

# Safety Bulletin



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## Editorial

### CIRP

For many years skyguide (Management<sup>1</sup>, Unions, and Safety Management) has been trying to convince FOCA and DETEC/UVEK to change the law and/or the ordinance in order to provide the legal framework for a "confidential reporting", a "non-punitive reporting", a "Just Culture reporting" or what ever you may call it. Without any success. But now it seems that changes could be realized very soon. In the DETEC/UVEK "Media information" after the NLR-Report it is written:

*... de créer les conditions juridiques nécessaires à l'instauration d'un système de reporting permettant d'améliorer la gestion de la sécurité. Aucune des personnes impliquées ne devra cependant craindre des conséquences d'ordre civil ou pénal en raison de la déclaration spontanée d'un tel événement.*

*...Le DETEC veut appliquer les recommandations.*

*... es sollen die rechtlichen Voraussetzungen geschaffen werden, um ein Reporting-System einzurichten, welches es erlaubt, das Sicherheitsmanagement zu verbessern. Dabei soll keine der beteiligten Personen befürchten müssen, durch die freiwillige Meldung eines solchen Vorfalls zivil- oder strafrechtlich belangt zu werden.*

*...Das UVEK will die Empfehlungen umsetzen.*

This sounds very optimistic for a CIRP (Confidential Incident Reporting Programme). But a lot of things have to be discussed and defined in advance in order to guarantee confidentiality to everybody who wants to report an incident.

What has to be punished? What remains blame-free?

The following extract of a document<sup>2</sup> that is presented by IFATCA at the ICAO Conference in Montreal this September gives a good introduction to this problem.

*There always is and always will be a threshold beyond which an ANS safety occurrence will be subject to a*

*punitive treatment. A crucial first step in clarifying the matter is to recognise and make public the fact that Confidential Incident Reporting Programmes will be based on "honest mistakes." It is to be understood that any behaviour beyond the notion of "honest mistake" cannot be protected by confidentiality and immunity.*

*If this becomes the agreed-to scenario, the possibility for difficulty exists in the fact that the categorizing of behaviour as an "honest mistake" or otherwise, cannot be determined until after an investigation has been carried out. No guarantees for confidentiality or for non-punitive treatment can be given until the investigation process is completed. Air traffic controllers, as an example, may, in full good faith, report incidents based on the understanding that they did nothing wrong, but still face the risk that the investigation board takes a different view on the subject.*

*In most cases, Service Providers will not have the luxury to ignore reports filed in a non-punitive reporting environment, should they not conform to conditions for immunity. A necessary improvement to the process will be to provide for assurances of fair treatment, and the respect for confidentiality*

This important discussion concerns everybody, controllers and technicians, staff and management. Therefore start the discussion with your colleagues, with your staff/management and try to constructively influence this process of "opinion-formation".

<sup>1</sup> To bring this important issue forward Francis Schubert started even an initiative on EUROCONTROL level. "Non-Punitive ATM Safety Occurrence Reporting" on our intranet:

*opérations(betrieb)/Safety Infos/external or  
technique(technik)/Safety Infos/external.*

<sup>2</sup> "The Need For A Just Culture In Aviation Safety Management" on our intranet:

*opérations(betrieb)/Safety Infos/external or  
technique(technik)/Safety Infos/external.*

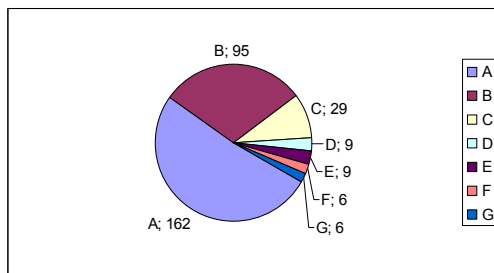
# Audit Management

## Introduction

In the year 2002 the evaluation team carried out 12 audits within skyguide. 7 audits at military units and 5 TriNET-audits. 3 of the TriNET-audits were carried out at regional airports one at the sg training center and one at TWR/APP Zurich. (TriNet-audits are carried out by a lead-auditor from skyguide and a co-auditor from Germany or Austria).

## Analysis

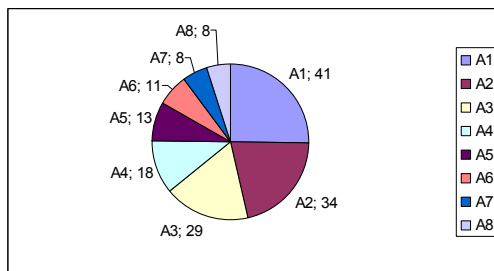
During these audits **316 problems** were found. These findings can be split up in the following main topics:



- A Publications
- B Procedures
- C Responsibilities which are unclear or not regulated
- D Video and voice recording tapes are not stored according to the regulations
- E Technical insufficiencies
- F Emergency equipment is missing, no checks of evacuation procedures
- G Missing training, generally lack of training

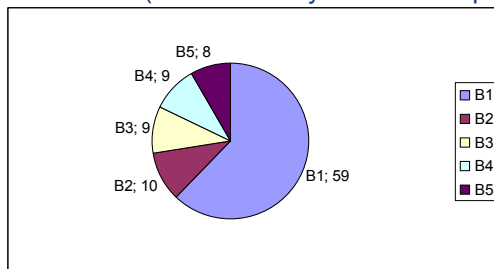
## Detailed analysis

### Publications (Detailed analysis of the 162 problems concerning publications)



- A1 Procedures which are not defined and described (no regulations available)
- A2 Publications which are wrong or out-of-date or which do not correspond to the actual situation any more
- A3 Publications which do not correspond with others (AIP etc.)
- A4 Missing charts, wrong charts, old charts and documents which are not provided with references and dates in the manuals and in the operating rooms
- A5 Editorial insufficiency of manuals (structure, content etc.)
- A6 Missing check lists
- A7 Missing or insufficient logbooks
- A8 Manuals not updated or at the working places not available

### Procedures (Detailed analysis of the 95 problems concerning procedures)



- B1 Procedures which are unclear and faulty or do not correspond with AIP/ATMM Switzerland
- B2 Procedures which are still described, but are not used any more
- B3 Deviations from international regulations without a written approval by FOCA
- B4 Missing or wrong separation standards
- B5 Not compliance with regulations

## Comments

- The units have reported until June 30th, 2003, 177 of the problems listed above as solved.
- 139 open problems remain. It has to be emphasized that it is often not possible for the units to solve a problem in short time because other departments are responsible for the solution.
- It is conspicuously how many problems concern the publications. The main reason is that the amendment service is not organized optimally for manuals and check lists and therefore the necessary changes cannot be published on time.
- Many problems also concern the topic procedures. Procedures are described in the manuals but they do not correspond with the AIP Switzerland or the ATMM Switzerland.
- Sometimes the units are not aware of the consequences that procedures could have which are wrong, not updated, not implemented correctly or not described.

## Lessons learned

### Case 1: TCAS incident with insufficient separation

#### Description of incident

Crossing over point XYZ at FL 300.

Aircraft A is taken off route by executive controller by approximately 20 degrees left.

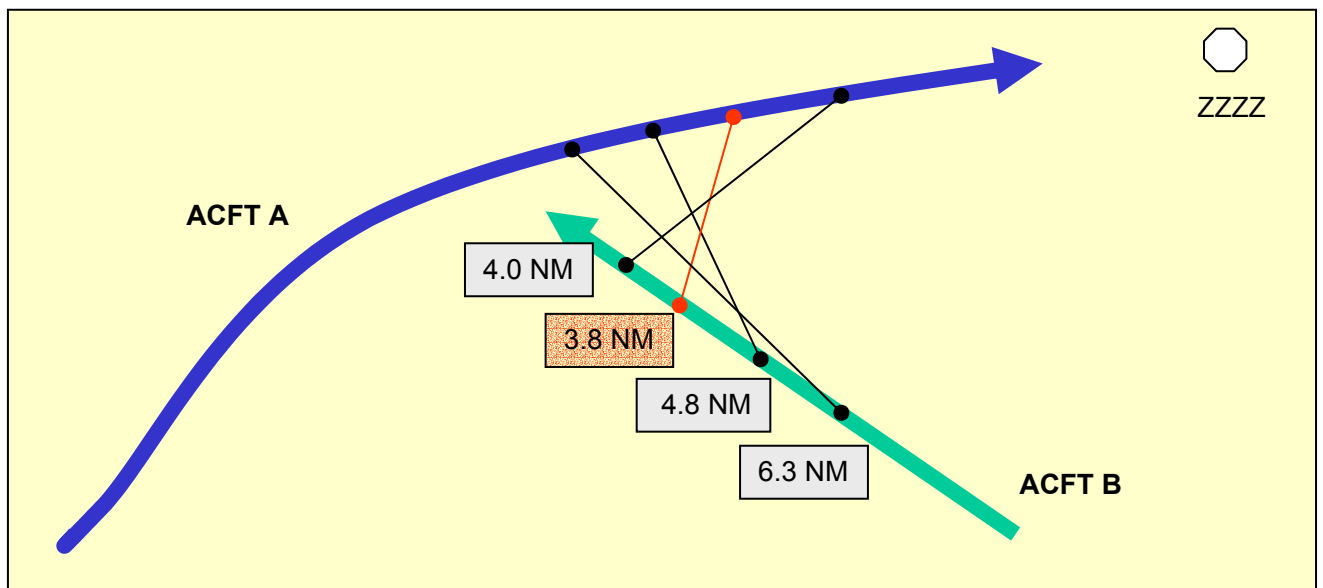
Aircraft B is also taken off route by maybe 10 degrees (left) in order to obtain a safe radar separation of 5 NM about 10 NM northwest of the initial crossing point.

About 10 NM before the crossing Aircraft A is instructed to proceed direct point ZZZZ which meant a turn to about a heading of 070, or about 40 to 45 degrees right. Despite the fact that Aircraft B was still kept on its current radar heading, the separation fell down to 3.8 NM at the two o'clock position of aircraft B (Northbound) and a TCAS RA was triggered.

#### Recommendation

In a similar and comparable situation maintain both flights on the assigned radar headings until the crossing is fully accomplished and no risk of falling below the required radar separation persists (even after the aimed for crossing point). The radar separation of 5 NM has to be guaranteed all times, even after the actual crossing has already taken place. This is especially important in cases where the tracks are almost opposite, or when the own NAV-track means a significant change of heading.

Please note that TCAS is a system that calculates continuously (every second or so) the CPA (closest point of approach). In this case it had detected a shifting of the crossing point to the right of Aircraft B and also aircraft A, and it has noted a dangerous reduction of the required time separation between both flights (less than 35 seconds flying time to CPA). It has therefore issued a TCAS RA that was fully justified.



### Case 2: Imprecise co-ordination

#### Description of the occurrence

A PC6, VFR, is in contact with APP and requests to climb to FL160 for a Parachute Jumping Exercise. In the concerned area the airspace above FL100 is controlled by ACC, the APP controller therefore has to co-ordinate with the planner of the concerned ACC sector, before authorising the PC6 to climb. The APP controller keeps the PC6 on his frequency (standard procedure).

#### Co-ordination between APP and ACC

ACC: "go ahead"

APP: "the para flight the last time today to FL 160"

ACC: "which code has it?"

APP: "1177 in the climb sector"

ACC: "and the 1171, is it with you?"

APP: "this is a hot air balloon, yes, maximum FL 100"

ACC: "okay, yes, thank you"

APP: "bye"

#### What went wrong?

The ACC controller who was focusing on the particular label (balloon) has been satisfied by the APP controller's answer (max FL 100, not infringing his airspace). ACC ATCO simply said thank you to APP ATCO regarding this TFC, he forgot however about the main issue triggering the call off the APP ATCO: the para flight requesting FL160. As the ACC ATCO said "okay yes, thank you" the APP

ATCO interpreted it as an authorisation for his PC6 traffic to climb to FL 160.

Despite STCA, TCAS and visual contact, a commercial airplane flying at FL150 passed at a minimum distance of 0.8 NM and 500-700 ft to the PC6. The commander of the IFR flight however assessed the danger as not having been very high (TFC in sight).

### BFU recommendation

(extract of the final report)

- Use standard phraseology

### Recommendation

In the standard procedure to execute a perfect co-ordination (described in detail in the last safety bulletin) the following rule has been infringed:

- If a verbal co-ordination can not be avoided, the decision to co-ordinate has to be clearly expressed and read-back.

### How to do it

ACC: "okay, yes, thank you"

APP: "confirm, para 1177 released for climb to FL 160?"

ACC: "affirm, reference [callsign] maintaining FL 150"

APP: "thank you, para 1177 climbs to FL 160 reference [callsign]"

## Case 3: Radar vector vs. Own navigation

### Description of the occurrence

During a very busy period at the Approach sector, ACFT A (B733) which was established on the RNAV STAR has been instructed to continue on downwind. The controller's intention was to prolong its route because another aircraft was established on the ILS already. The succeeding ACFT B (ERJ145) was cleared on the same RNAV STAR and when approaching the transition point RNAV2 (see graph) started its left turn according to the STAR. Doing so it entered in conflict with ACFT A which was going to be established on the ILS. The minimum separation was: 1.4NM and 400ft. STCA and TCAS went off.

### What went wrong?

The ATCO was sure that, as he did for ACFT A, he instructed ACFT B to continue on HDG; he even noted the HDG he thought he had given on the strip of ACFT B.

During the very busy approach sequence the ATCO was "fixing" almost all TFC on HDG, he probably simply forgot this one.

The radar response of ACFT B was particularly instable at the moment of the incident which made it difficult for the ATCO to detect the left turn quickly.

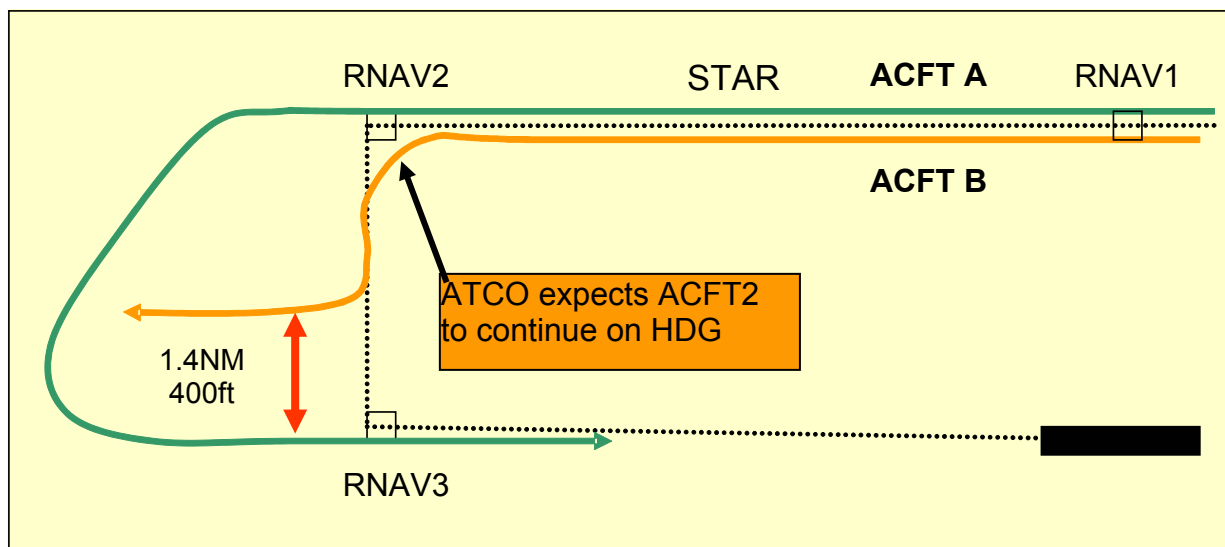
The crew of ACFT B which was aware of the very busy situation did not ask for confirmation before turning left.

### BFU identified causes

- Distraction of ATCO
- APP radar malfunction
- Lack of situational awareness of ACFT B crew

### Recommendation

- Keep well in mind whether the ACFT is under radar vector or under own navigation
- Write instructions on strip **simultaneously** as you are issuing a clearance (write as you speak).



## Case 4: A different perspective

### The situation

The situation takes place in the busy North sector of Geneva lower airspace. The inbound traffic from LUSAR is cleared to descend to FL190; the departing traffic, direction DJL, is cleared to climb to FL180. In fact the aircraft climbs to FL190 and STCA and TCAS alerts come on; this helps to provide separation as required.

### What has happened?

The departing traffic was instructed, in French, to climb to FL180 “niveau cent quatre-vingt”. The pilot misheard this instruction and his readback was FL190, also in French “niveau cent quatre-vingt dix”. The controllers, very busy, did not hear the last part of the transmission, “dix”, and therefore did not correct the readback. As a result the departing aircraft climbed to FL190. At the very moment when an STCA alert came on, the controller had realised that the departing aircraft was at FL190 and the arriving aircraft descending through FL200. Immediately the controller instructed the arriving aircraft to stop descent at FL200 and the pilot answered that his was doing so, following a TCAS RA.

The obvious conclusions are:

- 1) The pilot of the departing traffic did not listen correctly.
- 2) The controllers did not listen correctly the readback and therefore could not correct it.
- 3) The use of English standard phraseology could have reduced the risk of misinterpretation.

### Why it happened

There could be a different way to look at various causes of this incident as well as check for factors that influenced the situation, such as:

### The sector combination

The airspace design of the Geneva North sector is a complex one and traffic can be extremely busy. On this particular day the East sector was combined with the North sector at a time when the inbound rush to Lyon had started. The frequency was almost saturated and the workload was at the limit.

Conclusion n° 1: The decision to combine the East sector with the North sector was not a good decision. The sector East should have been open, or combined with the South sector.

### The air space design

Inbound to Geneva via LUSAR crosses the outbound direction DJL between FL160 and FL200. This means that aircraft have high horizontal and vertical speeds. For this reason there are a lot of STCA and TCAS alerts in the region of SAUNI. Due to the high number of alerts, the management recommends now to apply a separation of two thousand feet for this kind of traffic! Furthermore the STCA parameters have now been set accordingly and

STCA will alert with a vertical separation of 1500 feet or less, where the minimum separation is 1000 feet!

Conclusion n° 2: The airspace design is not adequate and should be changed. A possible solution could be a separation of in and outbound tracks, with a crossing, if needed, at much lower altitudes.

### The handover

The executive controller had taken his position for about three minutes at the time of the incident. He had been the former RP (co-coordinator) and therefore knew the traffic. The new tactical controller had received a handover from the former executive controller. There were still new strips arriving and he was busy sorting them out at the time of the incident. The former executive controller had left the sector at the time of the incident.

Conclusion n° 3: In busy and complex traffic situations the controller who is leaving the sector should remain at the sector until it is very clear that both controllers of the new crew have total control of the situation.

### French

The use of French, as described above, has its importance in the incident. Had the language been used correctly (niveau un huit zéro) the pilot might have understood correctly. The same is true for the readback of the pilot. It is not mainly the use of French that was wrong, but it is the way it was used.

Conclusion n° 4: The use of correct phraseology, in any language, prevents misunderstandings, and therefore incidents and accidents.

### Readback – Hearback

Had the pilot understood correctly his cleared FL, there would not have been a problem. The same applies for the controller in regard to the readback. The problem in this case was that the frequency was close to saturation. Therefore it is NOT possible for the controller to have a perfect hearback on all clearances. This is true for several reasons, such as:

Anticipation	You hear what you expect to hear.
Exclusion	You do not hear what is out of your present range of thoughts.
Overload	You are too busy solving other problems.
Distraction	You are thinking of something else, you lack concentration.

To overcome some of these obstacles the help of a computer based datalink ground – air for a non urgent communication (transmissions of EAT, frequency change, etc.), could be of a great help although by the use of such a communication system other problems will arise.

Conclusion n° 5: The use of a datalink would improve safety by freeing the frequency of non urgent communications.

## Technique

### Radar Malfunction "Lägern" from 28 March 2003

#### Introduction

Technical problems on air traffic control equipment impacting on the operation have been registered by the software TOKAI since 2002 and are reported to EUROCONTROL (ESARR 2).

The safety relevance to be reported ("severity of effect on ability to provide ATM services") is dealt with by both the Techniques and Operations in each case.

#### Description of the Incident and the Resulting Operational Consequences

On 28 March 2003 at 10:40 (UTC) Air Traffic Controllers reported "wavy lines" on several radar tracks. The immediate isolation of the disrupting source by the SYMA showed that the cause is suspected to be with the source MSSR Lägern.

On-site investigations by radar specialists confirmed the suspicions. A phase error in the high-frequency path was diagnosed as the cause. A temperature problem found a few days previously on the radar station Lägern was taken into account as a possible triggering element.

In the meantime, the reported disturbance reduced in severity, thus those involved agreed to initially postpone the repair works estimated to take several hours.

During the course of the following hours the "wavy lines" drastically increased again, therefore an immediate intervention on the equipment became inevitable.

The operations decided to increase the minimum separation "due to unreliable radar tracks", and accordingly lowered the arrival rate (these measures lead to alerting the management by SMS).

#### Cause

The cause of the malfunction was a **defective changeover switch** in the high-frequency path within the radar source MSSR Lägern. This switch (relays) connects the high-frequency sending/receiving part of the interrogator with the antenna (active channel) and with a dummy load (standby channel).

A relation with the temperature problem mentioned above could not be detected.

#### Repair

Following the search for defects and to correct the phase of the signals, the specialists executed an emergency repair due to the lack of spare parts. This intervention could only take place during the night leading to 29 March 2003

because the operations did not approve of the necessary disconnection of the MSSR Lägern earlier due to high traffic.

On 29 March 2003, following an inspection, the early shift of the SYMA switched the source to the MRT (Multi Radar Tracking) again.

#### Dealing with the Incident

During a Z-Meeting TZ informed the Management Board Z about the incident. He put forward eight questions and gave the answers determined jointly with the operations.

From those answers TZ drew the following conclusions confirmed by the Z-Meeting:

1. The decisions made regarding
  - the continued use of the disrupted radar source during 28 March 2003
  - the chosen separation / rates.
  - the time / moment of the repairwere correct.
2. Given the circumstances the repair by the Techniques was executed smoothly and without delay.

Furthermore TZ suggested to **continue** as follows (also confirmed by the Management Board Z):

1. All affected units (ACC, APP, TWR und SYMA) must fill any knowledge gaps regarding the effects of individual or several missing sources in the MRT (or of sources switched off), and the measures thus to be introduced : The *skyguide separation atlas* shall serve this purpose (in progress).
2. The final repair shall be executed as soon as possible (in the meantime completed).
3. The cause for the phase error must be exactly analysed (in the meantime completed).
4. The maintenance concept must be checked by TN and adjusted if necessary (in the meantime completed).
5. Operational log entries regarding the applying and lifting of restrictions shall be mandatory (in the meantime completed).

#### Conclusion

As the described incident shows, "lessons learned" applies both to operations and techniques.

**Safety concerns all of us!**

Haru Jenny, TZ

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## Miscellaneous

### Prevention of Runway Incursions

Runway incursion is one of the topics in a common focus of controllers and pilots. Runway safety is a vital component of aviation safety as a whole. We all remember too vividly the accidents at Tenerife, more than 25 years ago, and the more recent ones at Taipei and Milano Malpensa. With the predicted growth of air traffic, the actual numbers of incidents are likely to rise, unless held in check by preventive actions.

Analysis of the available data indicates that there may be one runway incursion every three to four days within the European region.

To fight this threat an “European Action Plan for the Prevention of Runway Incursions”, was set up to enhance runway safety by the consistent and harmonised application of existing ICAO provisions.

As this problemfield is discussed amongst skyguide personnel as well, I think it is relevant that you also get an idea what the inputs will be for the pilots.

#### Critical phase of flight

The taxiway system on major airports has become more and more complex. With the evolutionary process of enhancement and change accelerating in recent times, **it remains imperative that all flight crew remain aware of the signage and markings currently being applied.** Every opportunity to familiarise one self should be taken, and where possible, information critical to safe aerodrome operations, should be shared.

The current generation of aircraft is highly automated and they are equipped with complex systems, that allow preparing and programming the total flight on the ground. This has resulted in flight deck workload peaks to be shifted from the previous critical flight phase to the ground phase of aircraft operations. These evolutions are irreversible, and appropriate measures should be undertaken to address the situation.

**Consequently the taxi phase should be treated as a “critical phase of flight”.**

#### Planning for taxi operations

The key-point in the prevention of runway incursions is to apply better preventative measures during the taxi-phase. Reduced workload will provide for increased attention to the taxi phase and allow an updated and accurate positional and situational awareness.

This situation can be further enhanced by assigning one crew member to progressively monitor the progress of the flight against the aerodrome chart.

Controllers at airports are normally very familiar with all the details and weak points **of their** airport – not so the pilots, all airports are different and procedures are still far from being harmonised. So airport familiarisation is crucial for pilots. The information for pilots in this respect reads as follows:

#### Airport familiarisation

Departing from or coming into an airport can be prepared well in advance. A thorough planning for taxi operation is essential. This preparation should be done at the gate or prior to starting descent. Prepare the necessary charts for taxi and have them available for use during taxi.

Take some time to study the airport layout. Very often some systematic can be found in naming of taxiways. Use the ATIS information and your previous experience to determine the possible taxi routes. Remember to review the latest NOTAM for the Departure and Arrival airport for information concerning construction or taxiway/runway closures. Visualise this information on the charts. Standard taxi routes are used more often at busy airports. Review the routes you can expect.

Pay special attention to the location of HOT SPOTS. These are unique or complex intersections and runway crossings where runway incursions have taken place in the past or areas of the runway or associated taxiways, which are not visible from the Control Tower. Know what runways you will encounter between where you are and where you are going.

Plan timing and execution of checklists, so that no distractions occur when approaching and/or crossing runways; i.e. all eyes outside during this phase.

Conduct detailed briefing for all flight crew members, especially during night and low visibility operations i.e. include “extra eyes” where available.

Those are just a few highlights out of my future information to all SWISS pilots. As the airports of Switzerland still can be considered as our home bases, it's noteworthy also for you as controllers, to know how your communication partners are informed.

Jürg Schmid  
Vice President Flight Safety  
SWISS International Air Lines



## Knowledge, one step towards a Safety Culture

There are many definitions what a Safety Culture is or should be. But one thing is sure; knowledge about ATM Safety is a key-element of every Safety Culture.

*"Approaching safety is more than 1000ft, 5 nautical miles and a little bit of luck. However, to understand safety, everybody working in aviation should have a basic knowledge of elements such as Target Level of Safety, Risk Management ..."* This was written by Marc Baumgartner, President and CEO IFATCA in "The Controller", June 2003 <sup>1</sup>. And later in the same article *"What can you do in this process? You can as an ATCO (and Technician: remark by the editor) start to acquire more knowledge about ATM Safety. By reading relevant articles, download publications from all over the world and ask yourself? "What can I do to make the system safer?""*

To support the idea of individual knowledge dissemination the new rubric "safety infos" has been created on our SWAN intranet under "opérations/betrieb" and "technique/technik". The process is as follows. Everybody who has an article that is safety-relevant and could be of interest for your colleagues can be sent to Safety Management (s.m@skyguide.ch), Martin Probst or Thomas Novotny electronically or in paper form. Articles in French will be published on the F SWAN and German articles on the D SWAN. English articles will be published on both. Now it is up to you to use "safety infos". One step towards skyguide's Safety Culture.

1 "One Safe Sky For Europe- A Revolution In European ATM?" on our intranet:  
[opérations\(betrieb\)/Safety Infos/external or](#)  
[technique\(technik\)/Safety Infos/external.](#)

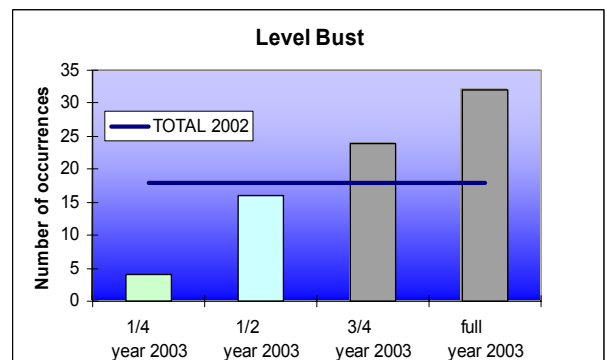
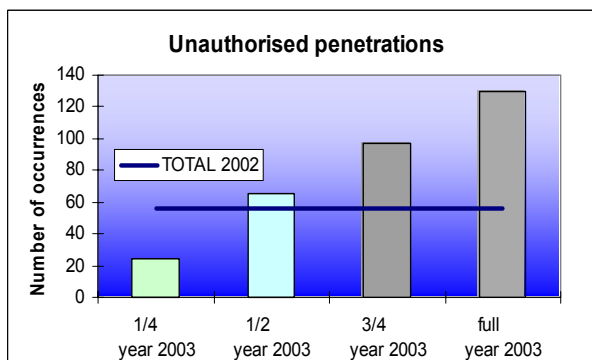
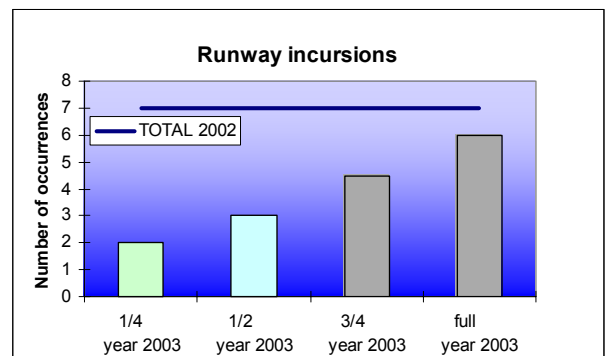
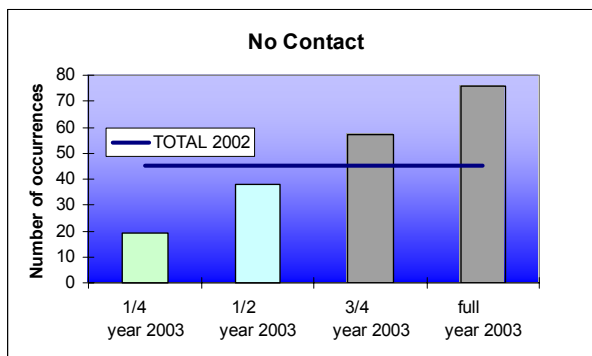
## Risk areas in our Airspace

As promised in the last Safety Bulletin we continue to provide the updated statistics of "Risk areas in our airspace".

'No contact' trend has remained exactly the same. 'Runway incursions' tendency is decreasing, but is based on very few occurrences. The two last categories: 'level bust' and 'unauthorised penetrations' are showing a very negative trend. The amount of 'unauthorised penetrations' has

already exceeded the final level 2002, after the half of year 2003! About that issue safety management sent a fully detailed report to FOCA the 18th of June 2003. In the meantime FOCA invited the concerned parties to a meeting on the 8th of October 2003.

With the aim to inform VFR pilots of this very hot issue and the risks they can generate towards the aviation community and themselves Safety Management decided to take initial steps and will published an article in the Aero Revue.



## Runway incursions

Runway safety shall be a major issue at any airport. Eurocontrol, IATA, IFATCA and several ATS providers joined their efforts to establish the 'European Action Plan for the Prevention of Runway Incursions'. The action plan contained in this document generally takes into consideration any actor that is implied in runway safety. Recommendations and best practices have been established for the aerodrome operators, the A/C operators, the ANSPs and the civil aviation authorities. A local runway safety team (LRST) has to be built at each aerodrome in order to make progress in the runway safety issue. FOCA sent an official letter to Geneva, Zurich, Bern and Lugano airport

authorities to demand them to build a LRST. In Zurich such a team has been mandated already several weeks before and in Geneva a general agreement on the constitution of a LRST has been made. In advance to that request by FOCA, skyguide safety management started to 'interview' its related airports on the runway safety issues. This very first preparatory work is almost finished and will permit to have an overview of the situation. Obviously the very first impression is that changes should be made. Some of the improvements required are not of the provider's area of responsibility and therefore the LRST with the FOCA on board has its very 'raison d'être'.

## Codes and Correlation – Please Complain!

In July a Safety Improvement Report was submitted by a controller following what looked like an SSR code allocation problem. Briefly, the scenario was as follows:

- SWR545 from Nice had entered the sector via IRMAR at time 1449, squawking 4043. The aircraft subsequently left the sector en route to Basel.
- DAT55N from Marseilles to Brussels entered the sector via TDP at 1541 (an entry time nearly an hour later than the SWR), also squawking 4043 – but correlated with the flightplan of SWR545.

The question asked was whether the code distribution to these aircraft was appropriate. What was found included some very interesting points - especially regarding the "life cycle" of a flightplan:

### Code Allocation

The SSR code 4043 was correctly allocated to both aircraft. It is a code that Marseilles is entitled to assign, and a time lapse of nearly an hour existed between the entry point times of the two aircraft. The French code allocation system considers a code available for re-use 15 minutes after the flight has been transferred to the next centre.

### Correlation

That the SWR545 flightplan correlated on the DAT aircraft implies that the SWR aircraft was no longer visible on radar. This also makes sense given the time elapsed. Therefore the flightplan was still "flying" even though the aircraft would have landed some time before.

There is a "logic" applied to the first instance of correlation (i.e. that the code is detected in a credible place with regard to the route), but this is not the case for any subsequent re-correlation of the same flightplan – therefore the idea of the SWR being at Tour-du-Pin was not rejected.

### Flightplan Termination

Geneva has a correlation area which extends further than Basel. If an aircraft transits the correlation area, its flightplan is terminated as it leaves the area.

However, if an aircraft disappears from radar within the correlation area, it is considered "lost" and is not terminated until it has not been seen for another 20 minutes (or 180 minutes for a VFR in the Approach sectors).

Arrivals into Basel are "lost" in this manner, and it is not possible to have a specific rule that would terminate their flightplans earlier. They could, however, be terminated manually.

Arrivals within Switzerland are treated differently, being terminated on landing via the actions the controller carries out on SYCO.

So, it seems likely that SWR545 was in "lost" status when DAT55N appeared on radar. As SWR545's flightplan was still active with the same code, it correlated with the DAT aircraft.

The disappointing thing, however, was to read in the SIR that code problems had "already happened twice yesterday" - because no reports or information had been passed on regarding those occurrences!

It would have been very useful to know, for example, if those problems were also related to Basel arrivals. Is this a frequently recurring problem that deserves swift and direct action – or was it a rare, chance alignment of factors that is best addressed through controller awareness? Without all the information it is difficult to determine.

**It is essential that an OIR is filed whenever a problem occurs with code allocation or correlation - so that it can be investigated, explained and appropriate action taken.**

Correct correlation and identification is crucial to air traffic control – if something is not working properly, we want to hear about it:

**Please complain!**

Sue Brash, ODO