown in the graphics below can demonstrate. As we received 13 operational internal reports (OIR) for the first 8 months in 2006, for the last 4 months in 2006 87 came in! Which makes a total of 100 for 2006 (only for regional aerodromes though). For 2007 the increase in reporting is even much bigger compared to the 13 reports received from January to August 2006 we received 455 for the same period in 2007!!

The interpretation of these numbers now leaves a large door open, and I would like to make the statement here that I do not know the full truth about these. However it seems to me that a basic behavioral change has happened. A more open reporting culture seems to have emerged in the company, which is expected to bring



more insight in the determination of our risk picture.

It would be totally erroneous to conclude that the safety of our operations has decreased, the fact is that we know much more today than previously.

The reporting levels of Grenchen and Bern are particularly impressive; below in the graphic we discover that a deeper analysis shows three main areas reported: airspace infringements, TACO and non respect of the minimal altitude on a SID toward WIL.

This statistically relevant data now allows us to take concrete measures to have a better grip on the potential risks identified.

However not only Bern or Grenchen report airspace infringements, we receive many reports from our main airports Zurich and Geneva. I am convinced that a lot of incidents still remain unreported. Here I take the opportunity to make the following call: please report all occurrences even if they do not appear significant in your eyes.

With the database we are building we can make the dialogue with our regulator more efficient. It could well be that our airspace structure is far too complex, or alternatively maybe the training or information is lacking. The communication channels might also prove to be used inadequately etc.

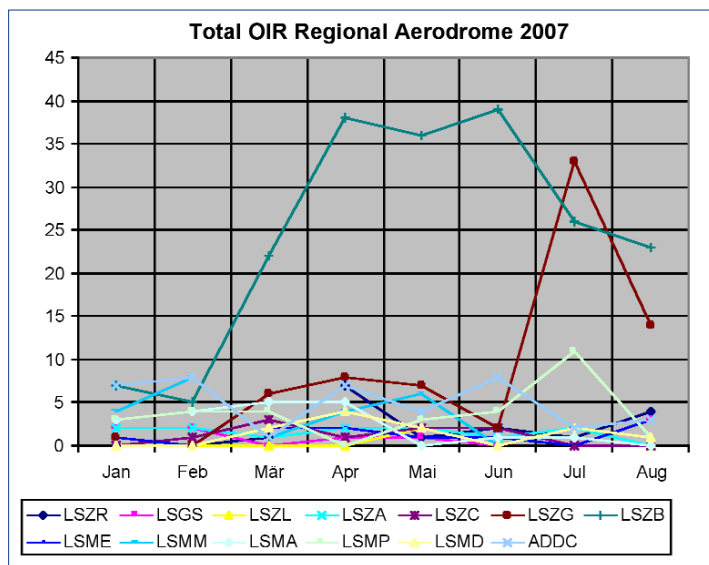
I took airspace infringements only as an example, but obviously other themes will possibly lead us to other weaknesses, for example technical

deficiencies or procedures that can not be respected due to aircraft performance limitations. Although minimal altitudes much more often have to do with noise abatement than with safety.

I would like to conclude this incomplete view into regional aerodromes OIR data with a great THANK YOU. Thanks for all the submitted reports, thanks for the time dedicated to it and thanks for the positive attitude which is behind it. I would like to express my wish that your contribution will not decrease.

It is well possible that other places than Bern or Grenchen need to report on problems. It is only by getting the complete picture on our operations that we will be able to reach our medium to long term goals in enhancing safety.

JÜRIG SCHMID
Head of Corporate Safety Management



	LSZB	LSZG
Transfer of internal information	6	0
TCAS	2	0
Airspace infringement	53	15
Procedures	12	0
Remote A/C	2	0
Ground radio	1	0
Technical problem A/C	4	0
Radar picture	3	0
Non compliance with ATC instruction	17	18
Voice pilot	2	0
TACO	39	0
DME15.2WIL 5500ft	39	0
RWY incursion person	4	23
Accident	2	0
RWY incursion vehicle	5	9
RWY incursion A/C	1	1
Technical problem sg	2	2
Aerodrome	2	0
other	0	3
Total	196	71

Voluntary Reporting at skyguide

News from Safety Improvement Reporting (SIR) and Safety Panel

ESARR3 (Use of Safety Management System by ATM Service Providers) demands inter alia that an ATM service provider: «shall ensure that all staff are actively encouraged to propose solutions to identified hazards, and shall ensure that changes are made to improve safety where they appear needed».

skyguide has decided that this should be achieved with the help of a reporting system, known as Safety Improvement Reporting (SIR). All skyguide staff members are encouraged or requested to report any problems with a bearing on safety which might represent a hazard in any way.

Depending on the problem being reported, an SIR is submitted to the O or T Department. The SIR is then processed as per the department's internal procedures. Audit Management, which is responsible for the operation of the SIR process, receives the report from the line as to whether and how a SIR has been resolved. Audit Management plays a co-ordination and interface role

between the writers of the SIRs, the line managers, the Safety Panel members and the Safety Manager.

The Safety Panel, a body composed of currently active ATCOs from the various units (ACC GVA and ZRH, TWR/APP GVA and ZRH, Regional/Military Airports, ADDC and representatives from Technics), sits four times a year. The Safety Domain Managers from the various units are also invited, although they have no vote. This Safety Panel is chaired by the Safety Manager, who has delegated this task to Audit Management.

The tasks and responsibilities of the Safety Panel are to review the SIRs and the measures taken by the management. The Safety Panel decides whether the solution reached to close a SIR is accepted. This means that the Safety Panel has a special place within skyguide, because it is authorised to decide not to accept a decision by the management and to refer the corresponding SIR back to the line: however, this occurs only rarely.

Not every SIR triggers an action. Sometimes those responsible assess the problem reported in a different way from the writer of the SIR, and thus do not take any measures. Although it is sometimes hard, the SIR writer has to accept this.

The way that the SIR process is structured means that it does not lend itself to offering solutions for problems that demand immediate measures. In such cases, the line managers must first be brought in.

The SIR reporting process has existed since 2003 and is well established. Every year, more SIRs are submitted. To date, there have been some 500 SIRs, with 100 already this year.

Most SIRs are submitted by staff from Operations, and there are only occasional ones from the technical divisions. However, the reporting tool is available to all skyguide staff members, and we would like to encourage everyone to make use of this reporting opportunity and actively contribute towards the constant improvement of our safety.

Safety Panel members:

- Jürg Schmid (Head of Safety Panel),
- Valerie Jost (TWR/APP Zurich),
- Pascal Jaunin, new (TWR/APP Geneva),
- Simon Spiri (ACC Zurich),
- Alain Gaberell (ACC Geneva),
- Olivier Bussard (ADDC),
- Mario Schwestermann (reg/mil airports),
- Jean Marquèze-Pouey (Technics),
- Marco De Monaco, new (Technics),
- Peter Scheuber,
- Marianne Zingre and new member Roger Hürlimann from Audit Management.

MARIANNE ZINGRE
DSA audit management

New safety panel members



Pascal Jaunin (TWR/APP GVA)



Marco De Monaco (Technics)



Roger Hürlimann (DSA)

A340 and B767 Jet Aircraft climbing opposite to their requested flight levels

Situation

An A340 out of Frankfurt southbound was cleared from FL 277 to FL 350, while opposite Boeing 767 was cleared from FL 270 to FL 320. The aircraft crossed off-set 3,2 nm, the B767 at FL 320 and the A340 going through FL 325 for FL 350 with a low rate of climb.

Events

- A340 outbound Frankfurt, heavy A340 with low rate of climb, cleared FL 350
- B767 outbound Bergamo, B762 with high rate of climb, cleared from FL 255 to FL 380
- Action to coordinate direct routings for both flights to gain horizontal separation
- Reclearance to FL 320 for B767
- Avoiding heading of 15° for both flights with slow action
- Traffic info for both flights

Analysis

The initial plan of RE was to clear the A340 southbound to its requested FL 350 (out of FL 275) and the B767 northbound to its requested FL 380 (out of FL 225). Then RE-South intended to achieve horizontal separation between the two aircraft by requesting direct routings from the neighbour units, as there was a low traffic situation at the beginning of the night shift. The intention was to offer an efficient service for the two airlines. As the A340 climbed slowly

to FL 350, the RE decided to change the concept and to achieve now vertical separation by reclearing the B767 to FL 310. By checking the climb rate of the A340, he calculated that the A340 would be passing FL 320 or higher at the moment the B767 would be 5 NM south of the crossing point. The clearance given to the B767 then was FL 320. The RE-S could not recall the reason that he initiated FL 320, and was all the way convinced he gave FL 310 till the moment he checked the strip with the cleared FL 320 written. RE-South decided to give a 15° avoiding heading to the left to both aircraft, when he realized that the B767 was approaching FL 320. In the

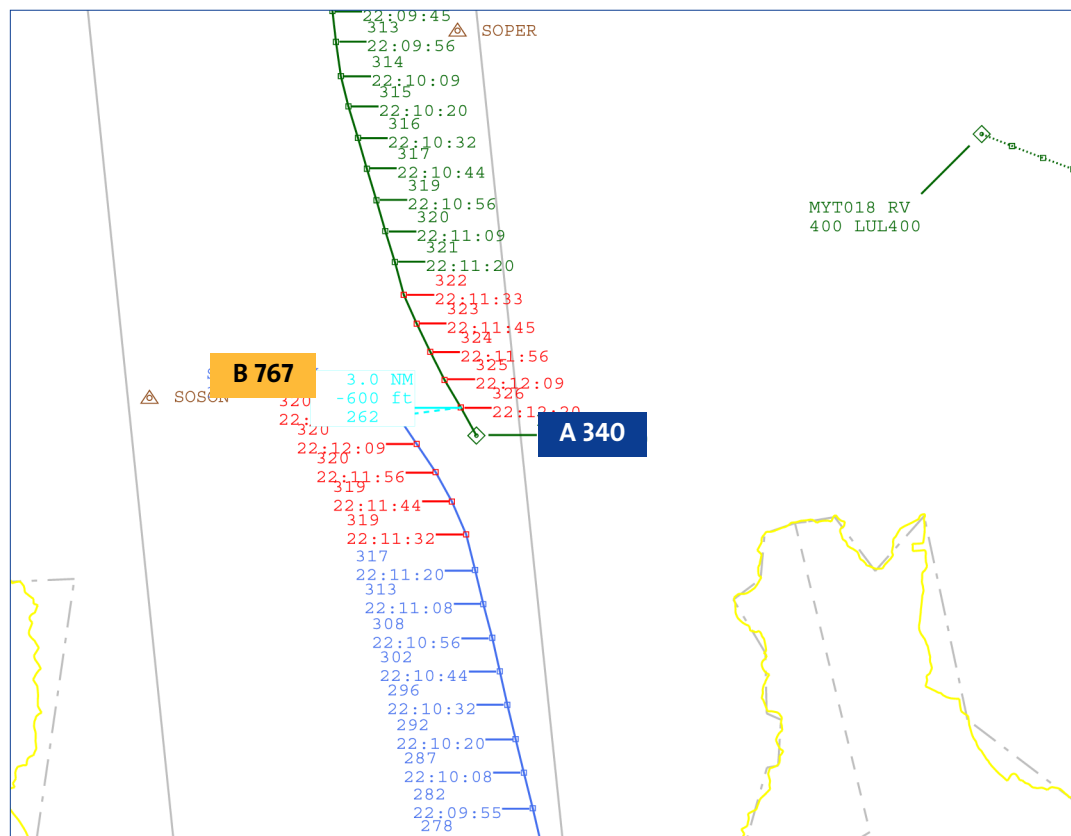
end the two avoiding headings did not realize more than 3 NM horizontal separation, as both aircraft at this altitude started their turns slowly. The A340 was unable to increase their rate of climb and this resulted in a vertical separation of 500 FT, the B767 maintaining FL 320 and the A340 going through FL 325. RP was busy coordinating with the neighbour units, as the coupled Sector just started to take over all flights from the other sectors. This kind of work, named also as «night shift modus» meant, that the RP was steady busy on the phone and was unable to follow the plan of the RE. He heard the cleared level 320 of the B767, but had no time to reassure,

why this clearance was given, as he was occupied with coordination.

Conclusion / Lessons learned

RE was convinced to have cleared the B767 to FL 310 and not FL 320. Additionally the plan of the RE to clear both aircraft to their respective cruising levels that were not separated from each other and then to get direct routings for the two flights to gain horizontal separation led to a situation, where both aircraft were approaching opposite with high speeds and vertically and horizontally not separated.

NICHOLAS SCHERRER
DSO Zurich



Managing safety in an ever changing environment

What is the relationship between the below terms and our daily business???



Where do we talk more about safety than in a business which officially states its intention to regard safety as its first priority? Have we a common understanding of what we mean by safety? Do we at least know how we intend to handle safety?

A commonly used definition for safety is «freedom from unacceptable risk of harm». A term which, as most of them, triggers the need to develop additional designations and descriptions to ensure a widespread understanding.

I do not intend to lay down or try to provide definitions for all of these terms. This article is merely an attempt to make some links between those conceptual aspects such as safety, risks, risk assessments and many more of them and what we, in skyguide, are really looking for, namely the services we provide (these services are multiple, ATC, CNS, AIS, ..., all essential for our customers). I will therefore allow myself some short-cuts.

If we are asked what is skyguide's intent in regard with safety you will most probably hear that we have in mind to reduce, or at least maintain, the number of serious incidents induced by ATM and this in a growing traffic environment. This ambitious goal is not solely a skyguide's desire, it is more a natural behavior when facing potential fatalities. Therefore all EUROCONTROL members have defined a commonly agreed safety objective:

«To improve Safety levels by ensuring that the number of ATM induced accidents and serious or risk bearing incidents do not increase and, where possible, decrease» (EUROCONTROL ATM 2000+ Safety Objective).

How could the reduction of the risk of an accident or bearing incidents be achieved, knowing that innate risks are related to the operations of an ANSP?

Reducing the risk may only result from the introduction of changes to

our system (even if the motivation to reduce the risks is not the unique source for changes it remains the main one). However, although the objective is in itself an enhancement, a change is inherently a source of uncertainty and bears the potential to break down the performance of any system and therefore implies an increased risk.

Therefore we want to assess the risk(s), related to the introduction of the change, posed on the services skyguide provides and ensure ourselves that we fulfill the above safety objective during and after the implementation of the change.

Behind this intention several questions are hidden such as «when is a change impacting the service skyguide provides», «what is our current safety level», «how may we identify risks», «how may we manage these risks to achieve our safety objective» and many more.

To help answering those questions we have developed a so called «Safety Assessment Framework». This lays down procedures to assess risks with the associated rules to conduct such assessments. Its is a mixture of concepts, processes, methods and other elements which may sound very technical. But in fact it is, as its name reveals, a framework or a kind of skeleton and its flesh around the bones may only come from those people having the real expertise of the services skyguide provides.



Who are these people? In fact it may be any of you! This may sound odd but it isn't. Not everybody is at the sharp end of the company and therefore in direct contact with our customers. Yet we are all dedicated to enable skyguide to provide, in terms of quality, the best possible product to our consumers. And each one of us has an impact on this quality even if it is in varying proportions.

However to maintain a sound application of the safety assessment framework, specialized people determine the changes subject to safety assessment (see some new faces in the next article in this bulletin). These are in first line the ones which have a direct impact on our services and therefore on our controllers.

This «Safety Assessment Framework» is still young and the continuous improvement of it will be the key to become effective as a way to improve our safety levels. Feedback is clearly welcome.

MARC VETTOVAGLIA
Head System Safety Assessment

Evolution of the Operations Safety Management

In line with recent work within skyguide to comply with the requirements of ESARR 4 in relation to Risk Assessment and Mitigation for change management, the Operations Safety Management (OOS Group) has needed to expand.

After quite a lengthy recruitment period, we are now pleased to tell you that we have three new starters employed specifically to perform the role of System Safety Expert (SSE) in the application of the skyguide Safety Assessment Framework (SAF). Our new starters are Sarah Amundsen, Max Canham and Jack Wendricks. So how exactly does that help the management and staff of the operations department? Well, firstly by having dedicated safety resources to perform the role of SSEs, it frees operational staff from needing to have an in-depth understanding of the framework and associated requirements of the ESARR4. Secondly, it means that the level of quality will be at the same standard which has proved to be a small problem in the past. Thirdly, from an organisational perspective, it means that as the SAF evolves, the number of people that need to be re-educated is limited to just those safety experts performing the function.

Although all three SSEs are based in Geneva, they will be in Zurich every Wednesday and either the Tuesday before or Thursday following, depending on the requirements of Zurich operations. But of course, they are available at the end of the phone at any time. And we have now created an OPS Safety Request mail account that you can use to request any assistance when it comes to safety for change management purposes.

With the implementation of the new structure, and the timing of the new SAF, the workload on Sarah, Max and Jack has been very hectic, but don't feel sorry for them, they are really looking to forward working with their colleagues to achieve a safe provision of ATS.

The three newcomers complement the existing staff of Anthony Gunton, Lisa Donne and Valery Michon, as shown in the chart below. Of course, risk assessment and mitigation is not the only thing that we in the Operations Safety Management undertake. Lots of interesting information about what we do can be found on our website.

LISA DONNE
OPS safety Management



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Review of Überlingen accident

by Professor Chris Johnson, University of Glasgow

The report, mandated by Eurocontrol, has significant inputs, hereunder please find two of them that probably need to be deeply thought of. The views are the ones of the author of the report.

Extract 1

«The analysis presented in this report has shown the direct relationship between problems in the implementation of the company's Safety Policy and the events leading to the accident. It is important that other Air Traffic Management organisations in general, and Safety Managers in particular, are made

aware of this direct connection. There is a danger that this aspect of the accident will be ignored or not given due attention given the amount of coverage that has been devoted to the interaction between the controller, the crews and ACAS/TCAS. These issues are important but are arguably less significant for long term safety than the lessons Überlingen provides about the importance of Safety Management Systems.»

Extract 2

«In this way, safety management becomes a core-business function

and is not just an adjunct management task. It is a vital step in the transition from a reactive culture – one in which the organization reacts to an event, to a proactive culture, in which the organization actively seeks to address systemic safety issues before they result in an active failure»

The full review is available, either

Internet

http://www.dcs.gla.ac.uk/~johnson/Eurocontrol/Ueberlingen/Ueberlingen_Final_Report.PDF

or skyline

http://skyline.skyguide.corp/Livelink/livelink.exe/fetch/2000/34326/582340/48089/177004/Ueberlingen_Report_Chris_Johnson.pdf?nodeid=976284&vernum=0

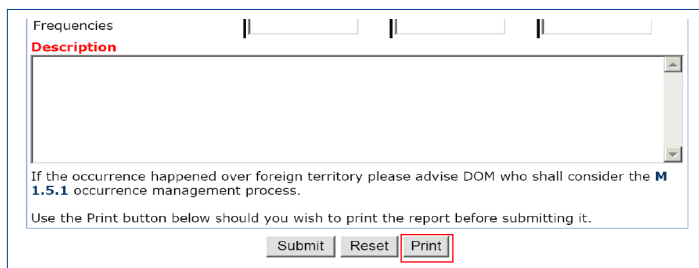
New Print function for SODA OIR

Since April, the print function is available when filing an OIR via SODA.

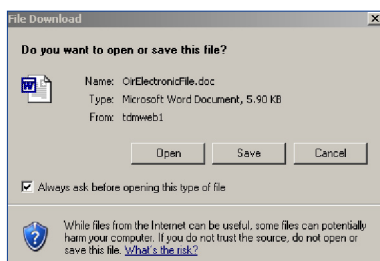
If it is ones wish to keep a copy of the OIR they have just written, press the «print» button (as shown on picture 1). This will call the «File Download» window (see picture 2) for a Word document (see picture 3). This feature will allow to have a hardcopy enclosing all the information and not as before, part of it missing. For confidentiality reasons the names of the ATCOs will not appear though.

After having printed or saved the file, please don't forget to press the «Submit» button, otherwise, the information will be lost for DSO.

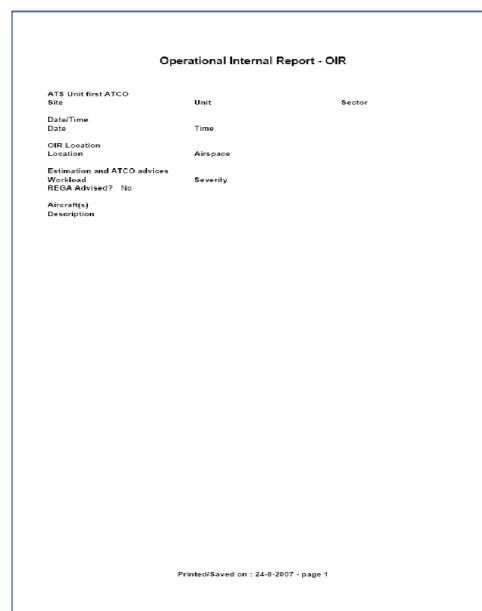
Opportunity is taken here to remind that for IT security reasons a time-out will appear after you left the OIR open with no input at all for 30 minutes or more. The data you typed in is then lost!



Picture 1



Picture 2



Picture 3