

OUTPUT



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Winter 13/14

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EDITORIAL



Another year is nearing the end, and certainly it's been a year full of developments and changes. A year where successes and failures in ATM have alternated, a year where the latest European Commission's development (and vision??) has been launched. A very busy year, for EGATS too.

So, the end of the year is at our doorstep but the ATM revolution is not even close to its completion. After all, only two FAB's are fulfilling all requirements. And after years spent on SES and SES II, last June the European Commission has presented its latest idea: SES II +.

But we do have some issues with it:

- Generally, these proposals for restructuring always feel like they have been developed without a full competence of the ATM system and if they are going to succeed it will be thanks to the sacrifices and hard work of the people working daily in ATM. It'll take time, it'll take a lot of effort and it'll take more than few sleepless nights.
- Money, and more precisely revenue, is always the number one concern, whereas technical integration is most of the times overlooked. How can we possibly create a seamless European airspace and workable FAB's when the systems we use in different countries are million years apart? How can we possibly create a seamless European airspace when some neighbouring centers can't communicate

with each other? How can we possibly create a seamless European airspace when some neighbouring centers don't want to communicate with each other? How can we possibly create a seamless European airspace when there are such big differences in social conditions and retributions?

- The systems and engineering are now the backbone of the new ATM concept, from flexible airspace to 4D trajectories. Investing and bringing up to par the less technologically developed ANSP's should be priority number one if we want a fighting chance to succeed in this mastodontic project.
- En route flights are currently as efficient as they can possibly be. Sure we need to work for the future and we can introduce more flexibility, more capacity, fewer delays. But what about airports? Presently, they are the bottlenecks of the ATM system and very few dare bringing this up. Without proper investment in ground infrastructure, all we can do in upper airspace is to have the most efficient airspace with the shortest routes to the nearest holding point.

It's clear that we need to get ready for the future of air transport, with the predicted traffic that goes with it. But the whole system has to be addressed, not only FAB's. It's important to remember that flying is the fastest and the most economical way of travelling. For an Airline Operator, the ATM related costs amount to 6-8% of their total costs. Maybe we should look elsewhere if they want to save more money? Pointing fingers at ATM is just too easy. But I would like to remind the Airline Operators and the European Commission alike that for a minor percentage of their budget they enjoy a top quality service with well trained and dedicated professionals. I would hate to see this quality level decrease to save few bucks on ATM. This problem is further exacerbated by a chronic lack of common vision on how to tackle SES II +. With more high level objectives being introduced, sometimes even in contradiction with each other, with more variables continuously brought in into the mix, one sure result is the institutional fragmentation among the

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ATM stakeholders and no clear path to follow. And even worse, no one in the position to take the lead and responsibility to impose a clear way. The danger here is to waste the big resources made available (also considering the state of the economy) and the concrete possibility for things to stall and come to a screeching halt given the complexity of the project and the number of partners involved.

Further proof that the European Commission has a very limited vision is the continuous comparison that they make between ATM in Europe and ATM in the USA. One has to wonder about their simple understanding of things. To start with, the USA enjoy the results of one system, one language, one culture, one nationality, one ANSP and regulator. Their employees have been given the privilege of being federal employees and the politicians (House and Senate) in USA are less than 700. This less than 10% of the number of politicians in Europe, a glaring difference to any type of comparison between them and us. I would suggest we start from here. Plus, believe it or not, ATM in USA is more expensive, both towards the airlines and the public, and less efficient. People should really stop this nonsense comparison, once and for all.

This brings me to the fact that, over the past 10 years, two things have happened:

- the European Commission has been unable to propose effective measures for ATM and all the efficiency and cost reductions achieved are mainly due to the ANSP's and social partners who have come up with creative ways to stretch our resources in order to do so. But how far can we stretch before it breaks?
- ATM achieved a productivity of 3% higher than any industry over the same period of time, thanks to everyone working at the front end of ATM. This despite all the cuts that we have suffered.

To conclude, it's impossible to envision a future ATM system similar to what we have now. A huge process of changes has been set in motion, but it's paramount to have clear guidelines, achievable

objectives, effectively monitor the progress, share the knowledge and involve the staff with the help of our social partners.

As you jet off for your Christmas holidays, just remember that the ATM system guarantees already an incredibly high level of service, while costing less than 6 euros per ticket to the travellers and being responsible for 0.6 minutes of average delay per flight to the airlines.

Therefore, if we really need to change, you better make sure it's an improvement!

Merry Christmas everyone.

Professionally yours,
Raf Vigorita

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Contributions by:

- Members Of The Egats Executive Board
- Kris Scicluna
- James Kench

- A big thanks to our colleagues of MUAC printing office for their continuous help and support through the years!

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Congratulations to the CISM team for having been recognised for their important work and having been voted into second place at the Excellence Agency Awards. Well done!

- Paul Hooper
- Gabriel Bangiu

update on EGATS work and involvement.

Raf Vigorita

As promised in the last edition of the OUTPUT, here is a brief update on the work done by the association over the past 6 months.

The starting point is a renewed agreement and understanding with management. The appreciation is mutual and we can all benefit from this cooperation. Furthermore, on behalf of the whole Executive Board, we would like to thank DIRMAS and HOPS for their yearly support that allows EGATS to attend important meetings and conferences.

So, what has been done?

First, we tried to get involved in as many project as we deemed our professional input necessary; a lot of work behind the scenes, a lot of effort, a lot of time invested.

Just let me say that, after we got involved over 10 years ago, the hard work for better facilities has finally paid off. The new building (to be completed next spring) will offer a slew of amenities that we'll all enjoy. Better rest rooms, a reading room, a new fitness center with a multipurpose indoor court, a music room, an "internet cafe", a new cantine, a terrace and more!!

And as usual, EGATS is very active at IFATCA level, having participated to the Annual Conference and the European Regional Meeting. Plus, Patrik Peters, now IFATCA's Deputy President, will stand for election to become IFATCA's President next spring.

To remain "outside", a lot of time has been invested by EGATS representatives at ATC-EUC, FAB and MARC level.

Within MUAC, EGATS has been, or presently is, involved in a increasing number of projects. The Lux High is an important one (although all of them are, really), especially given the "history" of its original implementation.

Of utmost importance is EGATS presence in the VDFL project, in the New Unit Training Plan and the Flexible ATCO Resourcing Strategy Workshop (Cross Training), since all of them will lay down the rules for the foreseeable future.

CBA Land is another major project where we look into issues and possible solutions.

INREP has been improved and we hope you will continue to file them. Use INREP for all those issues and concerns you might have that are not foreseen for Remedy, and for all those situations where nothing went wrong but you just didn't feel right. Be clear, be professional, be just as you want the answers to be too.

Just Culture is a hot topic and you can read a separate article in this issue.

But EGATS is dealing with technical aspects too. Our participation to the TCAS RA Downlink group and to the RDF study are just proof of this. One rediscovered issue is formation flights. At present, in MUAC we have to work formations if they fly GAT, but we do not have the knowledge, procedures and training for them. Once the legal aspects are sorted, we hope to come up with proper ways to deal with them. We are working on an ad interim rules to fill this gap till training is implemented.

A lot of EGATS' time goes into safety cases and FHA's.

EUROSS is being redesigned to better serve the ATCO's while the newly formed Communication Team will have EGATS representatives as well. We are also involved in the revised and improved Mirror bulletin.

The issue of ageing ATCO's will be studied early next year, together with TUEM and Staff Committee. We'll strive to come up with recommendations for management about this topic.

Although lately there hasn't been any significant developments, EGATS is always an active part of the Roster Revision Team and the promoter of the Professional Behaviour/Code of Conduct project.

And many other projects are awaiting EGATS in 2014.

It will surely be a very busy and challenging year, for all of us at MUAC and for the Executive Board members.

But why we do it and why we spend so much of our free time in this? We do it because we want to maintain a constant level of professionalism that made us the number one center in Europe. We do it because we love our profession and we do not want to see it altered for the worse. We do it because we feel we have to in order to protect us and our customers, we do it to maintain our highest level of safety.

All we ask you is that you trust us in doing the best job we possibly can and that you keep supporting us.

And as a continuation of the new trend, we'll surely keep you informed in the next issues on our work for EGATS.

As for me, I would like to thank my fellow Board Members and EGATS representatives for all their time invested in our association.



IMPORTANT INFO REGARDING YOUR MEMBERSHIP PAYMENT FOR 2014



Dear EGATS members,

Due to the decision of Deutsche Bank to restructure their operations in the Netherlands, and thus to get rid of the majority of the customers they had 'inherited' from ABN AMRO, EGATS unfortunately being one of them, we are forced to find a new bank at short notice.

We have taken steps to set up new accounts with the ABN AMRO again. This will mean new account numbers for your yearly membership fee transfers, and possibly a total cancellation of the incasso arrangements for the short term.

We will keep you updated as soon as more info is available, via both e-link and e-brief. Any membership fees being transferred to the current account at Deutsche Bank should still arrive for now, so no immediate problem is foreseen. If, however, for any reason, you notice your membership payment not being successful, please email me and let me know. Likewise, if you have any questions, please contact me as below.

As a reminder, the yearly membership fee is 55 euro and payment is due during the month of January.

We thank you for your cooperation.

Best regards,

Steven Pelsmaekers, on behalf of the EGATS EB.

steven.pelsmaekers@egats.org

IFATCA ERM 2013 SARAJEVO 10/2013

Alessandro Mercati



As announced during the ERM in Belgrade last year, the 30th IFATCA regional meeting took place in Sarajevo, capital of Bosnia and Herzegovina, thus continuing the “Balkan trend” that took us for the previous 3 conferences to Slovenia, Croatia and Serbia.

Some EB meetings ago, the board decided to keep EGATS’ attendance as consistent as possible in order to know every time better how things work and to learn from the other MA’s delegates in the form of improved communication and info sharing. Therefore, I offered myself to attend this regional meeting as I did for the previous one.

In this issue of the OUTPUT, you will find the report of Kris Scicluna who joined Raf and myself in this experience as lucky winner of our ballot intended to give a chance to our members to see what EGATS does within IFATCA.

This report describes what happened during the workshop that took place during the first day of the ERM, decided by the IFATCA EB and discussed in all 4 regional meetings across the world. This year topic was “safety in complex ATC system, going beyond the Human error” analyzing the difference between a “linear” and “systemic” approach to safety.

DAY 1 – IFATCA WORKSHOP

The subject was presented by Tom Laursen, ATCO and incident investigator at Skyguide at the time of Ueberlingen. He explained how pressure to introduce changes to improve the ATM system reduces time to validate and assess them properly. Does it ring a bell for us at MUAC with FRAM’s implementation?

A linear approach is simple to explain. In it we learn from accidents and do our utmost to prevent them from re-occurring. The most famous linear model is the so called “Swiss cheese” from James Reason. We have all heard about this model, where accidents are seen as the result of interrelations between acts by the front line operator, the ATCO’s, and latent conditions and weakened defenses.

In SESAR’s view of accepting an accident every 10 million flight is evident how difficult it is to study and make statistics from such a little percentage of occurrences. It would be a lot more beneficial to study what went right to start searching for what it could have gone wrong using the so called “systemic approach”.

According to IATA in 2012, close to 3 billion people flew safely on 37,5 million flights, approximately 100.000 flights per day. Sadly there were also 75 accidents and 414 fatalities. However the numbers show



that an accident is a rare event, the equivalent of 1 every 500.000 flights.

Assuming that accidents are the result of an expected combination of normal performance variability, the consequence is that safety requires the constant ability to anticipate future events. In other words we should change the perspective from “avoiding that anything goes wrong” (safety 1 concept) to “ensuring that everything goes right” (safety 2 concept).

The ICAO defines safety as “the state in which the possibility of harm to persons or of property damage is reduced to, or maintained at or below, an acceptable level through a continuing process of hazard identification and safety risk management”.

The main difference between the two different approaches to safety is that the systemic model looks at the whole process, rather than to the small parts of the system involved by the changes, and incidents are seen and explained as possible variability within the system.

IFATCA’s vision about the issue is that any investigation should move away from “what is the cause and who is to blame” to a “macro understanding of the system and his weaknesses” in order to prevent an accident from occurring at all. We need to be proactive and try con-

tinuously to anticipate developments and events rather than being just reactive and respond when something happens or is categorized as an unacceptable risk.

The conclusions were that we need both models to proceed but that a systemic safety culture is the way forward to achieve a higher level of reliability.

During the afternoon, Marc Baumgartner, the IFATCA SESAR/EASA Coordinator, presented the current situation in Europe in relation to the Single European Sky project.

The EU, under the pressure of the industry, is not happy with the achievement of the SES 2 package and even before its full implementation they created the SES 2+.

To give some figures, today we handle in Europe 10 million flights per year with 58.000 staff employed in the ATM system. Of these, there are 16700 ATCO’s that work in 63 centers. When the SES will be fully implemented the EU estimates that traffic volume will double and, the ATC centers will be reduced to 40 units employing the same amount of ATCO’s but reducing the total ATM staff by 10.000 employees.

With the SES 2+, the EU imposes the ANSP's to cut their budget by 25% within the RP2 (reference period) and where do you think that the cuts will start?

ATCEUC is strongly opposed to this and announced the Action day on the 10th of October. At the end it did not take place in order to give the EU another chance to take a step backward from their SES2+ figures. The best way to know more about it is by checking on the TUEM website (www.tuem.org/USAvsEU).

The EU has to realize that from the start of the SES project they managed to create 13 new institutional actors, SESAR joint undertaking, EASA, PRB performance review body and Network Manager just to name a few, adding every time a new layer of complexity. In other words the EU managed to fragment the governance of the SES to an extent that the FAB's implementation is becoming a utopia.

Another big issue that delays the SES implementation is the gap between big and small ANSP's. A minimum level of interoperability is necessary to run the system but there are way too many different FDPS through Europe and if the small ANSP's do not get help from the big ones to reach a higher level of technology the European airspace will always be fragmented.

The main objective towards which the EU failed to concentrate from the beginning was to find an agreement between the states on revenue distribution. The political and national interests are lobbying in favour of the project but it's a lot easier to make the ATCO's and ANSP's look bad in order to put themselves in a better light.

When a flight from Milan to Brindisi decides to fly through the Croatian airspace because route charges in Croatia are 50% cheaper than in Italy (even though he travels 50 NM's longer), there is not much that an ATCO can do. The Network Manager and the member states should find the solution for that.

The public should be made aware that the amount of flights that go through Europe today have an average delay of only 37,8 seconds and that we cost only 6,2% of the airlines budget. We are talking about just over 5 euros per flight. One wonders where the rest of their budget goes.

DAY 2 – EUROPEAN DAY

The second day of the conference started as usual with the roll call of the present MA's. This year we had 37 associations out of 42 members

and the quorum was met.

The topics of this day were the IFATCA prosecutor course, a focus on Just Culture and again the SES2+ from the eye of the Network Manager.

In his opening speech the IFATCA DP Patrick Peters stated that unfortunately our profession is recognized by the media only when something goes wrong, that's what the international day of the controllers on October the 20th is there for, to praise ourselves for the good service we provide 24/7 all around the world.

Some time ago, when the Just Culture concept was launched, IFATCA realized that there was something missing between the ATCO's and the Judiciary world. They came up with the idea of making a pool of experts (both controllers and cockpit staff) able to deal/advise the persecutor and judges in case of criminal investigations resulting from aviation incidents or accidents prior to the Court debates.

The first Prosecutor Expert course developed by Eurocontrol and IFATCA took place at IANS at the beginning of this year and Philip Marien was selected to attend it. In the next 2 years some other colleagues from other MA's have been selected to join the course and make a pool of about 40 experts. They will meet regularly, once a year, in order to share experiences from real cases, continue the dialogue with the Judiciary and to introduce a fresh pair of eyes each time.

Following the Just Culture concept, actions and decisions expected from someone with the adequate level of training shall not be persecuted, while gross negligence or willful misconduct will not be tolerated. However who draws the line between them? The Judiciary of course, and that is why we need somebody with our expertise to deal with them in the most possible suitable way.

For those not fully familiar with the Just culture, there is a bunch of videos of Sydney Dekker on YouTube. He is a Dutch former airline pilot and now a professor of Psychology in Brisbane and he explains very clearly what it is all about.

During the afternoon we focused again on the SES 2+ project, Joe Sultana, Director NM, was there explaining the current and future role of the Network Manager.

Today the NM manages the flights tactically before departure to avoid over delivery in sectors, TMA's and airports. It operates at pre tactical level, planning airspace and operations a day in advance and refining on the day of ops, based on actual capacity/demand balancing by

applying pre-departure ATFM measures and in the near future short term ATFM measures (STAM).

NM main function is to deliver added performance at network level by leading some projects like free route airspace, cooperative traffic management flight efficiency and flexible airspace management.

The future of ATM will be all about 4D trajectories. This will help the ATM to handle more aircrafts if the flights position can be predicted to an accuracy of +/- 3 seconds.

That means that any uncoordinated action on a trajectory needs to be updated in the system and any direct route we give or speed change from the pilots need to be reflected in the system by means of cooperative traffic management between the real time network management and local ATC.

What is the future of the NM then? It will be the counterpart to ANSP's in delivering the best possible network performance having more influence on network issues even when they have an impact at local levels.

The last presentation of the day was made by our colleague Fred Deleau, reporting on the status of the 9 FAB's whose implementation had to be effective by 04/12/12.

Due to the current fragmentation (28 national ATC systems, 60 ACC's and more than 650 sectors) only 2 FAB's managed to be established and notified to the EU commission: UK-Ireland and the Swedish-Danish FAB.

The EU, which is obviously not satisfied with the current achievements, decided to start infringements procedures against the states that have fallen most behind with their own FAB (Italy, Cyprus and Greece will be the first ones to be hit).

The Commission continues to compare the USA airspace with the European in terms of efficiency, although the differences are in front of everybody's eyes: the USA FAB is one single country where the FAA is both Regulator and Provider, whilst the EU insists on a full organization and budgetary separation of the 28

National Supervisory Authorities from the ATM providers.

The US delays, based on airline figures, cost 5,3 billion Euro compared to the 850 million in Europe. The whole ATM system in the US is 35% more expensive than Europe (11,8 vs. 8,5 billion Euro). Route charges in Europe are estimated to be around 6% of the ticket price versus 7,5% in US.

That clearly shows how the European airspace, with all his fragmentation, is already more efficient than the US despite is being governed by 10.600 representatives (766 in the EU parliament and 9900 national parliament) while the entire USA has 535 only! If the EU is charmed by the FAA model they should aim for a single Pan-European provider controlled by ATM staff with the statute of European employees (FAA employees are federal employees too...).

If the EU had listened to our MOSAIC project a bit better, they probably could have found already a solution to optimize the European ATM System, but they did not.



IFATCA ERM report

Raf Vigorita

Listening to the Member Associations reports, one can have a relatively clear idea of what is going on in various parts of Europe. Certain nations are looking to recruit because understaffed, most importantly Norway, the Netherlands, Croatia and Turkey, which is about 200 ATCO's short.

From a salary stand point, Belarus and Serbia saw some reductions while Lithuania had a considerable increase. Other countries that have

adjusted salaries upwards were Turkey, Moldova and our friends in Malta. In an interesting twist of events, Kosovo's airspace, previously divided between Serbia and FYROM (while being controlled by NATO), will be unified in April 2014 and Hungaro Control will remotely provide ATC services. This will have a positive impact on traffic capacity as new routes can be created to fly without interruptions throughout such airspace, and traffic in and out Greece will benefit the most as they won't have to plan detours around Kosovo's airspace any longer.

As a continuation of last year's ERM and April's Annual Conference, we are pleased to say that the Norwegian ATCO's were able to solve all their serious issues with management and everything looks better now. In Spain they are busy setting up TRM and CISM, all the best to them for these two important milestones. This, put in perspective, makes me think how far we have come in MUAC where CISM just celebrated its 10th anniversary.

Meanwhile, the situation of our Latvian colleague (who was previously suspended and forced out of work for forming a new union) will take a clear path next year when the judge at the higher court will deliberate on her case. We hope justice will be served.

In Finland, ATCO's are not happy with the foreseen relocation from Tampere to Helsinki. They are also still working under the old contract although it has expired last May, as negotiations for a new one are taking longer than necessary. They are also faced with a group of qualified, yet unemployed ATCO's. They are used by management to negotiate lower conditions of employment. You know, this is it or I take those cheaper guys. Lame.

Without being dire, there are more countries with few issues, mostly negative but before I explore them, let me bring to your attention Denmark. They have increased the A.I. pass rate to nearly 100% by changing their training philosophy: now a trainee can train for as long as necessary to qualify and graduate without strict deadlines. It will be interesting to see if this is cost-efficient in the long run.

So, for the situations that could be better: Belgium is complaining that, when taking over on a position, it takes an ATCO more than 5 minutes to adjust their personal settings, all the while working live traffic. In Iceland a colleague has been fired. I do not recall the underlying reasons, but I remember them saying that Just Culture had been flushed down the drain. In Bulgaria they are experiencing a considerable drop in applications for their A.I. training, without any apparent reason. In Romania they reduced the working hours from 40 to 36 a week. However, due to the stressful nature of the job, no overtime is allowed. You think it's good? Wait. If overtime is deemed necessary, it's planned but not compensated. How about the stressful nature?? In Malta, they

are experiencing a rather large increase of traffic since the Arab Spring in Libya turned sour. Libya is not able to accept East/West-bound traffic, so all these need to be re-routed via the Maltese FIR.

And saving the best for last, something straight out of a horror movie. Welcome to Cyprus, everyone. In Cyprus they have experienced extreme cost saving measures, sometimes up to 50% which has obviously affected their salaries in the same negative way. To add to this, they are experiencing extensive military activity around them which has a clear impact on their daily work. There are the Israeli, always on alert for something. The conflict in Syria, that despite the good bilateral relationship with the Syrian ATCO's, causes more than few problems. The instability of Egypt, and the big presence of the USA and Russian militaries off the coasts of Middle East. The complexity it's at its highest but no new route structure could be introduced. But the drop that spilled the glass is the absolute disregard for safety by Ercan ATC center. But I digress. Nicosia is the primary ACC serving the Cypriot FIR. As a result of the Turkish invasion of 1974, any kind of communication between Turkey and Cyprus has been interrupted. Ankara ACC, in its effort to change the status quo, instructs the aircraft on a southbound course towards Cyprus, to contact Ercan. Ercan is an illegal ATC station in the occupied part of the island which is not recognized by the International Civil Aviation Organization (ICAO). ICAO only recognizes the legal government of Cyprus and has issued instructions to aircraft operators to obey only Nicosia ACC when in the Cyprus FIR. Nevertheless, Ercan's irresponsible attitude sometimes causes problems. Ercan has no direct communication with neighboring airports such as Beirut and Damascus, but they still issue descend clearances to aircraft proceeding to those destinations. Obviously Cypriot controllers must work extra hard to ensure that safety is not impaired at the area of FIR transition and so far they have managed to carry out this task admirably well. In other occasions Ercan controls illegal interceptions to civil traffic under Nicosia's control simply because these flights are proceeding on a direct course instead of being on route, all this while penetrating into



Nicosia FIR. It is just incredible that all this is happening in Europe and no one has the guts to put an end to this shame. I personally don't care about politics, I do care about professionalism and safety and here there is a blatant disregard for all of it.

Well, this is it for this year, I guess it was more than you wanted to read, anyway. ATC conditions vary dramatically within the same continent and things we normally take for granted aren't necessarily a reality somewhere else.

Till next year in Kiev for more exciting updates on the old continent.



Attending the ERM in Sarajevo

Kris Scicluna

Ok, I should come clean. When EGATS first announced that they were looking for a volunteer to participate in the IFATCA ERM 2013 in Sarajevo, my first reaction was that it would be an easy way of adding Bosnia to my 'countries that I have visited' list. Considering that EGATS pays the flights and hotels and Eurocontrol gives office days for the controllers to participate, I could not believe that only six people had put their name down for the lottery. So, as you can imagine, I was quite happy to find out that my name was the one that was pulled out of the hat.

First, some boring stuff: IFATCA is a global organization that represents controllers from all around the world and is split into four regions: Africa & Middle East, Americas, Asia & Pacific and Europe. (From what I gathered, it looks like the European region is the most powerful). Each region holds a regional meeting every year and everyone gets together during the yearly Global Meeting. The European Regional Meeting was held in Sarajevo, Bosnia-Herzegovina between 19th and 20th October 2013 and there were 36 countries out of about 40 European members.

We flew out of Dusseldorf with a quick connection in Munich and got to Sarajevo early in the afternoon. As we got through customs, it was



nice to see that controllers from the Bosnian organizing committee were waiting with vans to take us to our hotels. We had decided to stay in the Hotel Europe, which is right in the middle of the old town and was also the location of the IFATCA seminar that was held on the day before the ERM started.

After getting our rooms, we decided to go out and explore Sarajevo as this was going to be the only free time we had during the trip. Unfortunately, Sarajevo is most closely associated with the siege that devastated the city between 1992 and 1996. The shelled out buildings can still be seen all around and there seemed to be an unproportionately high amount of cemeteries spread around town. However, this is a city that has quite a bit of history to offer. It is obviously a Muslim city with all its minarets, mosques and influences from the Ottoman Empire. However, there are also churches and elegant buildings dating back to the more recent, Austro Hungarian Empire. This is also the place where World War 1 was triggered when Archduke Franz Ferdinand was shot while crossing the Miljacka River right in the centre of town. The bridge still exists today.

We finished off the day by having a typical dinner in a restaurant up in the hills overlooking Sarajevo. The view of the city and the town below was stunning and highly recommended.

The next morning, at 09:30 sharp, the IFATCA workshop kicked off. This year's subject was 'Safety in Complex ATC Systems', and as the name implies, I quickly came to the realization that this was not going to be a holiday after all!! By the end of the day, my head was aching with all the acronyms that were thrown out in quick succession. I have no idea what the difference is between linear and systemic safety. Is a KPI similar to a KPA and what about the difference between Safety 1 and Safety 2? Why are there an SES and an SES2? Is SES2+ better or worse than SES2?? I came to the conclusion that this all depends on who's point of view you are looking at it from. All I know is, that by the end of the meeting at 18:00, I needed to go to the room for a quick nap. However, this was all quickly forgotten once we got a few pints down our neck during the welcome cocktail at the City Pub.

The ERM kicked off on Saturday morning at the Gazi Husref-Beg Library. This impressive building that was renovated with Qatari donations, was just around the corner from our hotel. Once all the welcome speeches were made, the meeting could begin. Safety was, once again, high on the agenda and there were several presentations made by representatives of Eurocontrol, SESAR, the EU Commission, ATCEUC and IFATCA. I am sure that Alessandro's detailed report of the day's activities will give a more complete description of what was presented.

All I can add is that the meeting finished at 18:30 which gave us just enough time to go back to the hotel for a quick shower before being bussed off to the Hotel Hollywood for a traditional dinner. As one can imagine, there was traditional Bosnian food, music and dancers. This coupled with the fact that smoking in public spaces is still legal in Bosnia-Herzegovina, made sure that this was truly an interesting, traditional night to remember!

Day two of the ERM is where it gets interesting for controllers. After a brief presentation by Spain about next year's global meeting (which will be held in May in Gran Canaria ... I should have applied for that one!), each country's guild gives a brief presentation about issues that have occurred in the last year which have impacted them.

I do not know what affected me the most. Was it the Cypriot presentation about their 50% pay cut and the shocking way traffic is handled in the northern part of the Nicosia FIR at the interface with Turkish control in Ercan, or the Latvian union representative who described how she has been fired for raising safety concerns in Latvian ATC with the Latvian government. What about the Belgian controllers that have no 'saved settings' for their displays and how they are worried that it can take up to five minutes for them to set up their screens during handover? Or else the Finnish controllers that are angry that Tampere ACC is going to move to Helsinki. What about the 50% pay increase that Moldovan controllers received last year or that Maltese controllers are still feeling the impact of the Libyan conflict?



The final items on the agenda were a presentation by Ukraine about next year's ERM in Kiev and the selection of Estonia to hold the ERM in 2015. All in all, a highly interesting day that was topped off by an excellent farewell party at the Sarajevska Pivara brewery in Sarajevo. The only problem was, that due to the fact that organizing committee members seem to have celebrated a successful ERM, the promised vans that were meant to take us to the airport the next morning, never turned up!!

All I can say is that this was a great experience and that it is a great initiative by EGATS which allows one of its' members to experience what goes on during these meetings. I would highly recommend it and encourage you to apply for next year's ERM in Kiev.

KUÇADASI ATC SYMPOSIUM

Not just another conference! More a reality check...

Frederic Deleau

During the last IFATCA Annual Conference, the Turkish Association TATCA invited a number of European Associations to an ATC Symposium they were planning in the town of Kuçadası, near Izmir, Turkey. They asked each participating association to present their working conditions, using a template they had worked out. This would allow our Turkish colleagues to demonstrate to their colleagues and their management that their working conditions could be, of course, improved.

There was a long list of topics they wanted address, including: a benchmark of the living standard of air traffic controllers compared to other employees in the aviation sector in each country; career planning including training requirements, terms and conditions of appointment; employee rights; differences in terms of transition between busy airports or ATC centers for ATCOs; country's busiest airport in terms of daily landings and take offs number of sectors, number of controllers and terminal capacities; working conditions including number of teams and working daily/monthly hours; ratings requirements; sector and centers manning and organization requirements (ATCOs, FDAs, Supervisors, etc); specific regulations issued by the country or expected working hours; description of fatigue management; just culture; minimum number of team per shift; loss of license; relevant legislation; ANSP structure including information such as average annual capital expenditures for Air Navigation Services; ATCOs retirement conditions, including early retirement; bonuses, etc

Despite having to cover this multitude of subjects, a time limit of 15min per speaker was set... a real challenge!

Eight European associations accepted the invitation and EGATS was one of them. The main part of the meeting was foreseen on Saturday 08th of June with the presentations and a short visit to Efes late afternoon. (Unfortunately, I was unable to stay for an air show near Izmir that the participants were invited to the next day. I was expected back in Brussels for yet more meetings...)

BUT A MAJOR "SURPRISE" WAS STILL TO COME...

After a short night, I set out early on Friday morning to Izmir via Istanbul S.Gokcen airport - Istanbul's 2nd airport on the Asian side. For this 36 hour trip to Turkey, I had a presentation and two short movies (one of my own "production" to kick-in the attention, and one produced by MUAC).

After a smooth connection, I was struck by the size of the terminal at the single runway airport of Izmir. And it's still expanding! The very next day, this was explained by the impressive figures and the realization of how fast aviation develops in Turkey due to booming tourist industry.

SATURDAY 08TH OF JUNE...

The event was chaired by Zeljko Oreski, IFATCA's Executive Vice President Europe. After the address of the mayor of Kuçadası and the presentation of the Turkish Civil Aviation Authority,

it was EGATS' turn. I made a simple, factual and somewhat entertaining presentation about MUAC and its staff. Colleagues from The Netherlands, Croatia, Bulgaria, Romania, Germany, UK, Sweden and Spain followed suit

UNTIL....

The "surprise"... or when politics interferes with Safety.

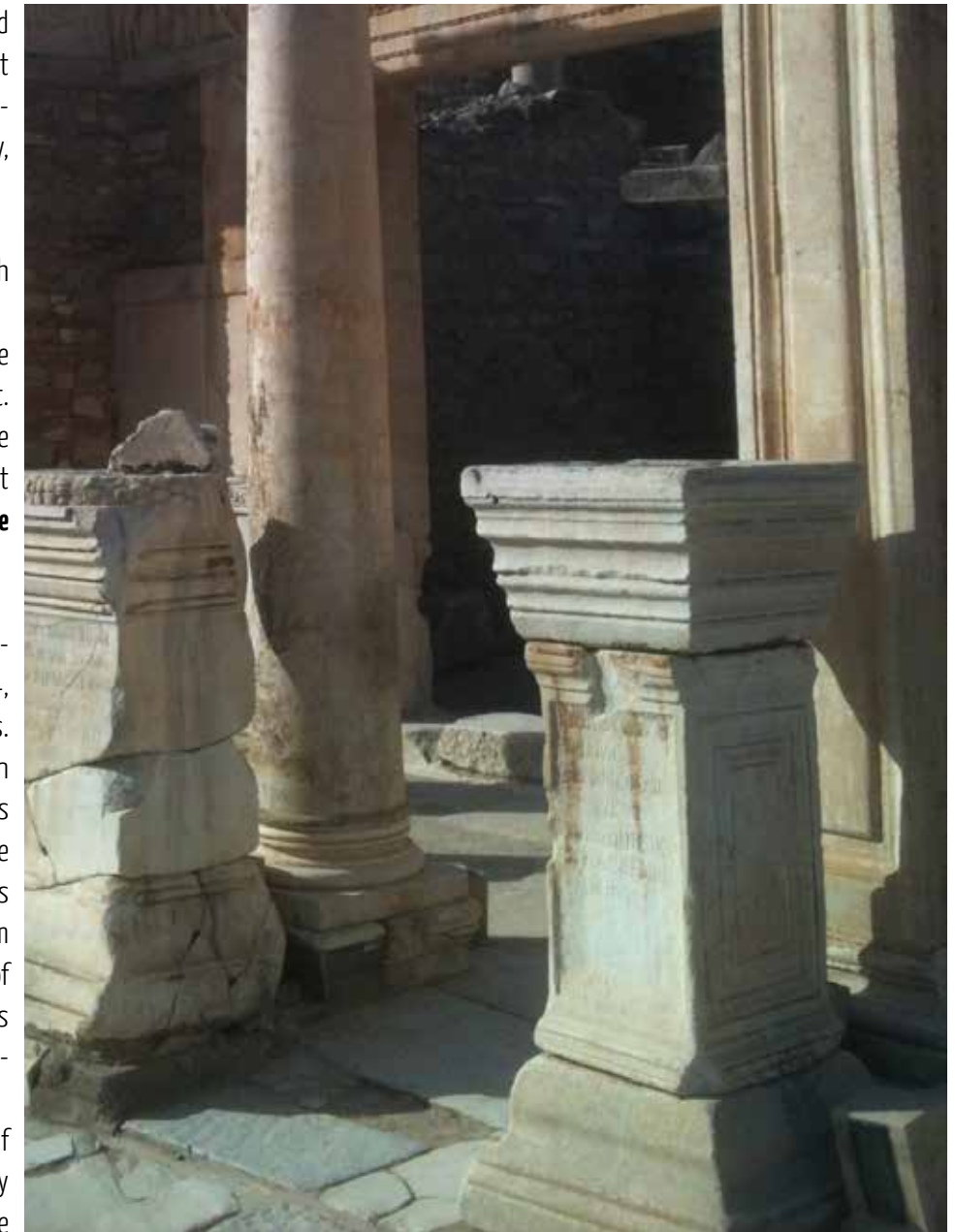
Apart from who would attend, the scope of the meeting seemed fixed long before the event. There was however an unforeseen item on the agenda: other guests... We learned at the last minute what it meant: **a representation from the Ercan ACC!**

For those who've never heard of Ercan, and without touching too much on the politics: in 1974, Turkey invaded the Northern Part of Cyprus. This so-called "Turkish Republic of Northern Cyprus" is not recognized by the United Nations has an independent state, nor is the airspace recognized by ICAO. However, Turkey has established an ACC in Ercan, which they claim is in charge of the "Advisory Airspace" North of Nicosia. The political tension this creates has severe implications for the safety of Air Navigation in the area!

As professionals, how would you feel if unknown aircraft would penetrate your busy sector and suddenly climb or descend in the middle of your traffic? How would you react if an Airbus 380, in your sector would suddenly be intercepted by F16s from a neighboring country – all without any kind of coordination of course! How could you work if you do not have any possibility to contact an adjacent unit that sends you traffic without any details. This has been daily reality for controllers in Cyprus for the past 40 years! Every time an aircraft approach the boundary, pilots monitor the two frequencies and call 10min before to give the basic information like callsign, flight level, destination... Often charter flights carrying hundreds of holiday makers, totally unaware of the risks that such a procedure carries! ATCOs in Nicosia frequently use a website to identify aircraft coming their way!

On top of all these long lasting daily occurrences, one has to consider also nowadays the consequences of the Syrian crisis and hundreds of military aircrafts flying "freely" in the area...

I could go on but I guess you have understood the reality in the area



and the consequences on safety. Despite valiant efforts, neither the UN, EUROCONTROL, ICAO nor EU have been able to dislodge this solution. Hopefully it will not take a catastrophe to finally resolve this operational disaster!

In the recent past, I've been personally involved in drafting several letters highlighting the safety issues in the area. Together with many others, and via various channels, we have tried to establish some kind of dialogue to improve the situation, only to find our efforts blocked by political arguments.

Maybe a path towards a solution would be to lift the problems into a regional concept: a center operated by an international organization, with employees from both sides and supported by international staff? Maybe safety and efficiency could then take over from politics and bring together people defending a common aviation goal and common



sense, which seem to have been left behind in 1974? Maybe...but it is (unfortunately) highly unlikely.

So it is in the middle of this cesspool that we found ourselves in Kuşadası ...

After our colleagues from CYATCA, the Cypriot Association, realized what we got ourselves involved in, they wrote a letter – see the separate box for some extracts.

I feel for colleagues on both side of the border. Having travelled several times to and through the area for business or family reasons, I am ever more concerned of the impact such situation has also on the Network.

In Kuşadası, I had the chance to discuss openly with our colleagues from Ercan after they made an interesting presentation about their working conditions. It was a very valuable experience.

More importantly, I'd like to share what happened later during the evening organized after the symposium... The evening came, and after an already full day, I was seated with Zeljko Oreski (IFATCA EVP Europe) and Paul Neering (IFATCA Liaison Officer to the EU) at a table of 8. Plenty of seats left then.

We were discussing the symposium when we were joined by a group of people who introduced themselves as ATCOs from Cyprus... Well...If you give me such an opportunity to tease, do not be surprised of my sense of diplomacy...so, I welcomed them and, as they were from Cyprus, I asked them what they thought about the day...in Greek of course – for those who don't know: my wife is...Greek and my brother-in-law lives in Nicosia... Cyprus!

I suppose I never saw people as confused as they were for a split of a second, explaining warmly that they were from the Northern part of Cyprus! They got my sense of "humor" and we all laughed together. As happens so often, this broke the ice and we talked of course about the situation and shared a very nice evening together. Could it be so easy? The answer is a resounding yes: as in many cases, the controllers on both sides seem more than

willing to come to solutions. It's only when politics get involved that things go sour...

As a conclusion to this experience, I can only but stress the need to find as soon as possible "a" solution to the Cypriot situation. I have had the chance to meet interesting people from Ercan. We do not need to share political ideas. We are all ATCOs and it is clear that everywhere we have a common goal, either North or South of a border that is a very much forgotten and ignored iron curtain in today's Europe! As controllers, we should not allow politics to interfere with our priorities: safety, efficiency and continuity!

Despite the unannounced item of the agenda that could have spoiled the trust between the International representatives and our host, it was a real pleasure.

I once again would like to thanks EGATS for giving me the opportunity to represent my colleagues in such International event.

TURKISH AIR TRAFFIC IN NUMBERS

131 million passengers in 2012! An increase of 280 percent compared to 2003! There are currently 1058 ATCOs working in ATC and it will increase to 1500 within the next 2 years! Turkish Airlines has over 300 planes on order (217 Airbus and 95 Boeing). Employment in the aviation sector: 170.000 jobs, an increase of 254%...I said before: impressive!

However, the presentation of TATCA showed the conditions of the expansion and additional valuable information. Out of it, what could be interesting for some is to realize the difference between our working conditions and "theirs": Standard working day shifts of 11.5h...nightshift of 13.5h – 2h on, 2h off – 187h per month...Sector capacity: 45 ac/h...published capacity not adhered to in order to accommodate the requested traffic volumes in TMAs...

I was happy to find out that Turkey has also a SMART (team)... Systematic Modernization of ATM Resources Project. This project will deliver shortly a

EXTRACTS FROM CYATCA LETTER SENT SUBSEQUENTLY TO THE ATTENDANCE OF ERCAN ATCOS TO THE SYMPOSIUM ORGANIZED BY TATCA

" (...)I therefore feel compelled to kindly recall the following facts regarding the situation in Cyprus:

- Following Turkey's invasion in Cyprus, in 1974, and the subsequent Turkish Occupation of 26.2% of the country's territory, the UN Security Council has repeatedly called for the respect of the sovereignty, territorial integrity and unity of Cyprus, a State which is a full member of the European Union and the United Nations and a contracting state to the Chicago Convention on International Civil Aviation.
- The UN Security Council condemned all secessionist actions in Cyprus, including the attempt to create a "Turkish Republic of Northern Cyprus", declared them illegal and invalid and called for their immediate withdrawal (UN Security Council Resolutions 541 (1983) and 550 (1984). All States were called upon not to recognize the purported state-of "the Turkish Republic of Northern Cyprus" and not to facilitate or in any way assist the aforementioned secessionist entity"
- ICAO, as a UN specialized agency adheres strictly to UN positions on Cyprus and to the binding relevant Security resolutions. In

big change as the 3 current ACCs (Istanbul-Izmir-Ankara) will merge into one in Ankara for all the Turkish airspace above FL 235. EUROCONTROL has been involved at several stages during the development of the concept. One single Upper Area Control Center, 235...well it looked pretty familiar...

To conclude the presentation, TATCA colleagues wished to stress that they are working with their CAA for a clearer separation of the ANSP from the Ministry of Transport and have high expectations regarding Just Culture, Fatigue Management and also the introduction of a loss of license scheme (there as well!) as the loss of income once going on pension is an astonishing 80%!

We shall hope indeed for our Turkish colleagues that the rapid expansion, however supported by a lot of modern tools and huge investments, will also take care of a key enabler: the Human capital!

(For anyone looking for more information, I will be glad to transfer the full presentations on request but you can also check the following video on YouTube: "you fly-we care")

this regard, ICAO at no time has recognized or cooperated with any authorities other than those of the Government of the Republic of Cyprus. Its relevant resolutions and decisions also clearly state that a country temporarily not exercising effective control over its territory by reason of military occupation, does not lose its sovereign rights over such territory and the airspace above it. Furthermore, under Article 1 of the Chicago Convention "the Contracting States recognize that every state has complete and exclusive sovereignty over the airspace above its territory". The unilateral declaration of the so-called Ercan Advisory Airspace is therefore a legally invalid action before international law.

- The illegal establishment of the so-called "Ercan Advisory Airspace", not only violates international law, but also places the safety of air navigation in the northern part of the Nicosia FIR at serious risk. The safety risk, occurring by Turkey's denial to recognize the Republic of Cyprus and establish direct communication with Nicosia ACC, is widely recognized at all relevant international and regional bodies (ICAO, EUROCONTROL' European Commission, IFATCA, ATCEUC), which underline the pressing need for an urgent operational solution between Turkey and Cyprus. All initiatives to reach an operational solution to this problem, however, were rejected by Turkey, which insists on introducing procedures outside the framework of international legality which cannot be accepted." (...)

CSS, evolution or revolution

James Kench

WHAT WAS I THINKING?

When I was first asked to write this article my initial response was, "Sure, that sounds like fun".

This positive attitude, partly coerced into existence by the infectious smile that Raf carries everywhere he goes, soon dissipated into sheer terror. "Write an article about CSS" he says. "Erm, from what angle or aspect" I asked. Am I writing as a member of EGATS, as a controller or as a supervisor I wondered? Write whatever you want was the abridged response, great, thanks...

My opinion of CSS differs wildly depending on which hat I'm wearing. I see positives and negatives to all aspects of it, but there is one undeniable constant, it's our reality and it's what we make of it.

So that's what I decided to try to write, hopefully a balanced discussion article, no more, no less and no finite conclusions, it's far too early for that.

WHY CSS?

I almost think that CSS was an inevitable evolution. When I look back to some of the old maps in the display areas around the building it struck me the progress we have made and the corresponding cost to the profession. The old Delta sector virtually had two points and a handful of airways in and out of those two points. Each controller knew exact airway tracks, distances, radials and maybe even Nav-Aid frequencies! I'd bet that some of them even knew lengths of suitable runways given an unexpected diversion.

Since then we've had to cast a wider net in terms of sheer quantity of knowledge, an ever-expanding list of points, airways, operators and procedures, but there is only room for so much. At some point you have to focus on the most important aspects.

Our organisational structure evolves in much the same way. The sector supervisor used to be in charge of the roster, SOT's (sector opening times), appraisal reports, trainee allocation, leave de-confliction, virtually everything. As the workload has increased in each focus area, entire teams or offices have sprung up to replace them.

From a controller's social point of view, nothing will ever be more ideal than having one person you can go to for all these things. From a business point of view this situation can never be as efficient as centralising 'services' to avoid duplication of work. At the end of the day there is a happy medium somewhere in between. Unfortunately, sometimes the agency as a whole has a habit of being reluctant to reverse 'progress'. This is why EGATS will always be an essential part of any social dialogue, they are the 'House of Lords' in our political system, always exercising caution, remembering tradition and urging a slow methodical approach. CSS is far from the finished product and hopefully their influence will help make it better.

PROS AND CONS

Now, back to the 'cost'. What have we lost in this evolution? Well, the most obvious is the social human cost. We no longer have block breaks together, team briefings or the same working pattern; time spent on a one to one basis is extremely limited. Of course this began with the new roster. Where did the majority of those extra 30 days off come from? From the social time we spent in work of course and the extra flexibility we afforded to management. We achieved this at very little 'transparent' cost. Much like the analogy to the evolution of a sector, the knowledge of the personal side of the ops room has broadened yet become less specific. We don't have all the answers for this yet, we will never achieve the same feeling as we had in the past but you can guarantee we will try our very best to do whatever is achievable. Do I think anything has improved? I think we have given ourselves the potential to improve but we aren't there yet. In the past we had 12 supervisors looking at a single sector group, now we have 30 looking at the whole; yet we do not have 18 new opinions or working styles. TCM measures that were once exclusive to one sector or another are now tried on other sector groups. Some to better effect than others but one thing is for certain; we generally have similar ideas on what works and what doesn't. It's still a learning process and hopefully the input of new ideas reaps benefits. I feel we share information within the CSS crew in a better way; we are well briefed and prepared for weather or

other network situations by the DSUP and FMP. Increased interaction with people from other sector groups and attempting to harmonise the way we plan on TimeZone are all noble causes and heading in the right direction. The approach is broader and more generic as per the earlier analogy, which is one reason we urgently need a complexity prediction tool.

Will it be a success? I think it's impossible to compare the situation pre and post CSS. What are the indicators? TimeZone productivity figures, delay minutes, overload reports? All have far too many variables from year to year to be able to make an adequate comparison. All I can do is draw your attention to some of the new considerations for supervisors, hopefully many of you will experience the limitations we face operating the CHMI during the CSS observations but of course that's nothing new!

There are only so many aircraft that can fit in one sector at a time. One way we can improve capacity is to better spread the workload. In the past most of our focus would be on making the SOT a perfect fit to the traffic. Of course that is still the primary goal but new variables must be taken into account. We can no longer sit on the position ourselves; therefore an unexpected SOT increase requires two people rather than one. Our knowledge of the sectors is more generic, therefore less calculated risk might be taken. It is virtually impossible to keep an overview of whether people are sitting in the correct position or indeed arrive on time, it is therefore vital to have a plan for the upcoming hour in due time. Mistakes can have a knock on effect that eventually become unrecoverable. Sometimes, if the predicted traffic fails to materialise it can be too late to make efficient use of the spare controller hours. If there is a decision to be made on the opening or not of a sector, is the limiting factor merely the frequency load? Perhaps you are bored on a low sector but you might be helping a high sector to give the most efficient service possible. Alternatively two under utilised vertically split sectors might be of assistance to an overloaded adjacent sector by presenting them with simple solutions that they can maintain and 'sell on'. Whatever decisions are made, our goal is to safely process all the traffic considering many different factors, that of course includes providing the best possible service to the controller within the framework of the roster and sharing the workload in the best way possible, sometimes it is not merely a numbers game.

WHAT NEXT?

If we assume that our biggest 'loss' so far is the social human aspect then I am looking forward to the team days coming up in the spring. Many made it clear that the last effort was too similar to TRM, too

work based. To be frank, that was our worry too but necessary to secure a budget unfortunately. Now we have feedback from our colleagues our argument has a more solid foundation. From the draft programme we have seen so far for the team days, it looks like there is far more emphasis on social aspects and group activities. That can only be positive as far as I'm concerned, we already spend plenty of time educating ourselves on procedures, training and TRM but relatively little time actually getting to know each other.

FINAL THOUGHTS

We all need to work together to succeed; we need your help to make it work through open and honest feedback. I found a quote that I think nicely sums up the choice we are faced with.

"If two men on the same job agree all the time, then one is useless. If they disagree all the time, both are useless." Darryl F. Zanuck.



photo competition

Paul Hooper

I have to say that I was a little disappointed with this year's photo competition. Being our tenth competition I really was hoping for a record number of entries and, based on the number of enquiries I received and the choice of a subject that was wide open to interpretation, it

should have been just that. Sadly that wasn't to be and by the competition's closing date we had just eighteen entrants; sufficient but less than anticipated.

I was really hoping for interesting interpretations of the subject – black and white. Only two entrants went a step beyond the obvious and submitted color photos of black and white subjects. All the rest, which includes myself incidentally, went for the expected conversion to black and white. Just to re-assure you, I always ask the judges to select more than three winning photos just so that I can remove any of my own should they be selected. My ego remained deflated this year! The competition rules were sent to all EGATS members and others who specifically requested them. However, receiving them and reading them are two totally different things! I have to apply the rules rather

strictly so that all entrants are treated equally and thus it grieves me considerably when I have to remove a photo which has not complied with them. It doesn't happen often but it does happen. So, when you receive the rules folks please read them carefully.

For the time being all the 2013 photos can be viewed at <http://www.jaypix.net/egats-photo-comp-2013.html> and will eventually appear on the EGATS website

This year's competition was judged by the staff of the Fotostudio A.B. in Valkenburg (www.fotostudioab.nl) to whom I offer my sincerest thanks.

Many thanks for all your entries – it's always fun to view them when they land in my inbox! Keep clicking!

**1ST WIM LENTJES FOR
"THE FENCE"**

**2ND MATT HOUBEN FOR
"FIELD OF HONOR"**

**3RD IGOR JAKIMOV FOR
"HOMELESS MAN IN PARIS"**





e-brief

Ilia Bojilov

During MUAC transition programme earlier this year it became apparent that there were certain issues raised by controllers regarding the eBrief system. Therefore I was tasked by Keith Cartmale to design and conduct a survey to obtain more information from staff about the positive points of the system, and where improvements may be required. The objective of the survey was to confirm that the eBrief System is providing the required information in a way that can be easily accessed, read and understood before commencing duty in the Operations Room and to confirm that the underlying processes are adequate and robust to support the process as envisaged.

My intention with the eBrief survey was to establish the effectiveness and the adequacy of this system, and to define whether any improvements were needed.

The eBrief survey covered areas like the identification of the documentation dealing with the processes subject to the survey, assessment of the adequacy of the procedures, a numeric indication resulting from the polling of staff responses and the adequacy of the process descriptions.

Here are some main highlights that came out of the survey:

87% OF RESPONDENTS FOUND THE E-BRIEF USABILITY GOOD.

98% OF RESPONDENTS HAVE INDICATED THAT 30 MINUTES IS SUFFICIENT TIME TO BRIEF ONESELF BEFORE DUTY.

Despite the high number of positive responses, several staff reported difficulties in briefing one-self within 30 minutes after long periods of absence, or when large amounts of information is presented.

A high number of respondents consider the information contained in the e-brief items irrelevant, out of date, too much, lacking clarity and precision or variable in quality week on week

It also became apparent that a clear indication is needed about who staff should contact to obtain more information regarding the briefing contents.

A large percentage of ATCOs would like to make the e-Brief more user friendly and easier to work with.

Plenty of good examples were given by most of you - thank you, that helps a lot.

A point that regularly came up in the responses was that the e-brief is used as a "catch all" for providing briefings, when in some circumstances, the briefings are too complex and are better conducted using other means, e.g. face to face briefings.

From the results of the e-Brief survey one can conclude that although the system has been in place for many years now, and is well used by staff, further improvements are needed.

For all of us it is crucial to achieve and maintain a high standard of briefings to the ATCOs. Therefore the following 3 recommendations were put forward to Nick Miller and his team as a result of this survey:

1. Improve the relevance, timeliness, content, clarity, precision and communications quality of the items contained in the briefing system
2. To consider the complexity of briefing materials, with a view to introducing alternative methods to provide the required information in person when needed e.g. when complexity is high;
3. To take the suggestions provided in the report base on the survey to improve the functionality and usability of the e-brief system on board in further updates to the e-brief system;

In total 162 responses from shift working OPS staff gave us the needed rate to make this survey count for which I would like to personally thank all those of you who took the time and invested in this survey.

Expect follow up in the next Output magazine!

Gabriel Bangiu

A Lost world: Supersonic Air Transport.

During the last decade, the airline industry has gone through very turbulent times. Terrorist threats, epidemics (see the SARS outbreak...), soaring fuel prices and a lot of other factors (natural disasters, environmental pressure...) have sent it on the brink of collapse. In order to survive, the airlines had to adapt to the new conditions, to implement restructuring plans and to switch to more fuel efficient equipment. Aircraft as the A380, the B787 Dreamliner, the coming A320 NEO or B737 MAX, just to name a few, have changed and will change the face of air travel.

But all these achievements were possible only by giving up to something which was actually the main characteristic of flying: SPEED.

Therefore, it could be the right time to have a look at what used to be the ultimate in air travel: supersonic passenger transport.

of carrying passengers over long distances, at speeds exceeding the speed of sound.

Therefore, the 2 main competitors of the time in the aviation industry, the USA and the USSR, went back to the drawing board trying to win the fierce competition of being the first to create a supersonic airliner. But the leader in this race was neither the USA nor the USSR.

Some years before, two groups, one from the United Kingdom and the other one from France, had already formed the basis of a collaboration which would have led lead, eventually, to the only successful supersonic airliner.

technically speaking, the final selection had an unexpected winner. On the 31st December 1966, Boeing was announced as the winner and its project was to become the Boeing 2707-300 SST (Super Sonic Transporter).

It was intended to be the first wide-body aircraft, with a 2-3-2 row seating layout and, in its final version, it was supposed to accommodate up to 234 passengers.

The work had started on a full-scale mockup and the production of 2 prototype aircraft began.

Unfortunately, the SST never flew; the program was cancelled on the 20th May 1971, before the 2 prototypes had been completed.

Off Weight of 180.000 kg. It could accommodate between 120 and 140 passengers and it had a 3 men crew.

The performances were astonishing: a cruise speed of Mach 2.16, range 3500 nm and a service ceiling of 59000 ft.

The program suffered a serious setback when the first production aircraft, a TU-144S (registered 77102), crashed at the Paris Air Show, on the 3rd June 1973, killing all 6 people on board and also 8 on the ground.

The causes of the crash remain unclear until today, the presumptions going from a faulty design to industrial espionage, to trying to

avoid a French Mirage which was there to take pictures of the newly installed Canard wings. Although the presence of the Mirage was not denied, this was never confirmed as the cause of the crash. The TU-144S went into service on the 26th December 1975, flying mail and freight between Moscow and Alma-Ata, this being the preparation for the passenger service which started in November 1977.

The only operator of the TU-144 was Aeroflot and the scheduled services were also short-lived, the last one being on the 1st June 1978. By that time, only 55 scheduled passenger flights were made. Aeroflot continued to fly the TU-144 even after the official end of service, using it for some additional non-scheduled flights in the 1980s. In total, 16 airworthy TU-144 aircraft were built, with a 17th that was never completed.

In 1995, with additional American funds and in cooperation with NASA, the TU-144D (registered 77114) was taken out of storage and, after some modifications, had made 27 test-flights between 1996 and 1997, before being cancelled in 1999 for lack of funding.

Once the Concorde was withdrawn from service in 2003, there were plans for the revival of the TU-144, again with American participation, but they were dropped quickly because of the rising costs of development, the soaring oil-prices and, not last, the lack of a reliable propulsion system, the only alternative being the Kuznetsov NK-160 turbofan which is used on the TU-160 Blackjack bomber and which was considered as military secret and, therefore, not allowed to be exported outside Russia.

CONCORDE

And there we are, with the only successful supersonic airliner, the pride of the English and French aerospace industry, the aircraft that wrote a great page of history in aviation.

In commercial service for almost 20 years, its achievements were nev-

The reasons for the cancellation were the rising costs, the lack of firm orders and also not to forget the incoming oil crisis. It is interesting to notice that, at the time of cancellation, the SST had 115 unfilled orders from 25 airlines, while the Concorde, which was to become the only operational supersonic airliner, had, at the same time, 74 orders, from 16 airlines. The SST mockup was disassembled and sat in a scrap yard in Florida for 19 years, before being purchased and partially reassembled for display at Hiller Aviation Museum, San Carlos, California. That was the short-lived American project of a supersonic airliner.

TUPOLEV TU-144

The Russian supersonic airliner had a better fate than its American competitor.

This program was officially launched in 1963, the development starting on the 26th July that year.

Because of its resemblance to the Concorde, the Tu-144 was nicknamed "Concordski".

Although the program was started later than the European Concorde, the TU-144 was actually the first supersonic airliner to fly, having its first flight on the 31st December 1968, 2 months before Concorde flew for the first time. It broke the sound barrier for the first time on the 5th June 1969 and it was the first airliner to exceed Mach 2, on the 15th July 1969.

In its final form, the TU-144 was an aircraft with a Delta shaped wing, 65.5 m long, with a wingspan of 28.8 m and having a Maximum Take-

The name of the project: Concorde. So, let's have a short look at all 3 competitors in this historical race.

BOEING 2707-300 SST

In the USA, the program for a supersonic passenger aircraft was launched on the 5th June 1963.

Because it was already trailing the European project and also the Russian one, in terms of development, it had to outperform the other 2 competitors.

Therefore, the requirements were for an airliner able to carry at least 250 passengers, flying at speeds of Mach 2.7-3.0 and having an inter-continental range of at least 4000 nm.

The participating projects came from North-American, with the NAC-60, from Lockheed, with the L-2000 and from Boeing, with its B 2707. Although the Lockheed project was deemed the most realistic one,



any other airliner in the world.

Starting with the records, it holds the fastest flying time between New York and Heathrow, set on the 7th February 1996, by a BAW Concorde, in 2 hours 52 min 59 sec. It also set the record time for the Washington-Paris route, in 1973. It had the highest operating altitude for an airliner, cruising at up to 60000 ft, at Mach 2.05 (interesting to notice that Concorde travels 23 nm a minute, that being a mile every 2.5 seconds!).

The idea of a supersonic airliner came at the end of the 1950s and the Concorde program was officially launched in October 1962, once the "Mach 2.2 Airliner" specification was published.

Developed together by the British and the French aerospace industries, Concorde was, in its final design, a 62.17 m long aircraft, with a low Delta wing, having a span of 25.56 m, a MTOW of 185.000 kg and powered by 4 Rolls Royce SNECMA Olympus 593 engines, with afterburner, each of it developing up to 170.2 kN thrust.

The maximum range was 3550 nm and the maximum speed was limited to Mach 2.05, in order to limit the skin temperature to 400 Kelvin degrees, allowing thus the use of conventional materials.

The first flight for the Concorde was made on the 2nd March 1969, by the French prototype, Concorde 001. The British prototype (Concorde 002) took to the skies for the first time on the 9th April, the same year.

On the 1st October 1969, Concorde 001 exceeded for the first time the speed of sound, reaching Mach 1.002. On the 4th November 1970, Concorde 001 exceeded Mach 2, followed 8 days later by the 002.

Although at the beginning there were many airlines interested in buying the Concorde and a presentation world tour was made, the oil crisis and the coming setback in the airline industry forced the potential buyers to cancel, one by one, almost all the orders and commitments. Another issue was the limited use of the Concorde, all supersonic

flights taking place over the oceans and not populated areas, in order to minimize the effect of the shock wave (the so called Sonic Boom), when the aircraft was accelerating from subsonic to supersonic flight. In the end, there were only 2 customers left: British Airways and Air France. It is also noticeable that the British Airways Concorde registered G-BOAD has flown for a few months with its port side painted in Singapore Airlines colors, following an agreement between the 2 companies and operating the London-Singapore route, via Bahrain.

There was, though, a third company operating the Concorde and that was Braniff International Airlines which operated a subsonic service between Washington and Dallas, with a BA aircraft, from January 1979 until May 1980 when it was discontinued.

In total, only 16 production aircraft were built and the service entry was on the 21st January 1976, with a London-Bahrain service.

The only sad event that marred the safety record of the Concorde happened on the 25th July 2000, when the Air France Concorde, registered F-BTSC, crashed near Paris, having suffered a major fire after take off. An unfortunate chain of events, going from runway debris to a faulty fuel tank design, contributed to the loss of 109 people on board and another 4 on the ground. Following this crash, the whole Concorde fleet was withdrawn from service, the Certificate of Airworthiness being suspended on the 16th August 2000.

After undergoing some modifications, the Certificate was awarded again and the Concorde started to fly again on the 7th November 2001. But, again, bad luck had struck Concorde one more time and this turned out to be the swan song of this beautiful metal bird.

Following the September 11 (2001) events, the aircraft industry entered in a very long downturn and the increasing costs of the maintenance combined with the soaring fuel prices led to the decision to withdraw the Concorde from service, both at British Airways and Air France.

Despite an offer from Virgin's chairman Richard Branson, to buy all BA's Concorde, British Airways decided to go ahead with the withdrawal of the fleet.

On the 10th of April 2003, BA and AFR made simultaneous statements that the Concorde will be retired by the end of that year.

The last Concorde service for Air France was flown on the 27th June 2003 while the last BAW Concorde service took place on the 24th October 2003.

The Concorde story ends for good on the 17th December 2003, when a BA Concorde made a final flight to a US museum, the same day when the 100th anniversary of the Wright brothers' first flight was celebrated.

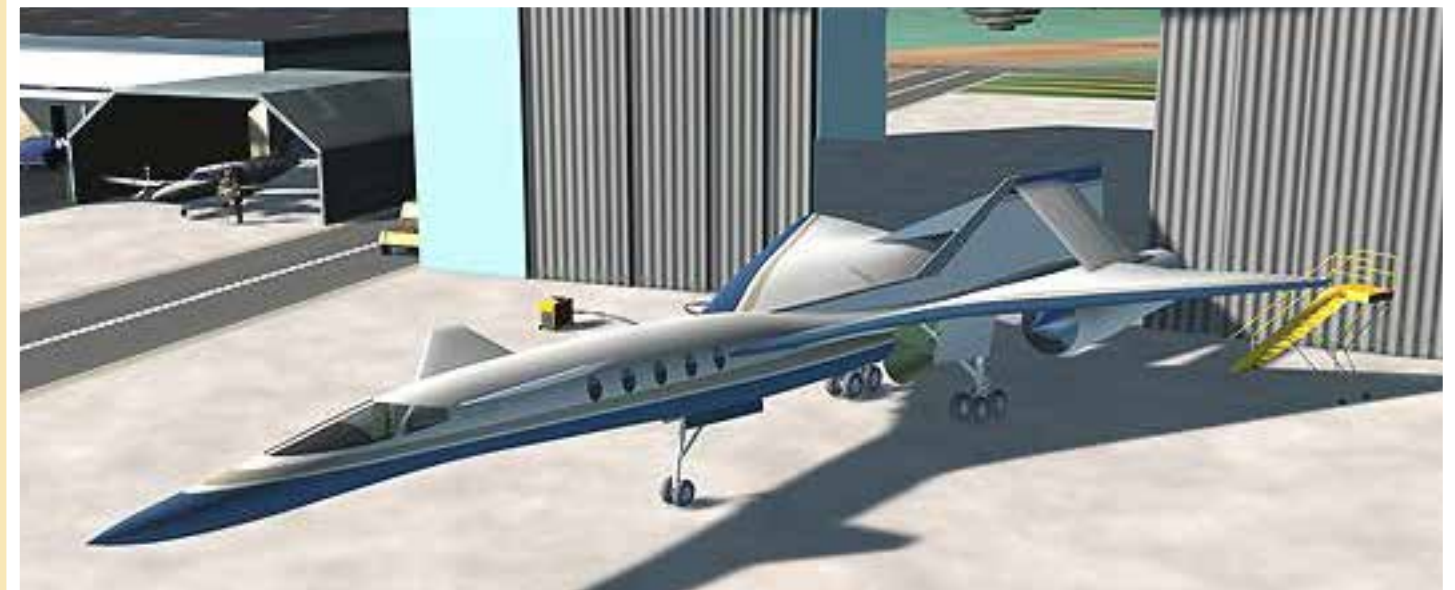
Some plans to retain one aircraft for five years, to be flown at air shows, about 20 hours per year, in airworthy conditions, were abandoned because of lack of spare parts. It is thought that behind this story was the refusal of Airbus consortium to supply the spares or to allow anyone else to take over the task of supporting the aircraft. After 2004, the aviation industry saw a revival of the idea of having a supersonic aircraft for passenger, but this time mainly for business jet industry.

In 2004, some studies for a Supersonic Business Jet (SSBJ) were unveiled, following two different approaches to achieve the goal of an affordable supersonic travel.

The first is represented by Aerion, a Nevada based company, which is developing a Mach 1.6 capable aircraft which will avoid sonic booms by dropping to transonic speed over land.

The Aerion design features an unswept wing, with a sharp leading edge and a thin, bi-convex aerofoil section with a conventional V-shaped tail.

It is designed to be 45m long, with a wingspan of 19.6m, could accommodate up to 12 passengers and have a range of about 4000 nm.



The selected power plants are 2 Pratt&Whitney JT8D-219, which create up to 21700 lbs thrust each but, for the SSBJ, they will be rated only to 19600 lbs, in order to allow sustained supersonic cruise at up to M 1.6 and also to provide higher reliability.

The other idea belongs to Supersonic Aerospace International (SAI), whose Quiet Supersonic Transport (QSST) is relying on a newly discovered concept, the low-boom aircraft. This can be achieved nowadays by controlling the direction of the shock wave and re-directing it, to obtain a minimum effect of the sonic boom.

The SAI's QSST was foreseen to have its first flight in 2010-2011, with certification and entry into service in 2013-2014. The airframe was designed by Lockheed and, in order to reduce the sonic boom, features a "tail-braced wing", with an inverted-V tail and aft-positioned engines. It was planned to be about 40 m long, with a span of around 20 m, seating between 8 and 12 people in executive configuration and able to fly distances of up to 4300 nm.

The operational ceiling for both projects was set at 51000 ft.

Wind-tunnel conducted tests were encouraging for both projects and, while there haven't been many news about the QSST lately, the Aerion SSBJ seems to be a bit ahead compared to its competitor, although even after so many years, the progress made is very slow, with the QSST missing its targets for the first flight and the SSBJ not even having a date set for the first flight. Until that moment, we will live with the memories of the beautiful Concorde and, in the end, I would like to cite from the words of Captain Mike Bannister, former Chief Concorde Pilot for British Airways:

"Beyond 24 October (2003), Concorde may no longer be flying scheduled routes, but its special magic will live on.

Flying at the edge of space, where the sky gets darker and you can see the curvature of the Earth, has been a unique and memorable part of my life."

ES2-WS3-13, Madrid November 2013

Raf Vigorita

The EU's regulation 996/2010 is a good start. Its principles are fairly simple: promoting investigations to prevent accidents, being blame-free, making investigations mandatory for accidents and serious incidents, giving mandate to a National Independent Civil Aviation Safety Investigation Authority, sharing results and data on a protected network, train investigators and ensuring JC elements.

But this is just the beginning. The number of interested parties in this subject is rather large, and each of them has different interests.

The investigators, for one, must have the authority to take the necessary steps to satisfy the requirements of the safety investigation with immediate and unhampered access to all evidence. They also have the duty to coordinate with and the obligation to cooperate with the judicial authorities.

The protection of information is very high on the list with the de-identification of the recordings

and documents. However, as it is clearly obvious, no one is nor can be above the (national) law, therefore in accordance with such laws, the judiciary system may decide that the benefits of the disclosure of the records for any permitted purpose outweighs the adverse impact that such action may have on any future safety investigation.

BUT WHAT IS A SAFETY INVESTIGATION?

A safety investigation is nothing less than a deep audit of the whole system which may discover shortcomings in order to prevent future accidents. Safety recommendations will follow and they will be stored in a database, and each individual Member State will lay down the rules and eventual penalties. The investigation doesn't apportion blame or liability, but the European Commission cannot reduce the power of the penal institutions of each Member State.

As for the JC's progress, the EU directive states that each organization shall have JC policies, with protection for staff, whether it's the person reporting, or those mentioned in the report, or those dealing with such report.

BUT WHAT IS JUST CULTURE EXACTLY?

JC means a culture in which front line operators are not punished for actions, omissions or decisions taken that are commensurate with their experience and training but where gross negligence, willful violations and destructive acts are not tolerated.

But where we want JC, we need to have safety first. Safety as culture comes from the people. Safety as philosophy comes from documents such as SMM and ICAO doc 9859. Safety as result is to learn from the past, communicate problems, actively cooperate and get involved in safety. And do not forget reporting, that is the essence of our knowledge to take future preventive actions. The first reporting enabler is the organization's safety culture, with trust and JC. Giving feedback in due time is credibility (this is why we revised and improved INREP) and amounts to commitment and accountability from the people. If you do not like something, get to know it better, get involved. It's easy to sit and complain, it takes effort to proactively do something about it.

However, despite the newly launched courses where safety experts, investigators, judges, managers and many other professionals are present with the idea of understanding each other's job and duties, the idea of immunity for aviation is simply a myth. The law is supposed to be equal for everyone, therefore you can't expect to be treated differently. JC is something internal to an organization, something vital for improving each organization but it's not really applicable in

a judiciary system. However, JC serves the interest of aviation safety; there is a need to create a workable balance between safety and punishment. It's that simple, it's that complicated. As a good professional, never forget to report even what is not mandatory but yet important... data, trends, information, situations... remember: communicate!!

The greatest source of safety data it's the people. Sharing information improves training according to needs, enhances procedures and helps developing new ideas. And safety can only benefit from all this.

It's now clear that JC is paramount to every organization; if you punish people, they will stop coming forward and the flow of information will eventually run dry with detrimental consequences for prevention and development. It's a fact that humans make mistakes but do not expect people to perform better than the training they have received. Be safe, be professional at all times, report and communicate but despite all, do not expect immunity in the outside world. JC is there for everyone's benefit but it's just an internal (and very important) safety culture.

Ask not what safety can do for you, rather ask what you can do for safety. How to evolve ATM safety investigations while preserving Just Culture (JC)?

Joining a KC135 on a tanker mission

Sascha Martin

The employees of Lippe Radar had the great opportunity to join a KC135 out of Geilenkirchen for a tanker mission this autumn.

My big date, together with a colleague, was the 31.10.2013. We had to show up at 0645 in the morning at the entrance of the Geilenkirchen Air Base.

After an ID-check the security provided us with our visitor badges and we were entitled to enter the premises of the base.

We drove to the Air National Guard house,

which is the base for the tanker crews and the crew invited us for a chat and a coffee before the mission.

During that time, we had the possibility to get a little bit familiar with the crew. The complete tanker crew, flying out of Geilenkirchen, is working for the Air National Guard and most of them are here in Germany for only two weeks, before they are going back to America and going back into their normal job.

A normal tanker crew consists out of a captain, a first officer and a boom operator.

They told us, that they have usually two tanker missions a year and that they were flying at various destinations and areas already. Nevertheless they always like the European airspace.

There are a couple of Air National Guard bases in America and the crews, who are coming to Geilenkirchen, are taking their own aircraft from America.

The crew explained as well that their tanker aircraft (a KC135) is based on the Boeing 367-80 jet transport, out of which the Boeing 707 was derived as well. The aircraft for our flight was produced in 1960, but the crew promised that it is well checked and in



good shape.

After the little small talk the crew had the official briefing about today's mission. We expected a training flight in the KIM Short anchor with one receiver (an E3TF). The speciality of that flight was a Learjet 35 who wanted to join this training flight to take some pictures (Thanks to Alexander Golz for providing us with these pictures!).

Once the briefing was finished we were picked up and were driven onto the apron to our KC135 for that day.

The crew started immediately with the outside and inside checks and it was unbelievable to see how many "Remove before flight" tags were attached to the aircraft on the ground.

During this checks the crew was quite concentrated and we did not have the chance to ask too many questions.

After completing the main checks we were asked to get into the aircraft via a small door at the bottom of the fuselage and climb up the ladder straight into the cockpit. The captain and the first officer were busy with the preparations for the departure and we received the emergency briefing from our boom operator.

During this briefing the most important





point was the oxygen hand bag, which you had to keep during the whole flight next to you. With the aid of the demonstration kit he showed us the plastic oxygen mask with a small O₂ tank, which should provide us with enough oxygen in the event of a rapid decompression. It did not really look like the oxygen masks we are normally used to see during the safety briefings of airliners.

We were close to our off block time and therefore we were asked to take our seats (more or less comfortable jump seats in the cockpit) and we had the chance to have a close look at the cockpit instruments.

With having a look at these instruments the aircraft cannot hide its age.

Only the two main flight instruments have been replaced by glass instruments which looked more or less modern.

During the push-back the captain explained that, even though the aircraft doesn't really look modern, it is totally reliable and he really loves to fly this aircraft.

In the meanwhile all the necessary preparations were done and we received the taxi clearance to the holding point runway 27 in Geilenkirchen.

You could really feel the professionalism with which the crew was running through the check-lists and preparing everything for the

take-off. Once we reached the holding point runway 27, we got the lining up and take off clearance straight away.

The captain gave full thrust to the engines and we accelerated to our rotation speed. Once reached this the captain lifted the nose and a couple of seconds later we were flying. After the call-out for the positive attitude the gear was retracted and we continued our climb and switched to Beek-approach. Beek approach continued our climb and turned us right toward Mevel. I had the impression we only scratched the Dutch airspace before we got transferred to Langen. Langen continued our climb to FL240 and we were waiting for the clearance into the upper airspace.

Just before reaching FL240, we got the climb clearance to FL250 direct to WSR. The crew asked us why we only got a step climb without any traffic near by and we explained our working principle in respect of separating to the TFL. Upon entering the Lippe north sector we received the clearance to FL280 and the Lippe controller told us to expect the KIM short anchor.

That was the right time to leave the cockpit-crew alone and to get with the boom operator into the boom-area.

Our boom-operator explained his working environment to us and how he controls the boom. He can steer the boom with a joy-stick with his right hand and with his left hand he controls the retraction and extension of the boom. In addition he controls with his left hand the lights on the fuselage of the aircraft, which indicate the necessary control inputs for the receiving aircraft to get into a reachable position for the boom.

After receiving this whole explanation we had the opportunity to enjoy the impressive view out of the tail of an aircraft over the northern part of Germany.

At one stage we saw already the NATO (an E3TF) approaching from behind and coming closer 1.000ft below. When he got on the

boom frequency he joined the tanker aircraft from below by applying the commands indicated by the lights system at the bottom of the fuselage (higher / closer and forward / backward). The left and right position was indicated by a yellow line, as well at the bottom of the fuselage, which was a guideline for the receiver pilots.

Our boom operator got the receiver into a suitable position for getting into contact with him by extending the boom. Once the two aircraft were in contact with each other the boom operator gave the command into the cockpit to start the fuel flow.

At that stage the boom operator was only in charge to check that the boom (angle, extension and azimuth) were kept in the limits. As soon as the receiver was pushing the boom into a position close to the limits or a little bit outside of them the boom operator disconnected the boom, retracted and lifted it, so it could not hit the receiver again and damage it.

Once disconnected the whole game started again. The receiver was controlled via light commands into a suitable position and the boom was extended to get into contact again.

After monitoring three approaches from the boom position I walked again into the cockpit and joined the cockpit crew.

I was expecting a total relaxed atmosphere in the cockpit and was totally surprised to see the guys flying the tanker track without the autopilot. They told me it is difficult to enter all the anchor points into the machine and that the autopilot is not following them as well as when they are flying the aircraft.

In addition they explained that they are limited (depending on the receiver) to a bank of maximum 15 degrees. Due to this, there are situations where the tanker is overshooting the track in the turn, also depending on the wind.

In addition, the cockpit crew was in charge

for the fuel management. They dealt with the fuel pumps and were in charge of keeping the tanker weight and balance in its limits and relaying the fuel through the boom.

The final task for the cockpit crew was the R/T. They were listening to the Tanker frequency on the first set, to the boom frequency on the second one and for all other possible requests they were monitoring the third frequency.

I had the chance to observe the cockpit crew for another three approaches until the mission was completed.

After the receiver left the tanker we requested to go back to Geilenkirchen and we received the clearance from Lippe to proceed to IBAGU at FL280.

On the way back to IBAGU the crew did all the paper work which was dealing with the refuelling process (e.g. how many tons offload). Just before approaching IBAGU we got our

descent clearance to FL250 and were handed over to LanLangen which continued our descent and gave us a couple of vectors to intercept the ILS runway 27 in Geilenkirchen. Once established on the ILS we contacted "Frisbee Tower" and received our landing clearance.

Although there was a relatively strong cross wind, our captain landed the KC135 very smoothly on the runway and we vacated the runway at its very end.

After taxiing to our parking position the engines were shut down and all check-lists were completed.

We left the aircraft through the same small door at the bottom of the fuselage and put all the "Remove before flight" tags back on the aircraft and the engines.

When the work at the aircraft was completed we were picked up and driven again into the Air National Guard house.

Arriving there the crew filled out all necessary documents and they explained again the procedures which were applied during that mission and, from our side, we explained all the procedures in regards to the ATC-background. After finishing our coffee (for them coffee is as important as it is for us), we said goodbye to our crew and after swapping our ID-cards at the guard house, we left the Geilenkirchen air-base.

All in all it was an impressive experience and we learnt a lot about the work that needs to be done on board during a refuelling mission and we will understand certain reactions better now.

© for the outside pictures: Alexander Golz





Happy holidays everyone!

