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# THE SUMMER ISSUE

Summer 13

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For those few ones who do not know me, I am Raf Vigorita, ATCO in the DECO sectors and presently undergoing supervisor training in the CSS. And I am the new EGATS president as well, for just over a month now. It's hard work, but that didn't come as a surprise as I saw what the presidency entails from my predecessors considering I have been an EGATS board member for just short of 10 years.

Two of the biggest challenges when I took over the EGATS presidency from Bernhard on the 1st of June were very clear: try to keep up with the multiple projects EGATS is involved in and communicate as much as possible with the membership. Over the years it has become clear that we need to let people know what we do and why. We need to be clear and brief at the same time, we need to get through to our audience: not an easy task considering the amount of information we are subjected to on a daily basis. But we'll try our best.

While some of you may know that EGATS was involved from the very beginning in setting up CISM and INREP, fewer of you may know that EGATS is at present actively involved in a larger number of important projects. Currently we spend our energies both inside Eurocontrol and outside alike. We share our time amongst the Frisian Flag Post Analysis, Transition Team Communication, Just Culture, EUROSS, TCAS RA Downlink, FABEC and MARC (Mosaic ATM Regional Coordination) and IFATCA just to name a few.

We were also tasked to revive a project aimed to tackle the (possible) problem of ageing ATCO's, while keeping a close eye to Cross Training procedures and the Training Section re-structuring.

All this while constantly improving our good relationship with management, because we are a professional organisation and we do have at heart our profession and our professionalism. We are there to propose, double check and give advice when necessary, We do not need to

always agree with management, but disagreement, when happening, needs to be constructive and respectful. It has been like this, from both sides. And we are building an ever stronger cooperation and collaboration as we appreciate each other's efforts. We appreciate the chance of having monthly meetings with DIRMAS and HOPS, and the chance to discuss any topic with our management.

At international level, we have a number of members (also retired) who collaborate and put a lot of effort into European and SES matters, as much as being on the IFATCA executive board and managing the Controller magazine, the official IFATCA publication. We do appreciate their time and commitment, and it is a truly remarkable feat for such a small guild as EGATS.

All it takes is people who are dedicated to their beautiful profession, the support from both our membership and management and... hard work.

So far, we are lucky to have all of the above. What we need now is to let you know more clearly what is going on. This OUTPUT is a good start to understand more, and we'll endeavour to always keep you up to date with the projects EGATS is involved in and the results and changes that, in one way or the other, will affect they way we do our job.

Enjoy the magazine, and remember you can always write us (or approach us) at board@egats.org should you wish to let us know anything that might be relevant to our profession.

Professionally yours,

Raf Vigorita  
EGATS president



# Summer 2013

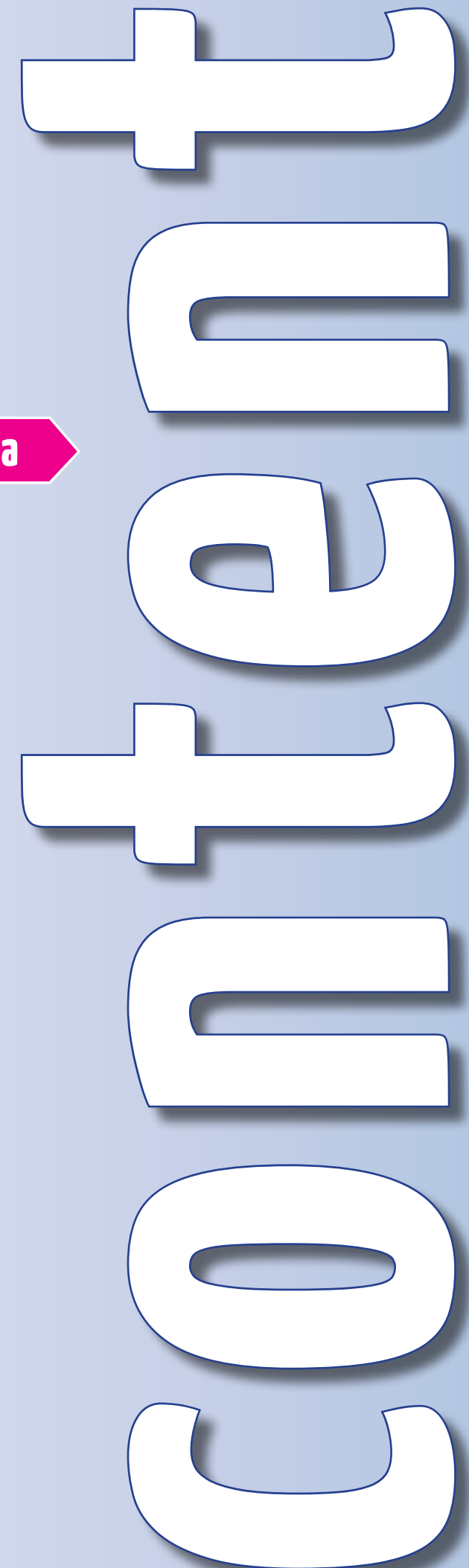
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#### Contributions by:

- Members of the EGATS Executive Board
- Kirsteen Easdale
- Inge Vander Eyken
- Kevin de Kroes
- Paul Hooper
- Ive Van Weddingen
- Philippe Domogala
- Philip Marien
- Viktor Jagasits
- A big thanks to our colleagues of MUAC printing office for their continuous help and support through the years!





# VIENNA BOUND

A word from the outgoing EGATS president... (by Bernhard Romanik)



## On the move? Again? What happened?

I just put behind me the first three days of “keeping a license”; thereafter I jumped in the car and drove down to Innsbruck, Austria, where I joined an “Audit-techniques”-course of a certifying agency. As you might have heard I am seconded to the Austrian National Supervisory Authority (NSA) for the next three years since the beginning of June. It all started with the incentive briefing in March, where the possibility of a secondment was offered. As none of the other options like 30/40 were suitable I decided that this could be the chance to spend

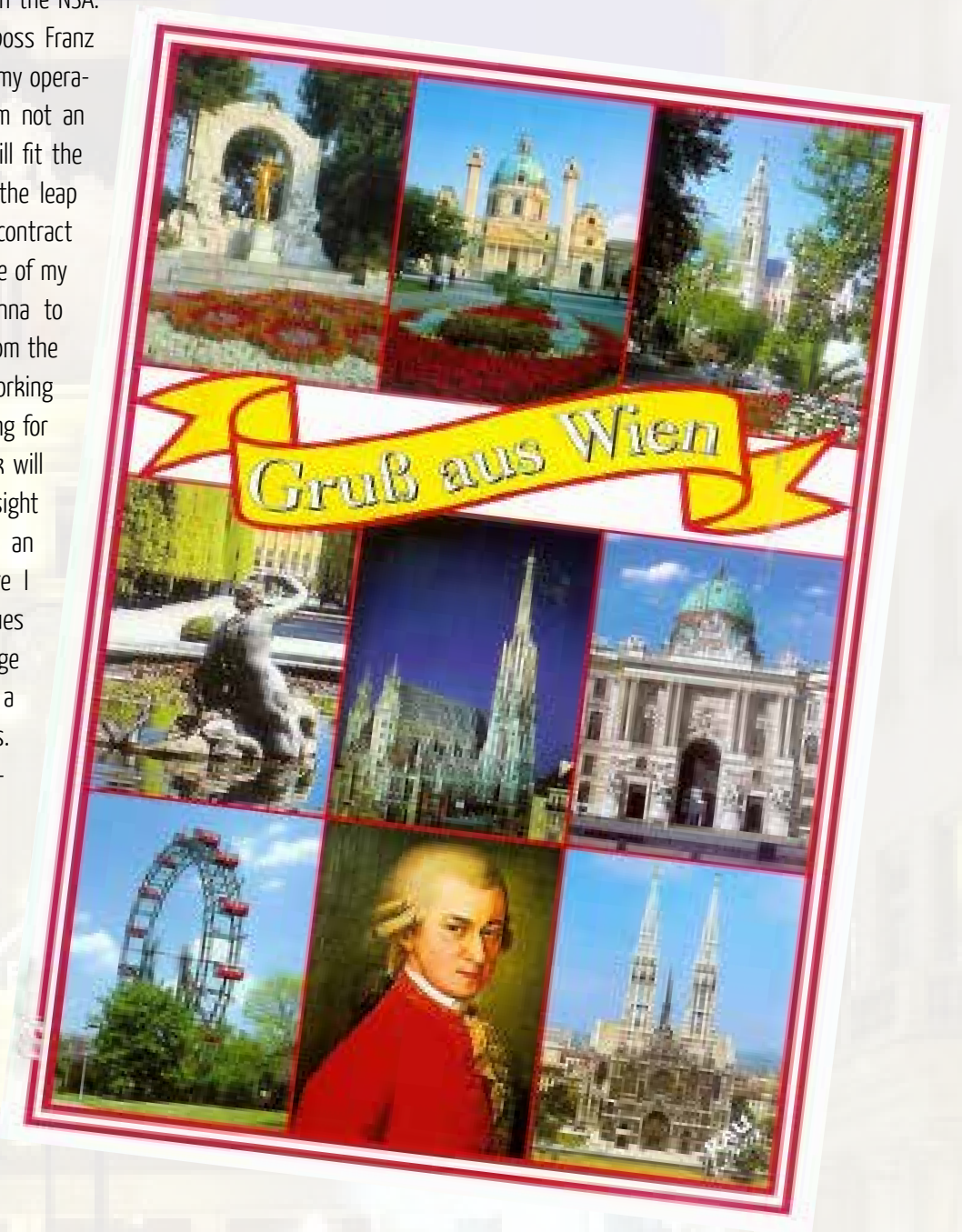
again more time with my daughter in Vienna. She is now 12 years old facing some hard times in school and that did not help a distant father-daughter relationship for sure. I must confess that I underestimated the impact of my decision to work abroad 5 years ago. So for me it was a clear decision in that respect at least. Anything else was very much harder to decide. Will I be able to stay current with only three days a month in MUAC? What will the new job bring? Will I be able to revalidate in the age of 43? What about my freshly taken responsibility as EGATS-president?

Especially that last question was a big burden, as I did not want to take this easy or put any bad light on the guild. Luckily I could get some advice from Ivo when he was preparing himself to leave the board and had the support of my fellow board colleagues when I informed them as the plan matured. On our last board meeting mid May we decided that Raf Vigorita will take over the leadership in EGATS and I am very happy and satisfied to find the guild in his experienced hands.

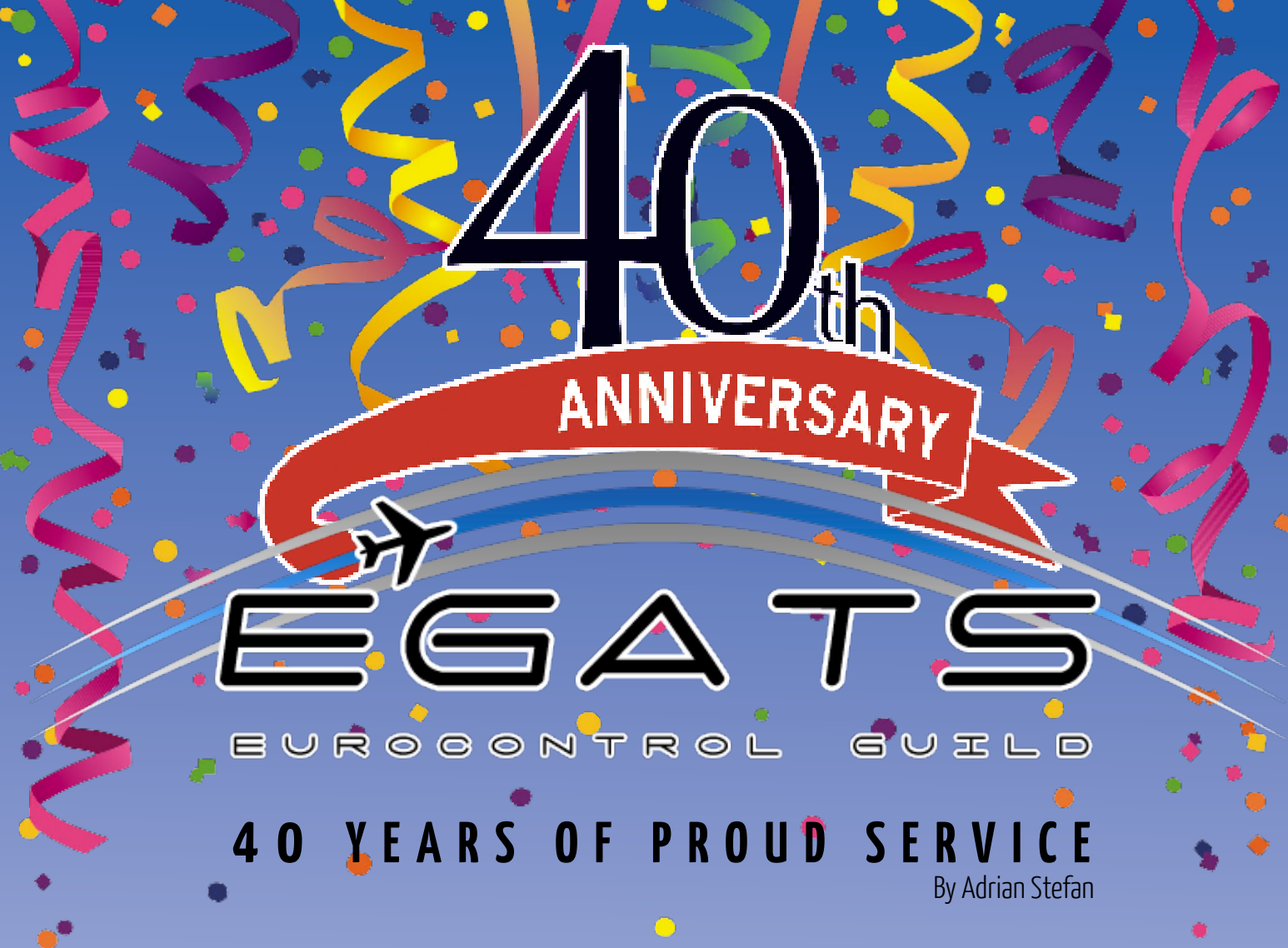
So I decided to go ahead. I never tried to work operationally in Vienna, as it was clear for me that I wanted to return to the OPS-room in Maastricht in three years time. So I approached an old friend in Austro Control's administration and he told me about the opening in the NSA. After a talk with my new boss Franz we decided that he can use my operational expertise and as I am not an Austro Control employee I will fit the job well. I decided to take the leap forward and although no contract was signed yet, I spent some of my off-time during May in Vienna to receive a proper handover from the colleague leaving the NSA working again in the en-route planning for Austro Control. My main task will be to perform a safety-oversight over the Austrian ANSP as an operational expert. Therefore I am trained in audit-techniques firstly here and at a later stage in the IANS which is offering a specialized training for NSAs. Besides that, I am responsible for everything within the European regulations that has operational implications. It is very awkward to sit in an office mon-fri 9-17 for the first time, and the weekends seem to be very short when you are used to a 6/4 cycle. I had to get used to a very administrative way of working

and after 3 weeks I must say I was looking forward to have some time in the OPS-room. Here you immediately see what the outcome of your work is; in the ministry it takes a bit and especially now at the beginning, to get a job done I need for ever, as the regulatory framework on European level is complex and I am not yet used to it. I think I have the unique chance to learn a lot about aviation law, European regulations and national legislation in an area I was always interested in. Luckily my boss is very patient and supportive so I had a good start there.

**I hope I was able to give you a bit of interesting information and am looking forward to see you guys soon!**







### Dear colleagues,

we have recently celebrated, with style I might add, Maastricht UAC's 40th birthday. This year EGATS also reaches the same anniversary number, and we should also celebrate that, even if it happens in a far less dramatic manner. I want to use this occasion to talk about EGATS. I will quote for you some facts about the history of the guild, the projects that we helped setting up, our current work and our future. What I want to do is to explain to you why we need EGATS, how our work is relevant to you and to the centre as a whole, and why it is essential to continue to have your strong support, but to do that I would like to start from a different perspective.

### The history:

I did not know much about all the work EGATS has been doing along the years. However I did get a taste of the international aspect of it, when I travelled to Jordan in 2011 as an observer to the IFATCA 50th Conference. And I liked it a lot. If I had to describe it in one word, I'd say it was a 'humbling' experience, an eye-opener. I sort of always assumed before that controllers would in general have great working conditions, be paid adequately and work in advanced control centres or towers that have all the necessary

technology; that controllers would not be punished when they made an unintended error, or when they reported an incident with the purpose of improving safety. While I can say that indeed we do have a lot in common with our colleagues from all over the world. We share the same passion and enthusiasm for what we do, we all want to dedicate ourselves to the highest possible standards of safety for the flying public...we are also sometimes worlds apart in terms of technology, recognition, salary, working together with management and so on. The worst is when you hear about controllers being prosecuted by courts of law, for incidents or accidents that happen in complex situations, and the focus seems to be on finding a scapegoat rather than understanding what happened and learning from it. Just Culture is a great idea, which has been around for a surprising number of years, and to try and explain it simply, it says that when something goes wrong, states and organisations should focus on learning what went wrong to improve the overall safety system rather than on blaming individuals that were trying to do their job correctly.

But let's start at the beginning: 40 years ago, when Maastricht UAC had just started operations, EGATS was born out of a natural desire

to rise to the rather unusual challenges of those early days, and to make contact with similar professional associations from Europe and the world. I still find it nothing short of a miracle that, despite all the inherent difficulties, a truly international ATC centre was formed that was to become a model of safety, efficiency, advanced technology and social conditions. This desire to excel, to develop further, to protect our rights and stay ahead of the game is also the core of EGATS's commitment to its members.

I'll quote for you now the official objectives of EGATS, as defined in our constitution:

- a. To promote the safety, efficiency and regularity of international air navigation.
- b. To contribute in the development and establishment of safe and efficient systems of Air Traffic Control by collective rather than individual research.
- c. To maintain a high standard of professional knowledge and proficiency among Air Traffic Services Personnel.
- d. To protect and safeguard the individual and general

interests of its members.

- e. To establish and maintain relations with similar or related professional organisations.
- f. To promote, encourage and enhance in general the work of the Air Traffic Services Personnel and to develop and promulgate knowledge of Air Traffic Control in all its aspects and applications.
- g. To promote and coordinate the social, cultural and sporting activities of its members.
- h. To sponsor and support legislation aimed at increasing the safety of air navigation and the establishment of the profession of Air Traffic Control.

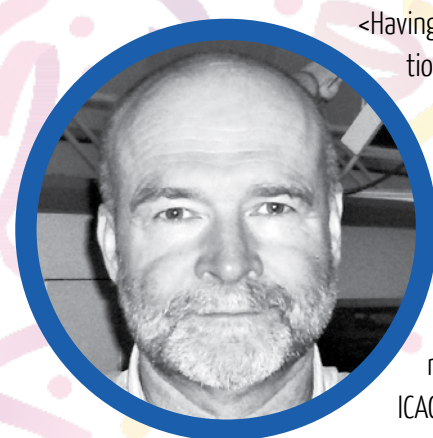
The objectives are ambitious, they cover a wide range of interests, and in practice it meant, especially in the early days, that EGATS had to be involved in pretty much everything. There were no working groups, sidetrack careers, SMART, or even TUEM.

Perhaps I should allow some of the people that have worked hard for the guild to say a few words about their experience.





### A few words about how it felt to work for EGATS by Philippe Domogala (Former EGATS President, member since 1973):



<Having a professional Organisation such as EGATS enables us to discuss openly with all levels of management on technical and professional issues, and often get things done. EGATS goes to international meetings, has access to ICAO meetings through IFATCA.

We can then meet our colleagues and neighbours on a regular basis, typically twice a year, and exchange all kind of problems and information.

At the beginning (1972-75) our neighbours were afraid of us, and it is only through EGATS, (there was no union then) that we could go to IFATCA and convince our "opponents" that we were real controllers like them and that the Eurocontrol idea was the future, not a threat to their jobs! We then became friends, and this contributed to guarantee our future.

EGATS also made lots of contact with the airlines. That also contributed to us being still here today. Airlines were some of our biggest supporters then. One of our achievements in the early days was getting Familiarisation Flights for everyone. It is people like Rene Pauwels, Danny Grew, and later myself, who organized second to none such. Local management did not have the contacts we did in EGATS with airlines at the time.

EGATS managed after years of pushing to get (and pay for) couches (the blue ones still around some offices) and later obtain the bedrooms for some decent rest during night shifts. In the early days it was not allowed to rest during night shifts, and we had to take inflatable mattresses and sleeping bags and find offices that were not locked.

EGATS lobbied for many years to get automatic promotions for control staff, and it was finally with a decisive meeting with a new DG (Keith Mack) that we managed, together with the newly established TUEM, to turn this around, despite the whole management and staff in Brussels being fiercely opposed to this at the time.

Over the years, both EGATS Technical Committee and Professional Committee managed many changes and improvements to the MADAP system, the procedures and the working conditions.

More recently, we managed, together with management to establish a non-punitive, voluntary incident reporting system (INREP), that was, and still is a joint EGATS-management scheme. I am personally quite proud to have contributed to all this. Working for EGATS is very

rewarding. I will encourage every young controller today to consider spending a bit of time and energy in working for EGATS, you won't regret it.>

It took 3 years for EGATS to be accepted into the IFATCA family in 1975, and since then the role and responsibility of EGATS within the international environment has only increased! By having a voice there we are able to help directly in formulating IFATCA policies and recommendations which are normally supported or even adopted by ICAO.

When we think of our Centre as safe, advanced and efficient, we must remember that it is not only the technical aspects that make us this way. An example of a non technical project that aims at supporting our control staff is CISM-Critical Incident Stress Management. A lot of the hard work and lobbying needed to develop and start it was done by EGATS, and began officially from 2003.

### Recent years challenges from Ive van Weddingen (former EGATS president and board member 2005-2013)



<For 8 years I have dedicated some of my time to EGATS and the representation of our membership towards our local management as well as on an international platform. When I joined the EGATS delegation at IFATCA conferences, I heard first-hand what happens when proper representation is lacking.

When I hear people question the need for EGATS to continue to exist, I always think of those moments. What our position would be, if EGATS had not existed for all those years. If all those letters and e-mails about projects and proposed changes had not been sent. If there had never been efforts to include IFATCA policies into our every day work practises. We all take this for granted because we never knew anything else, but in much of the world, that is not how things are done.

I also noticed how much further advanced we are technically, and how much say the controllers actually have in the development of our system, even though we might not always feel that way. Again something we take for granted, but far from the standard worldwide.

I must admit, before I was on the EGATS board I never thought about those things either. I joined because I was brought up with the idea

that you have to give back for what you receive. It was just the right thing to do. Once I was a board member, and certainly after I became president the year after, I never questioned the need for our existence. Maybe the people before my time did such a great job that we didn't feel the need to impose ourselves as much. It also seems that the emphasis shifted more and more towards the work of TUEM in the social dialogue, a field where EGATS always took a bit of a backseat. But make no mistake: EGATS is still necessary, as was proven with the conditional endorsement project. Together with the competency assessors we managed to convince the ops management that this project would not be beneficial for the ops room. That in fact it would harm the overall safety level. When one of the ops managers accused us of being almost like a union, I knew we had taken the right course.

In the end, that is where I see the best position for EGATS: almost a union, but not quite the same. TUEM has done a great job over the years in the social dialogue, and I think EGATS has a similar great track record in the professional field. Together, yet as separate organisations, we can continue to represent our membership in the best possible way, with our individual accents. Although I'm no longer on the EGATS board, I will continue to stay involved in every possible way, and I will always be available whenever EGATS needs me. Why? Because it's the right thing to do! >

### The Now:

Another essential achievement that EGATS is proud of is INREP - an open and transparent way for us to express our concerns and our management also committed itself to this anonymous reporting system.

In our job we witness a lot of change, which probably happens faster than in most other fields of work. We sometimes embrace it right away, when we see clearly the advantage of the new tools or way of working. Sometimes our flexibility is pushed to its limits, when change is not communicated properly, or we just don't see the benefit. That's quite normal, I believe. Especially with complex projects, which have a lot of impact on our daily operations. That's why EGATS as Maastricht's professional representation has been involved in NRPO and is still involved in the Roster Revision Team, putting up suggestions using feedback from the Opsroom. It was a slow and often difficult process, but the transition to the new roster is complete. EGATS has monitored closely the introduction of CSS also, and was not afraid to voice its concerns about the impact it had in terms of support, interaction and reliability.

EGATS provides invaluable feedback and assistance to management when a new idea/project is being launched and by doing so, we serve

our members as well. We are first and foremost controllers, and we bring that kind of thinking to the table, trying to assess the kind of impact it will have. We do that in a neutral and constructive way. Since we are not being paid anything extra for our role as EGATS, we remain an independent body of ATC experts and sometimes we need to say "No" to certain ideas that we see as premature or having a negative impact on our work. Some recent examples of that are: multi-sector planner, night-sectorisation, single person operations. The EUROSS project was meant to try and identify what came to be known as 'best practices' across all sectors groups and also to find practices that are less desirable while attempting to make a statistic of that. Each campaign has a different focus and by doing this in a transparent manner and publishing the results we hope to promote good working habits and raise awareness about the less desirable ones!

### The Future:

Time tends to pass by very quickly when you have busy lives, and that's certainly true for EGATS also. But sometimes you need to take some time and re-examine who you are, whether you need to change and adapt in order to carry on with your mission. Recently, over our last couple of Board meetings, we did just that, and came up with a number of initiatives aimed at improving our identity and financial stability. We are very thankful for Eurocontrol's financial support we've had in order to attend IFATCA conferences, which is quite unique. However in the general saving exercise this support was cut partly and forced us to take some decisions. The one you will feel most is that we will stop the breakfast service on weekends from 1st of September 2013, which was 'eating' up a considerable amount of our yearly budget. In recent months it had also become increasingly difficult to find volunteers to help with that and in the end even non-members benefited from the service. We would rather spend our limited financial resources on continuing and even taking on extra work for the association! We are keeping the membership fee at 55€ per year, and we'll try hard to keep it at this level for the foreseeable future.

We continue to make a lot of effort to try re-establishing Fam Flights. In current hard economic times airlines are understandably reluctant to commit themselves to such programmes, but we persevere. We do that mainly because we really want to promote the professional exchange between our jobs. We would like to see a return to the times when controllers were encouraged to take as many as two familiarisation flights per year, and perhaps part of the training of young pilots should be to spend some time in an ATC centre and understand the way we work. EGATS has written a

letter to management asking for a dialogue to reinstate a clear and favourable policy towards making Fam Flights and also professional visits to other ATC centres.

Also, we would like to work together with TUEM and the Staff Committee on a solution for our aging controller population.

We are happy with the current number of colleagues that are members of EGATS. And yet, we want to encourage the people that are not, to take a moment and consider a membership. A united Opsroom from a professional standpoint has a clear and strong voice when it comes to issues that affect us all. Thank you for your trust in us, and remember that anyone who wants to dedicate themselves to this kind of work is welcome to do so!

Oh, and please find time to attend our Annual General Meeting. If you are curious about current issues, that is the best place to get updates and have a healthy discussion on our profession. It is a lot livelier to talk about such issues face to face, rather than a written report.

We decided to relaunch the observer programme, in which a lucky winner travels to one of the two main IFATCA meets of the year. This year Kris Scicluna will join EGATS for the European Regional Meeting in October, in Sarajevo. He will over the course of 3 days, interact with our European colleagues, and we expect a great report about his experience there. No pressure, Kris !!

EGATS was and still is affected by change. While today there is also a very active TUEM, a Staff Committee, a Staff Association to represent our interests, rights and to promote social dialogue, the professional representation of our job remains essential. In many cases in the past EGATS involvement was essential, even when we have so many sidetrackers. The involvement of staff is certainly one of the reasons why our center is still No 1 of its class in Europe. EGATS is part of this involvement and we aim to be a kind of a firewall to protect you, and to protect MUAC. We want to focus on our core business: The professional representation. As well we want to influence our future within FABEC, which is still very unclear at the moment. A lot of things have changed in our job over 40 years, yet some things will hopefully always stay the same.

**One of those is our Passion for ATC, as our Incident Investigator Philip Marien (former EGATS president and board member 1993-2000) defines it.**



## Air Traffic Control is a Passion...

Many colleagues appear to have evolved to believe that air traffic controller is just another job, like there are many others, one that you can leave behind at work and not be bothered with on your off

days. And with that, there appears to have been a devaluation of professional associations such as EGATS.

There's no denying that in the past years, there's been a shift from the professional side of the job towards the social-economic aspects. Perhaps there's been too much focus on money and too little on evolving the professional side of the job. These have been pushed to the background and things are being looked at too one-sidedly by both management and staff alike. Perhaps this shift is also responsible for some of the problems people are experiencing today: while the working conditions of the job appear to be well covered, can the same be said of the professional aspects?

For me, this is where EGATS continues to play a vital role. Our centre wouldn't be where it is now without the continued professional input of an association such as EGATS. Often behind the screens, they play a vital role, reminding the powers-that-be of consequences and shortcomings in their decisions (or non-decisions as it may be). This is not always very visible, nor is it always effective, but such reality checks are more important than most people realise.

I know that I am biased, but people that ask "What has EGATS done for me?" should try and visit a place where no tradition exists of involving a professional association in running an ATC centre. I can guarantee it'll be a real eye-opener.

If you're passionate about ATC, there's no other option than to be passionate about the professional aspects of the job and by extension about an association such as EGATS.>



# EGATS IS PLEASED TO ANNOUNCE ITS

# 2013

# BLACK

# WHITE

## PHOTO COMPETITION

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**This year's subject will be**

## 'BLACK & WHITE'

Attractive prizes to be awarded for 1st, 2nd and 3rd places. Closing Date: November 1<sup>st</sup>, 2013

The competition is open to all EUROCONTROL staff members and their direct family members.

Further information, and competition rules, can be obtained from

Paul Hooper at: [paul.hooper@eurocontrol.eu](mailto:paul.hooper@eurocontrol.eu) 000011111



# 52<sup>nd</sup> IFATCA Conference, Bali, Indonesia



Last April, an EGATS delegation was off to Indonesia to attend the IFATCA Annual Conference.

All I can say, this year EGATS' delegation was the most experienced and active in a long time. Appreciation came from all sides, but I am particularly proud of our team and our work this year. It is unfortunate that next year won't be the same team, as for personal reasons Fred will not attend and Bernhard possibly won't come along neither.

Nevertheless, I am convinced that whoever will represent EGATS will do so the best possible way, and we'll continue to contribute at international level.

For now, take your time to read through the Committee reports.



# Report Committee A, IFATCA Annual Conference, Bali - Indonesia

Bernhard Romanik

Going to Bali sounds exciting when you first hear about the location of the 52nd IFATCA Conference. It's the island of gods, so they say; so I hoped to catch a glance of that before starting the conference. I took the chance to combine the trip with a privately paid and arranged stay a couple of days in Singapore and the west coast of Bali, which is very touristic. I joined Fred and some IFATCA friends for a day in the north of the island mostly discussing conference papers; caught some impressions along the road on my way back, but frankly when you have seen two big Balinese temples you are done, for me they all look the same.

Grouping up with Raf and Michael we had a small meeting as I preferred to line up our ideas and positions for the conference. And meeting the old gang is always a great experience. Unluckily we were not able to set up a social gathering during the week, as most of us had some after conference meetings. The setup for the conference was arranged, so as a president I had to join the Committee A, the administrative and constitutional committee. In my last ten years of IFATCA experience I have always joined the technical or later the professional meetings, so I had to get used to the specificity of politics. Additionally EGATS presented two papers: "Budget transparency" and "Satisfaction of Representatives", both being a bit controversial. The idea was to try to offer a platform for a long ongoing discussion within IFATCA. I personally feared that these papers will be nodded through like many others as the active participation

of some countries is not the best. At least with the paper about the IFATCA Representatives I was wrong; it created some vivid discussions. I will not further go into detail of items that were discussed, as these are available on the EGATS homepage. A big thanks to Philip Marien for that. The conference report shows a very big involvement of EGATS and Luxembourg, for which we held the proxy, as EGATS was one of the associations raising a lot of questions. I was very surprised that the budget which handles over half a million dollar was not questioned from any other nation!

After all we received a lot of appreciation for our involvement, firstly from the EVP Europe Zejlko but as well from Paul Robinson who was chairing the committee. EGATS gave also advice to the EB for some proceedings in order to stay within the constitution. As a direct result EGATS was asked if it would like to join the CAC (Constitutional Committee), one of the two working bodies behind the committee A. After raising our voice so often the last days it was hard to deny, so after confirmation, that it will be free of any costs, we agreed. Rob Marshall (UK) is the chair of this committee and EGATS agreed on delivering two working papers for next conference. All in all it was a very interesting conference, probably one where I learned a lot about the proceedings and politics. As I will not be available the next time for this activity I wish my fellow board colleagues a lot of success for the next run in Tenerife. Finally I would like to thank Eurocontrol management for their outstanding support.



# Report Committee B, IFATCA Annual Conference, Bali - Indonesia

Raf Vigorita

The Technical Committee, B, discussed a number of important and complex topics. To start off, they conducted a study on the possible re-categorization of wake turbulence. Where most countries use the standard L-M-H-S categories, USA and Switzerland use 5, UK uses 6 and a few countries use some totally different approach.

While it is recognized that the current standards, based solely on weight, are obsolete, the way forward isn't as easy. Currently we apply the same kind of separation between a 142 ton A310 followed by either a 124 ton B757 or a 19 ton ATR72. Everyone appreciates the need to address this in a more selective way. A study, meant to optimize wake turbulence categories, was initiated by both the FAA and Eurocontrol in 2005. They looked at 61 different a/c types, representing roughly 80% of all traffic. It was initially decided to use 6 different categories (from A to F) based both on wake strength and rolling coefficient. These were operationally tested in Memphis airport with a net result of +15% in capacity. This is a very limited feedback however, and the aim for the future would be to move away from categories altogether, and just look at each pair of different a/c and apply the appropriate separation minima. However, with roughly 1200 different types of a/c flying the world's skies, there could be around 1.5 million different combinations. Technology would have to come and rescue the otherwise overwhelmed ATCOs.

To make things even more complex (or accurate, depending on how you look at things), the third stage of this study will no longer look at static pairs of a/c but rather at dynamic ones, taking into consideration every pair at any given moment based on the current and actual weight, speed, weather and so on.

Next subject the committee looked at was one on mode S transponders. Although in MUAC, we all know and appreciate the positive effects of having mode S to cross-check the selected levels amongst other things, there are issues related to it: the 'simpler' issue is for APP units where pilots sometimes intentionally select different levels as otherwise instructed to fly optimal trajectories. Where does the responsibility of an ATCO lie to correct pilots in such known cases? Even more important, the TCAS RAs could be down linked to an ATCO's position, opening a whole new world of responsibilities and legal maze that we do not truly need. However, mode S derived data are widely used especially in the European region and could

be used to enhance STCA, if the data are guaranteed to be not corrupted.

An interesting presentation was given by our colleague from Hungarocontrol on a new software called MergeStrip that will eventually aid ATCOs in efficiently sequence traffic while allowing them to fly more ideal vertical profiles. Very effective and cheap to implement, it seems to work a lot better than Point Merge.

One interesting topic was UAS (unmanned a/c systems). Not so much on how and why the RPAs (remotely piloted a/c) shall be separated with the same standards as applied to normal a/c when flying through civil airspace, but especially for four controversial topics:

- most of these RPAs are non-RVSM (to cut costs)
- there are no procedures on loss of communication (links between RPA and its remote pilot)
- the largest RPA is just a copy of the Piaggio P180, therefore becoming more and more a plane than a drone
- IFATCA normally doesn't support mixed mode operations, and a/c plus RPAs flying in non segregated a/s is viewed as a mixed mode.

One interesting topic was the study of UDPP (user driven prioritization process). Still a concept in SESAR, coming under the umbrella of ATFM, it's a study on how the airlines could have input on how delays are allocated, choosing and cherry picking delays (in so far as practicable) as they see fit to better meet their business objectives and remain profitable, specifically for unexpected capacity reduction (WX, RWY closure, system problems, staffing...). Eventually slot management will be available to airlines where ad hoc slot swaps (or sales) will be acceptable. However such procedures shall never have a negative impact on ATC provision. Non compliance to UDPP will carry penalties, but not for ATC while in the provision of its services.

One final topic of paramount importance was discussed, such as a possible amendment of ICAO Annex 13 (accident investigation) where proposals to include victims' families (and their lawyers) in the investigation process were presented. Thankfully, these proposals were unequivocally shot down by ICAO itself because it presented a problem of possible anonymity (following the cold blooded murder of our Danish colleague in Switzerland) and most importantly to guarantee that the investigation processes remain fully independent.



## Report Committee C, IFATCA Annual Conference, Bali - Indonesia

Frederic Deleau

When embarking for the journey to Bali, the island of the Gods, I had problems to imagine what to expect. Many tourists travel to Bali for the beaches, the culture, the scenery; that was not my principal drive. I knew I was heading for what probably would be my last IFATCA Annual Conference...and this only feeling made the trip a little bit different than others.

After a few days spent in the North of the island, I joined our EGATS delegation at the Sanur hotel. The conference could start.

With the Plenary and other formalities out of the way, the Committees started their discussions.

In Committee "C", this year's working program was exciting and interesting, not only for the issues that will be discussed but surely because EGATS experience on various matters was considerable and we would be able to share it with our colleagues.

First, the Executive Vice-President Professional (Scott Shallies, AUS) and the chairman of the Professional and Legal Committee (Jez Pigden, UK) gave us an overview of their activities in the past twelve months. Besides a considerable amount of meetings, they tackled the work program assigned to PLC. They also called for people to consider putting themselves forward for PLC membership. EGATS was approached several times to run again for PLC, but due to several constraints, we did decline.

Then, IATA made a presentation on Fatigue Management, which is very current with several media reports on pilots falling asleep in the cockpit. It also linked seamlessly to the PLC's work on Fatigue Risk Management Systems. Extracts taken from an extensive and complete work produced by the Dutch Guild were debated. While most of the recommendations seem logical for us in MUAC - basically to have a system in place taking into consideration the impact of shift work and the reduction of performance associated with fatigue - one of the conclusions, to introduce a systematic learning environment to improve the system and prevent risks, was very valuable to many participants.

An analysis of the right to take industrial actions and what steps to consider was the next topic. It described and compared the IFATCA policy to the current reality. EGATS brought forward a few comments, especially stressing the fact that ATC is an essential service. Some did not agree to minimum services while we could consider that "essential" services such as hospital flights

and State flights should be the only flights allowed as minimum service in order to guarantee maximum effects of an Industrial Action but also safety of the system. A tense situation, such as a strike, should not be hollowed out by going beyond essential services. Management would always try to "push as much traffic as possible" within the restricted sectors opened and the ATCOs on duty could be confronted with a situation which could not be manageable, considering the already stressful atmosphere.

It was interesting to hear that the International Labor Organisation (ILO) confirmed that the right to strike is guaranteed for certain category of essential services. ATC is one of them and they also advised that an arbitration process SHALL be put in place. We have in MUAC a Social Dialogue system in place that cares for such situation, without the need of an external arbitration process.

Another topic: Review of Single Person Operations Policy and Four Eyes Principle. While IFATCA stresses the need to operate sectors with two qualified ATCOs, it also defends the idea that ATCOs shall not be held liable for incidents or accidents resulting solely or in part from the non-implementation of the 4EP (4 Eyes Principle) Safety Net. EGATS brought the idea of the Multi Sector Planner concept and asked this item to be put on next year PLC work program.

Update on commercialization of ATS: some examples were given of the transformation of public (administration) ATS services into private/corporatized services. EGATS intervened for one factual mistake included in the paper presented, namely that MUAC was not mentioned as providing ATC over Germany ("In the case of Germany, (...) ATC for Upper Airspace is only provided from Rhein Radar today"...). This will be corrected. We also contributed a lot in the discussion on the very principle of commercialization of ATS.

The last presentation for the first day: Critical Incident Stress Management (CISM). CISM is a known and working system in MUAC while for others it seems still far from implementation. Yet another example of the positive influence a Professional Association can and should have. EGATS initiated and supports the CISM program for many years.

The second day meeting had Committees "B & C" join up. Why such a set-up?



Since a number of years, this is done because the issues and presentations brought to both Committees often overlap. It is also good from a logistics point of view, as some reports have to be presented to all "B" and "C" delegates: it avoids those with reports in both committees to run from one to the other and make the same presentation twice. Absolutely logical!

The only drawback for EGATS, and it is a very light one, is that we have to follow a lot of pure airport issues...and as we know, there aren't a lot of airports above FL245...

As Raf was also following the combined session, I took the chance to jump to Committee "A" (please refer to Raf's report for more details).

My report for these activities will be a few sentences to express a feeling but also a reality: people spend a lot of time preparing high quality reports for IFATCA and its members. It takes a lot of time and energy to try and capture one year of meeting participation, new concepts, explanations, etc in a written report. People then come to a conference loaded with material and flash as much as possible into power point slides, and worst, for most read out of their slides! But all the written information should already be known as people receive the reports before? Some take ages to come out with their conclusion and too often, they lose the attention of people along the way. It is a real shame. As I wrote many times, a lot of good material and reports are presented during these conferences but it simply does not reach the audience after one uninterrupted hour of PowerPoint torture!

Not to mention a presentation about "The fountain of Well Being". Actually, I cannot resist talking to you about this one: the person

having prepared the paper was not present - the person having to present this "master piece" was busy with other commitments. At the last moment, a third person, from the same delegation, took the responsibility to "flash" Committee "C" with 45+ slides...after six black slides showing a few words (like: "Hi", next..."I will present you", next..."today", next... etc,etc,etc) Each slide given to be read like kids without anything else than the sound of the air-conditioning fan...EGATS decided it was enough for that one and asked the chair to go to the next topic.

Surprisingly, everyone unanimously agreed but nobody was prepared to intervene..

I thought it was worth mentioning as a general remark that Power Point can be fun and they

usually make the conclusions easier, and remembered. The rest can be read in documents.

The last day, as mentioned in Michael's report also, EGATS was briefly in the spotlight when the discussion about the Single European Sky developments (SES) and about the FABs. My presentation consisted of three pictures... and I did not intend to talk for hours! Just to make the necessary points with the needed information and let people think and talk about the whole subject.

I requested some feed-back from Member Associations involved in the different FABs. Besides Denmark reporting that the NUAC-FAB with Sweden is working quite well, all other MAS were disappointed.

All in all not really a surprise for the participants as I already reported to them the "Limassol EU Aviation Conference" conclusions during the last European Regional Meeting in Belgrade in October. It was already stated that the FAB development did not reach the goal as the States were too reluctant to give up sovereignty and to embrace in real harmonization.

The Bali conference was closed and it was not without emotion that I left this kind of event.

I am, as usual, extremely grateful for all the experiences I have acquired in and around these Annual Conferences. I have met many great people and professionals.

You never know what tomorrow will bring but, as mentioned at the beginning of this report, I intend to concentrate mainly on European affairs and on MUAC's future.

Once again, I wish to thank the EGATS EB and the members for the support and the opportunities that are offered to me. Thank you!

**In MUAC, the future is today!**



## Report on IFATCA Panel and European Regional Meeting, IFATCA Annual Conference, Bali - Indonesia

Michael Ott

This year again I had the chance to represent EGATS at the 52nd IFATCA annual conference. It was my fourth conference after not being there in the last two years. Even when I attended some sessions of committee A, B and C my report will only cover the IFATCA panel and the European regional meeting.

The topic of this year's panel discussion on the first conference day was: "Will controllers/pilots be needed in the future?"

EGATS and IFATCA board member Philip Domogala moderated the discussion with some interesting guests: Captain Rick Torn, IFALPA representative Patrick Forrey, IFATCA Evp Tech (until this conference) Len Wicks, ICAO Asia/Pacific regional officer Dr Yaddy Superiyadi, lecturer at Indonesia Civil Aviation Institute, lecturer at universities Alexis Brathwaite, IFATCA president

Since full automation of ATC is a topic for over 40 years already it was agreed to consider a timeframe of the next 20 to 25 years for this discussion only.

Rick Torn, Patrick Forrey and Len Wicks presented their views, in which for the next 20 to 25 years the human being will be irreplaceable in the cockpit and in front of the radar screen. Especially unforeseeable and/or emergency situations can't be handled by fully automated systems. As well passengers will be very uncomfortable to sit in an aircraft purely relying on computers without pilots onboard or controllers on the ground.

Last but not least the antagonist, Dr. Yaddy Superiyadi, states his theory that pilots and controllers will not be needed in the future. However he is unable to name a timeframe when this will happen, because of the unpredictable technical development.

After the specialists presented their opinions different people from the floor asked questions and participated in the discussion. One of the most interesting was the manager in charge of the NextGen program in the FAA. According to him, no provider is willing to invest the amount necessary to push for full automation at the moment. There are some companies developing tools to automate certain parts of our work, but only, if they are sure to be able to sell their product and make a profit. To get closer to full automation a huge investment for

research would be necessary without the assurance to find a result.

After listening to this interesting discussion and as well from my own experience, I have the impression that we still have one of the most advanced ATC systems worldwide. Due to the setup in Maastricht involving controllers (SMART) we ensure that human factors are taken into account and those tools are tailored especially for our environment.

As well nobody else in the world seems to be close to find the Holy Grail which would be a fully automated ATC system being flexible and able to handle special/contingency situations. Our job seems to be safe, at least for then next 20 to 25 years we will not be replaced by machines.

The regional meeting took place on Sunday morning with 31 MAs from Europe being present and holding 7 proxies. This means only Albania and Armenia were not represented and is a great success for the region and is mainly due to the EVP Europe's (Zejlko Oreski) commitment in collecting many proxies. He opened the meeting and lined out the ruling: All the MA-reports will be in the closed session where no minutes are taken and no reports shall be produced.

Philip Domogala presented the ESF (European Support Fund). The ESF contains presently around 10.000 Euros and is used for assisting MAs to attend conferences. This year Latvia and most probably Ireland will need support to attend the regional meeting in Sarajevo. Ireland suffers from unexpected legal costs concerning their pension funds and even had to apply for the Special Circumstances Fund to take over their annual fee.

Before moving into closed session, where Rob Peters (head of strategic relations Eurocontrol) was accepted as observer, Zejlko thanked the many representatives for their work being involved with EASA and SESAR. If you are interested on updates about Spain, Greece, Latvia, Cyprus and others we can give you a heads-up in person, only, due to the rules about the closed session.

After the closed session the regional meetings of the coming years were discussed: 2013 will be in Sarajevo, 2014 in Ukraine and for 2015 or 2016 Germany and

Estonia offered to host.

The liaison officer to the EU gave his report together with Frederic Deleau on the latest work on SES and the FABs. The FABs are a disaster and not delivering. Fred asked for reports from MAs being involved in the different FABs. Besides Denmark reporting, that the NUAC-FAB with Sweden is working quite well, all other MAs are very disappointed. Especially a social dialogue is not happening anywhere. Iceland withdrew from the FAB and Austria reported having done a real-time simulation of LARA as Airspace-Booking-

Tool, which came to the conclusion not to be workable for them.

However it has to be said that LARA is operational already at MUAC and seems to be working fine.

EASA will become the one safety agency in Europe but is insufficiently backed up by the states. As a result it is very bureaucratic and not yet operational.

Rob Peters gave a quick update on what's going on within Eurocontrol. Many projects were launched and around 200 people were retired on early terms last year, because the agency was forced to cut costs. He stressed the importance of IFATCA in his eyes and suggested the deputy president Patrik Peters to meet with the new DG Frank Brenner as quickly as possible to bring him up to speed about IFATCA's involvement.

Last but not least I would like to thank Eurocontrol for supporting me with AoDs to enable me to participate in the conference.



YOUR  
**CISM**  
PEER COUNSELORS





# CISM IN MUAC

## The history, by Inge Vander Eyken



### It actually all started in 1995.

A couple of weeks after my final check-out I had the pleasure of travelling to Jerusalem to attend my first IFATCA conference. Until then the International Federation of Air Traffic Controller Associations

(IFATCA) had been unknown to

me. It was quite an overwhelming experience: meeting lots of enthusiastic Air Traffic Controllers from around the world, hearing discussions on so many different technical and professional issues and aspects of our job. One item though especially grabbed my attention: Critical Incident Stress Management.

IFATCA already had a policy for the psychological support of the Air Traffic Controllers since 1986. This was later further developed and from 1995 onwards I actively participated, on behalf of EGATS, in the shaping of what would eventually become a full Critical Incident Stress Management Policy in 1998: "IFATCA strongly supports and recommends the introduction of CISM programmes for all its member associations".

Many such programmes already existed but were usually "disaster driven". In some countries however, like Germany, Trinidad and Tobago, Austria, Switzerland, to name but a few, Air Traffic Service Providers had taken the initiative without waiting for any such horrific motivation.

I personally could not understand why till then nobody in MUAC had taken the initiative to implement a CISM Programme, despite the fact that it seemed like a necessary support tool.

Armed with IFATCA's policy, I started my battle to have CISM introduced in Maastricht UAC.

Initially there was very little interest from Management, until Klaas de Vries joined us as Head of Operations. He came from Amsterdam, where the implementation of CISM had been triggered by the ELAL crash in October 1992, and he was familiar with the advantages of having such a support programme. Suddenly EGATS managed to push things ahead and the Head of Operations and Director MUAC

both gave their full support to the CISM initiative.

In 2001 the CISM Foundation Team was established consisting of Roger Bartlett as Coordinator, Olga Zhurbyn as Welfare Officer, Inge Vander Eyken and Sven Dutrieue from EGATS, and Frank Schoenenborn from TUEM.

A lot of questions arose when we started developing the framework for our CISM Programme. How should we organise this? How many peers do we need to train? Who should train them? How do we (s) elect the peers? Should we go for the pro-active approach (CISM intervention after every incident) or just be "on standby" when support is requested? How do we guarantee confidentiality? What should the budget be? How should we create awareness and promote the CISM Programme?

It took another 2 years. Finally, in 2003 our first CISM peers were trained.

CISM organised by the staff, for the staff!

It seemed to have taken a long time since those eye-opening moments in Jerusalem in 1995. But I believe it paid off to proceed slowly and cautiously. It meant we could carefully gain the trust and much needed recognition from our colleagues as well as from Management. An environment was created in which the confidence in our CISM Programme could grow.

Today, 10 years after implementation, I am very happy and proud to see that the availability of CISM support is almost taken for granted. Who we are and what we do is known by most, but when we do it, it is hardly noticed. I am happy that our support is not often needed, but those occasions when our support is sought for and given, I really cannot imagine our Ops environment without it anymore.

*Thank you EGATS for providing support.*

*Thank you management for the resources over the last 10 years.*

*Thank you all for your trust.*

**And last but not least, thank you CISM peers for your continued dedication!**

## Running of the CISM Programme, by Kirsteen Easdale



In 2007 I agreed to become the CISM

administrator, filling a gap that had been left vacant for far too long after the departure of Roger Bartlett from the ranks.

It was felt essential to have someone with an

active knowledge of CISM and

how it works to fill this post and I seemed to have the most time on my hands...

My tasks can be grouped into two areas: the day-to-day running and purely administrative side and the more inspirational and unplanned side.

The administrative side involves updating contact information, posters, producing the yearly pamphlet, Peer elections, arranging the yearly Refresher Training and a one day Evaluation Meeting.

The 2 day Refresher Training is always an interesting, if tiring, event: not only do we have our trainers from the IVP to refresh the theoretical knowledge and instigate role playing exercises but an outside speaker is also sought. The most memorable so far were when 2 DFS Peers were invited to give a presentation on their Uberlingen involvement and a couple of years later when 2 LVNL Peers presented their experiences after the THY crash. This was not only interesting but exceedingly helpful in a practical way as to what might be expected in the aftermath of a large incident. The one day Evaluation Meeting is important for the development of the CISM Programme itself. What sets our group apart is that it is possible to react on suggestions that we receive or on our own observations straight away. For instance, it was through a suggestion from a colleague that there is now a 5th page on the Occurrence Reporting Form which contains basic CISM information and a contact list of Peers which can be taken home. This practical approach enables the Programme to remain dynamic and enables it to be shaped by what is regularly observed in the Ops Room itself. What cannot be foreseen are the international contacts and

requests that reach me. It is 10 years since a CISM Programme was introduced into MUAC and there is a lot of practical information that has been gathered throughout these years. Many ANSPs are interested in setting up a programme in their own country and of course any information is gladly received by them. It also swings the other way and it is through the sharing of experiences and best practices from other ANSPs that our own Programme can be fine tuned or adapted as appropriate. In the last years we have shared information with countries like Portugal, Sweden, Ukraine, the UK, and with Belgocontrol, LVNL and DFS.

Since the CISM Programme runs a bit alongside the divisions, it means that we must regulate our own work and welfare and think about what path we wish to take and/or what training might be beneficial for the Peers themselves. The unpredictable nature of the task makes it hard to estimate what effect "interventions" will have on the individual CISM Peers themselves and an element of self preservation is important.

In total 31 people have followed the CISM training course over the years and an election can be expected every 3 years or so as Peers step down and need to be replaced. An electronic election now makes this task much easier and a substantial increase in returns was experienced when this method was first used. Another election can be expected towards the end of this year...

CISM at Maastricht has certainly developed through the years but what remains the same are the guiding principles of confidentiality and trust which are as strong today as they were 10 years ago. It is due to the drive of EGATS and the support of management that there is a programme here at all and it is down to the integrity of the Peers and the trust of colleagues that makes it run so well in Maastricht.



# CISM IN MUAC

Being a CISM Peer, by Kevin de Kroes

Hi there,

Allow me a quick intro, I'm Kevin de Kroes. Controller in the Deco-sectors since 2007, Belgian and turning 30 this year. Let me try to share how it is being a CISM-peer, something which started for me in 2010.

After feeling very surprised to be

elected by my colleagues and Kirsteen asking me if I was willing to participate, it was with pleasure and curiosity that I accepted.

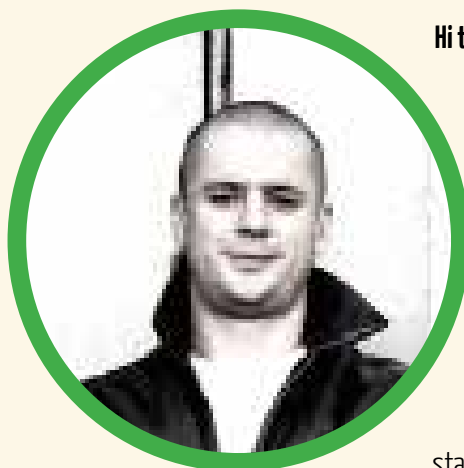
Not knowing what to expect, the initial course proved to be very challenging. Given by the National Institute for Psycho-Trauma, it contained lots of information about human behaviour during or after certain potential stressful situation.

Role-plays with professional actors are done to train us and show us what emotions we might come across. At times overwhelming is the least we can say. And learn to listen and let the process evolve by itself, eventually achieve solutions; these role-plays, together with more examples and theoretical background, re-occur every year during our 2 day refresher-training, trying to keep us prepared as far as possible.

By being a peer now, it means I am available all the time, never knowing when a call might occur, while at home or at work. It could be the Supervisor asking for support or anyone of you individually asking for direct intervention or in a group alike. Believe me, it doesn't matter when it happens, it always gives me an anxious feeling, because of course you want to be there for your colleagues in the best possible way.

Up to today, I have had no regrets accepting Kirsteen's offer. I learned a lot, not only about what might occur professionally, but also about myself and life outside of work. How and why we react in certain ways, what can trigger emotions.

I can only admit that my belief in the importance of the programme only grows and that in the end it feels good to be there for your colleagues.





# Visiting Fort Worth Center (Texas, USA) by Viktor Jagasits

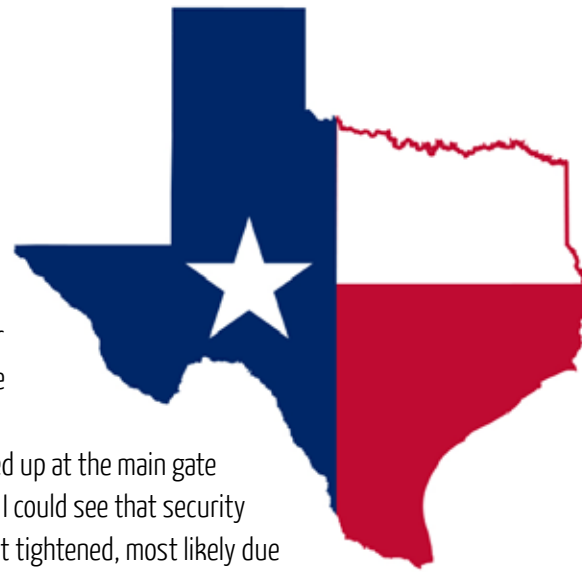
During a private trip in April 2013 I've had the opportunity to visit the Fort Worth Air Traffic Control Center in the United States. I thought if I was already there I might as well have a look to see what's different and how things work in a center in the USA.

I have started to organize the visit well in advance, since I thought security in the US must be very tight on these kind of installations. To be honest, in the beginning I couldn't even believe I would get access to such a facility. Fortunately Eurocontrol and FAA have signed an agreement, still back in 1986 which has an annex called "operational harmonization". I was referring to this item when I was asking for permission to visit the facility. It took a good 3 weeks to get everything done, but in the end there it was in my mailbox - my visit had been approved and I had to show up at 09:00 sharp at the entrance of the centre.

Since I also work in the SMART group, I have emphasized that I was interested in the technical aspects as well. I was told I'd have the opportunity to talk about those kind of things as well with the Facility

manager Ms. Andi Ramaker after my visit in the OPS room.

When I showed up at the main gate of the centre, I could see that security was a little bit tightened, most likely due to the Boston bombings just a few days before. When I entered the guardhouse, they have advised the DSUP of my arrival and asked me to put all my things into the X-ray machine, and to go through a metal detector - just as at any airport. Ms. Julie Williams (DSUP) picked me up at the main gate and led me straight to the OPS room. From the moment I was inside the fence, it only took two additional doors that had to be opened by her badge to get in there, so in the end security seemed much less tight than in MUAC.



The first thing that struck me when entering the OPS room was that it was dark. And I mean really dark. It took quite a few seconds for my eyes to get used to the darkness. I was led to the supervisor/FMP/Wx desk in the middle and had a chance to see their work.

Their flow management works in a completely different manner than ours. They make tactical decisions as well, like rerouting aircraft already in the air to avoid overloads or for example asking the previous sector to put certain speeds on the traffic in order to avoid inbound bunching.

They have a very nice visualization of all aircraft inside-, entering- or exiting-US-Airspace and already in the air. When the flow-man asked me where was I working, I've tried to explain it by pointing a

reason for these re-routings. The sector sizes are much smaller and the workload is much higher than in our centre. This is caused by the single-man sectors, and the lack of automatic coordination. All flights must be offered to the next controller by phone, which increases the workload very much. During busy traffic periods, the sector is extended with a planner and eventually an assistant controller.

Forth Worth Centre still has the old ATC system, they don't have NEXTGEN yet (NEXTGEN will have datalink and data communications between units/sectors).

It was quite shocking to see how difficult it is to handle the old system. It is operated with a trackball and a keyboard. The latter is needed to use all the functions. If you would like to put on a 2/4/8 minutes speed vector, you must enter the command for it and when you're done enter another command to put it back to 1 or none - as they use it the most.

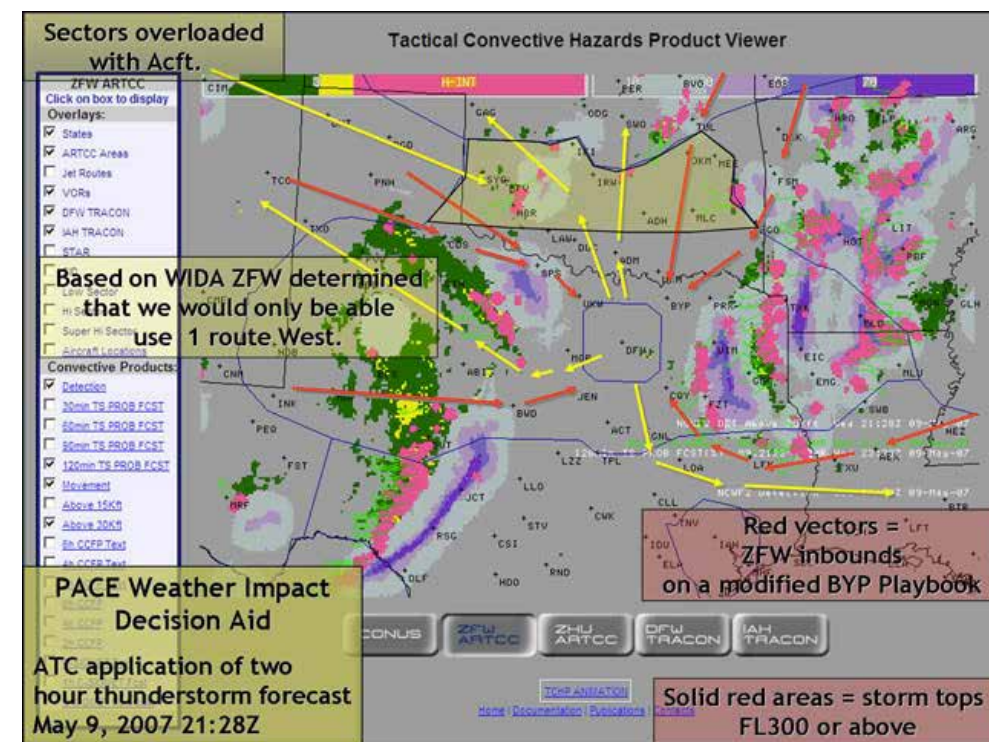
I was sitting in a sector handling Dallas-Fort Worth arrivals and departures, and I was explained by the controller that they have a square around the major airports. The exit points of departing traffic are on the sides of the square, while the entry points of the arriving traffic are the corners. This way they create some kind of separation between traffic flows already.

It was very surprising for me that they have no mode S data available, not even callsigns. The controllers work their butts off changing squawks, and trying to keep up with the traffic, while making phone

calls and managing the system. There were 13-14 aircraft on the frequency when I was sitting there and they controller was very busy.

During nights they also collapse sectors, and each sector group works on a single sector, just like us - but still it's only one controller on duty. Their VCS does not allow coupling or retransmit, so cross transmissions are unavoidable.

After my visit in the OPS room I was picked up by Mr. Richard Allison, the operations manager systems. He was very kind and has shown me just about everything he could show at their engineering section. He took me to the server rooms, old and new, communications centre, systems control, backup power supply and generators, air



## • TMU Screen

bit to the East at the edge of his screen, showing the UK - but he just made some quick adjustments on his screen and there it was - MUAC's airspace with all the traffic in the air heading for US airspace. I could see the Frankfurt departures, the overflights, everything - still 6-8 hours from the boundary. Of course with a click all kind of flight data was available too... I was impressed.

The other thing that impressed me very much was the accuracy of their weather data. They had upper winds updated in every 10 minutes, and an in-house meteorologist working on the actual and near future weather. They have this system combined with the flow management up to a level that they do tactical re-routings to avoid CB-cells in certain sectors.

When I was led to a controller working position, I could see the



conditioning, really everywhere. He was very kind and has answered all my questions about different aspects of the systems. Unfortunately they were reached by the financial cuts as well, and - even though people at the center don't agree - FAA has decided to give the connection links (switches and routers that provide the data transfer and voice transfer) to external partners - they will not be in house anymore as Mr. Allison said.

meet Ms. Andi Ramakers, the facility manager since during my visit an accident has happened, a light aircraft crashed outside of Dallas with 6 people on board and an emergency meeting was held for the top management.

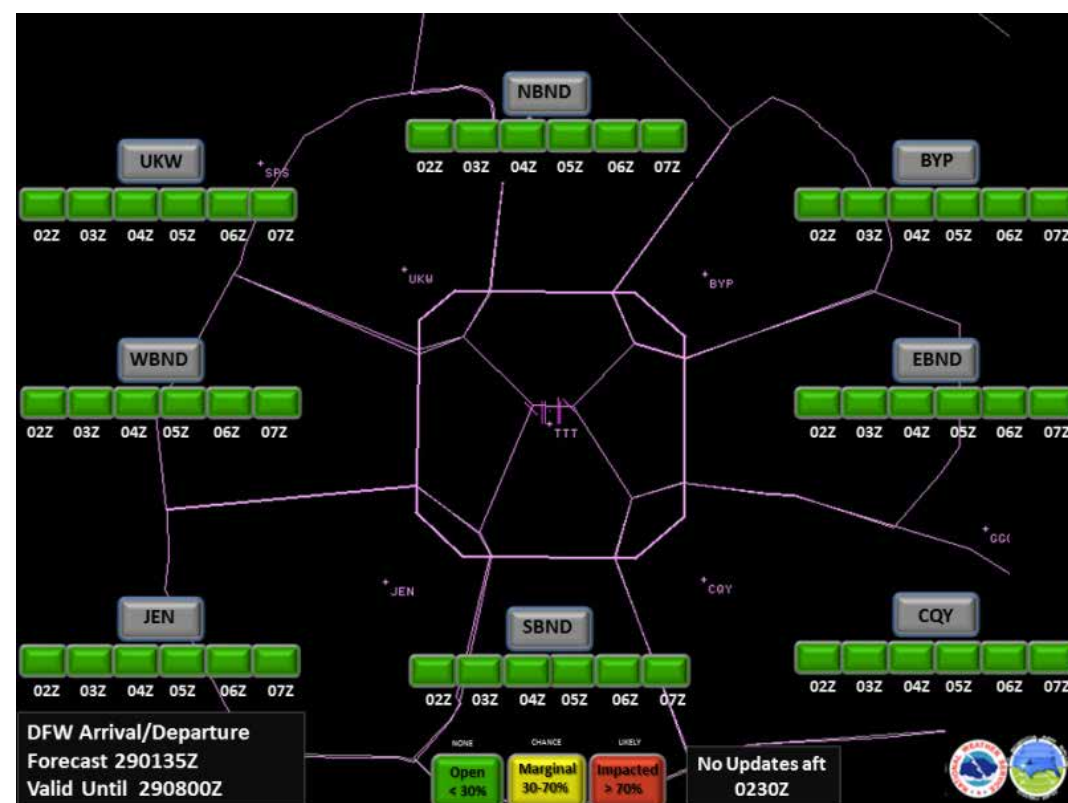
At the end of my visit I could witness the heightened security again, by not being let out of the facility until my ride has arrived - apparently loitering in front of areas like this would ensure a rather quick pick-up by the police, something that we all wanted to avoid...

**At last, a few words about the center:**

ZFW is the ninth-busiest center in the United States. It is responsible for 147,000 square miles of airspace over five states, including much of Texas, parts of Oklahoma, Louisiana, Arkansas and New Mexico. Controllers at ZFW work over two million operations per year, or an average of 5,500 operations per day. They control traffic from ground to FL450.

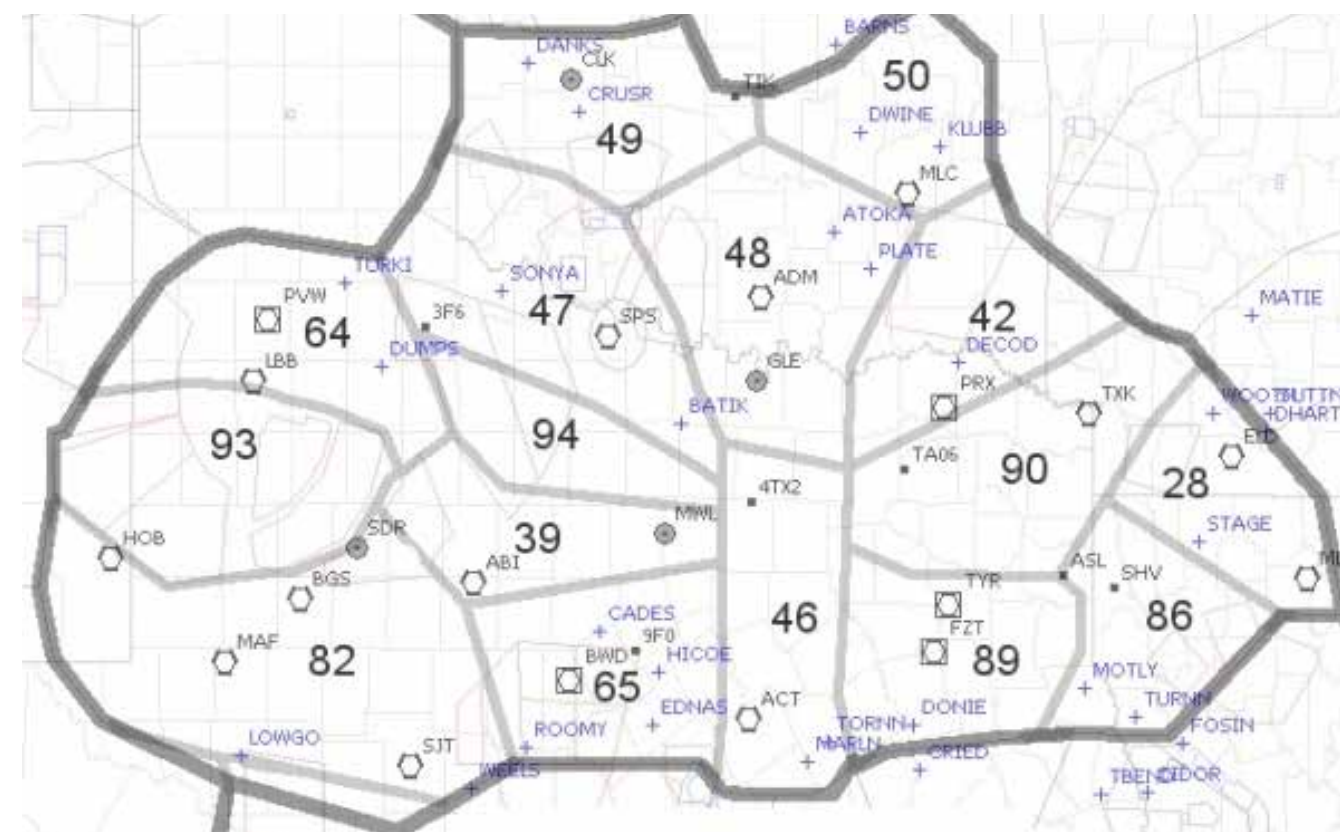
ZFW resides inside the boundaries of Houston, Memphis, Albuquerque and Kansas City Centers. ZFW

- **Radar screen at ZFW**



- **Arrival management**

After our tour around the facility, he introduced me to the rest of the OPS management staff, except the training manager, who was away. We got into a discussion and I was quite frankly shocked that they have never even heard about Mode-S as such. They thought I was talking about Mode-C and when I mentioned the differences and benefits (FSSA, etc.) they were amazed that these kind of things actually exist. As I could see over there, the main stream of developments is heading towards ADS-B based surveillance (probably to be able to dismount some radars) and GPS based navigation (the same for VORs/DMEs I guess). Unfortunately in the end I could not



- **ZFW high sectors sectorization**

(MOAs). This includes Sheppard Air Force Base, the 80th Flying Training Wing conducts the Euro-NATO Joint Jet Pilot Training (ENJJPT) program, a multi-nationally manned and managed flying training program chartered to produce combat pilots for both the United States Air Force and the North Atlantic Treaty Organization (NATO).

Controllers see an increase in air traffic during thunderstorm season, April through June. He says it is not uncommon for most East-West traffic in the United States to be routed through ZFW due to lines of thunderstorms extending from the center boundary north to Canada. Controllers also see an increase of traffic from special events such as the Texas-Oklahoma college football game in October, two NASCAR races per year and, recently, the Super Bowl.

There is plenty for NATCA members to do in their free time, as North Texas offers just about everything, from four major sports teams—including three that have won world championships—numerous universities, Dallas and Fort Worth art districts, Six Flags, the Fort Worth Stockyards. The housing costs are low and there are also lakes for boating and fishing, and some of the best shopping and nightlife in the country. ZFW NATCA members are very involved. They keep solidarity strong with quarterly business meetings, routinely sending 20 members to NATCA conventions, strengthening their relationship with nearby facilities like Dallas TRACON and DFW, and involvement in many workgroups.

"Getting volunteers for workgroups and other representative roles is not the challenge," says Lastrapes. "Rather, it's selecting from many qualified candidates."

The ZFW NATCA Local also has seven Collaborative Workgroups, and its Safety /Events Review committee is making tremendous improvement in the facility's procedures, and has even become a model for other facilities.

The visit at the Forth Worth Center was well worth the effort and time spent on it. I have seen some other ideas, and first of all I could see that our HMI and surveillance capabilities are way more advanced than the US will be in years. It shows how important it is to keep the pace of improvements to stay ahead and lead the way for other ATC centers in the world.

I can only recommend this experience to everyone, who is interested; it broadens your view quite a lot. Even though it's not a "neighboring" center, it does give you the extra insight of another continent's ATC world. We might have things to learn from them as well, but it is not on our ATC-HMI field, but I'd say flow control and weather data accuracy.



In this Output edition we're proud to present you the second article of series about NASA written by B777 capt. Chavdar Kostov, who flies for Asiana Airways. We hope you will enjoy them as much as we did. Part 2:

# ORANGES, DOGS AND POLITICS

by Ilia Bojilov

On October 4, 1957 USSR launched the first artificial satellite off the Earth. The R-7 rocket carried the "Sputnik 1" in an elliptic orbit with perigee 228 km, apogee 947 km and period of 96.7 min. This marked the start of space exploration.

During its very first orbit, the "Sputnik" flew almost right over the Redstone arsenal in Huntsville, Alabama, where the Army Ballistic Missile Agency (ABMA) of the USA was hosting an event for high dignitaries. A special guest at this cocktail-party was the newly appointed U.S. Secretary of Defence, Neil H. McElroy. His predecessor Charles E. Wilson had been an open opponent of space flights. As such, he had put an end to the Army's ambitions back in November 1956 by insisting they'd concentrate on conventional missiles with a range greater than 200 miles. The Army project for intercontinental ballistic missiles (ICBM), known under the name of Jupiter, had been handed over to the Air Force and was abandoned shortly thereafter. With his reputation as a man of action, capable of taking decisions fast in critical situations, McElroy was exactly what

the ABMA chief, Major-General Bruce Medaris and his leading scientist Doctor Werner Von Braun really needed in order to revive their space ambitions.

Both had vigorously lobbied the future Secretary of Defence: they convinced him that the rivalling Navy project, Vanguard, was doomed to fail and that if the Army was not given green light for its Redstone program, the Russians would very soon claim all the glory for sending the first satellite into space. Their tactical rocket Redstone, developed on the basis of German V-2 technology, first successfully flew in 1953. Although their joint work with the Navy for launching a satellite was abandoned in 1955 in favour of Vanguard, the Army Agency had continued to work on their own program.

Meanwhile, the U.S. Air Force had continued work on their ICBM projects Thor and Atlas. Designated to reach the territory of the U.S.S.R., the heavy ballistic rockets would fly at over 400 km of altitude with speeds exceeding 7 km/s. Their biggest challenge was how to protect the nuclear warheads

during re-entry in the atmosphere, during which friction would result in very high temperatures. Desperate for a solution, the Air Force contacted the Army and soon Von Braun's team found a solution. The engine was modified and the body of the standard Redstone rocket was elongated, to make room for additional fuel. Two extra stages were added, consisting of total 14 boosters with solid fuel of the Sergeant type, 11 for the second and 3 for the third stage. The rocket was called Jupiter and in September 1956, it reached an altitude of 900 km and a speed of 7 km/s. The thermal protection coating passed the test and the payload splashed down in the Atlantic, 4600 km from the launch pad at Cape Canaveral. To escape earth's gravity and reach orbit required a speed of 8 km/s, the rocket needed just one more stage. Von Braun's request to be allowed to add another stage to a spare Jupiter and to try to launch a satellite in orbit was rejected by the Pentagon. "Rocket 29" was stored in the hangar waiting for better times.

Forward to October 4, 1957. Early on, things were looking up for the Army Agency: McElroy listened carefully to the arguments of Van Braun and Medaris. In the heat of the conversation, the cocktail-party was interrupted by the director of public relations Gordon Harris. He announced that the Russians had successfully launched "Sputnik".

Von Braun jumped at the occasion to convince McElroy with words that would go down in NASA's history: "For Gods sake, turn us loose and let us do something! We have the hardware on the shelf. Just give us a green light and we can put up a satellite in sixty days! Just turn us loose". (The quote is from the book "Moon Shot" / Alan Shepard and Donald Slayton with Jay Barbree and Howard Benedict ISBN 0 86369 940 5 / pages 39-40)

## The "Sputnik" crisis

The triumph of "Sputnik" caused a real shock in the USA. The very next day after the launch, the New York Times published expert opinions. These warned that, although the satellite is too small to be of any danger, the analysis of its flight parameters clearly demonstrated the capability of the Soviets to launch nuclear ballistic missiles against the USA. Everyone was stunned: how could a nation "incapable of producing a simple refrigerator", achieve such a miracle in technology right under the nose of "the leader of the free world"? Soon the press started referring to the event as "The Sputnik crisis".

Despite all this, the White House remained calm. President Dwight D. Eisenhower stated that a small metal sphere in orbit around the Earth did not bother him at all. Although he could not reveal to the public why, his statement was well grounded. Top-secret flights of the U-2 reconnaissance planes over the territory of the USSR, which began in 1955, clearly showed that Soviet superiority in bomber aviation, which worried many U.S. generals, simply did not exist. The intelligence information had further revealed that the Soviet Union did not possess any intercontinental ballistic missiles. Besides technical flaws, they also had yet to solve the warhead atmosphere re-entry problem. Even if they had been able to overcome these, the Soviets were only able to launch their missiles one by one, at large intervals, from their only launch site.

At the time, Eisenhower's policies aimed at building up a budgetary reserve. As part of this policy, the military budget was constantly decreasing, thereby also trying to reduce tensions with the U.S.S.R. This position of the White House drew raging attacks from the media and the opposition. Some

went as far as saying the President had lost his mind and accused him of jeopardising the security of the state. By Monday October 7th, the leader of the democrat majority in the senate, Lyndon B. Johnson had convened a special committee for investigating

the reasons for the failure of the U.S. space program.

In Moscow, the flight of the "Sputnik" was a cause for a nation-wide celebration, despite the initial scepticism of Chairman Khrushchev. It was the reaction in the USA that made the Soviet leader realize the importance their achievement. It didn't take very long for him to decide to strike another blow to the self-confidence of the Americans. As the 40th anniversary of the October revolution approached, the Chinese dictator Mao Tse-tung was invited as a guest to the military parade at the Red Square. This would be a great occasion to announce the latest triumph of Soviet science and technology over the USA. On November 3rd 1957, an R-7 missile (8 71 ) put the 508kg "Sputnik 2" into orbit with parameters 212 1660 km and period of 103.7 minutes.

Several times larger and heavier than its predecessor, "Sputnik 2" carried a living creature to orbit around the earth: the dog Laika. Besides a demonstration of Soviet superiority, it would also be a test of a life support system. This consisted of oxygen supply, CO2 filters, temperature and pressure controls, a feeding and waste disposal systems and sensors for heart and breathing rates. The heat problem during re-entry still needed to be solved. Oxygen was also expected to run out after about 10 days: Laika would quietly fall asleep as oxygen ran out, never to wake up again.

After entering orbit however, the temperature control system malfunctioned. As a result, the temperature in the small cabin rose above 40 degrees Celsius and the Laika died in less than 2 days. But in 1957, Soviet propaganda proudly announced that the dog was in perfect health and survived her trip into space. Its survival was not planned at all and details of how she died didn't become





public until decades later.

In the USA the flight of "Sputnik 2" added new oil to the fire. In a speech in Topeka, Kansas, the new senator for the democrats John F. Kennedy, who had just recently announced candidacy for the 1960 presidential elections, joined the space rhetoric with fresh criticism against the administration in Washington.

### Foul start

Under pressure from the media and the opposition, the President ordered efforts to accelerate the space program. He assigned the highest priority to the Vanguard project and announced plans to launch the first American satellite by December. In addition to the program of the Navy for the following year, the Army Ballistic Missile Agency ( ) was preparing six orbital flights with their rocket Jupiter . Both those programs suffered major setbacks on the way to success.

The Vanguard team developing the civil side of the project was faced with incredible difficulties. A major issue was that the Air Force launch site at Cape Canaveral, where all long-range missiles were being tested, gave priority to military testing. Staff from the Vanguard program had to obtain permission for every single detail. Their first small victory was achieved when the armoured glass for the windows of their blockhouse (the launch room) arrived days before similar glass was installed to the blockhouse at the launch pad for the Thor missiles. Vanguard also faced continuous problems with subcontractors. When assembling one of the first test rockets, the workers discovered metal grits in the fuel tanks, which caused malfunctions in the engine fuel pumps. The engines had to be sent General Electric for

repair, while the tanks and the fuel system had to be cleaned up thoroughly.

"The Sputnik crisis" gave the program a new push. Most importantly, the relationship with the military at Cape Canaveral improved when the program got highest priority. Finally in mid-November the rocket V-3 (Test Vehicle 3) was erected at launch pad 18. After a feverish preparation, the final countdown began just before sunrise on December 4th. The long list of strictly timed procedures before the launch began with filling the fuel and oxidizer tanks. Liquid oxygen (LOX) had to be pumped under pressure into the tanks at a temperature of  $-168^{\circ}$ . Due to the low December temperatures and the LOX constantly leaking out, different valves and pipelines often had to be defrosted. Later that day, spilled LOX froze completely one of the fuel valves and the highly corrosive and very easily inflammable fuel poured out onto the launch pad. The start was cancelled, which meant draining the fuel and releasing the liquid oxygen.

Two days later the problem was fixed and the new countdown began at 01:00 on December 6th. Only twenty minutes later the countdown clock was stopped again. This time, several sensors in the rocket were acting. Fixing these was tricky, as the self-destruct mechanisms (explosives which would be detonated when the rocket veered off course) had to be bypassed.

At sunrise journalists began to gather on the beach, just south of the launch site. The beach soon literally swarmed with reporters and photographers. The few phone booths were about to burst from the radio correspondents. The countdown was resumed and the rocket was again refuelled. This time everything went without any problems. The weather was clear, and the steady wind was not a threat. With one hour to go before launch, the chief administrator of the project



John Hagan opened a permanent telephone connection with the White House press secretary James Haggerty in the President's estate in Gettysburg. Expectations were very high, but with 31 minutes on the clock, the countdown was stopped once more. This time, the problem was a voltage spark in the ignition system. Technicians ran out to the launch pad to try and fix the problem. Half an hour later the countdown continued. With 19 minutes to go, the lights in the blockhouse were dimmed to give a better visibility of the rocket. Smoking was prohibited and all idle conversations ceased. In the following 18 minutes the radio transmitter of the satellite was checked thoroughly, as

well as all the local radars and the stations for the monitoring of the flight both in the States and Peru. Five minutes before the start, all personnel vacated the launch pad. Then at one minute before the countdown reached zero, it was stopped again to due to wind. When it calmed down again, the launch sequence was restarted. The pipeline supplying helium to keep the fuel tanks pressured was released and caught with a special net. The pipeline providing air for the cooling of the satellite was detached next. The ventilation valve of the liquid oxygen tank was closed and the thin trickle of vapour above the rocket vanished into the air. Ten seconds before ignition, Kurt Stelling placed his finger on the start button. Five seconds before water streams flushed onto the launch pad to clear the spilled fuel and to prevent explosion.

4... 3... 2... 1... IGNITION...

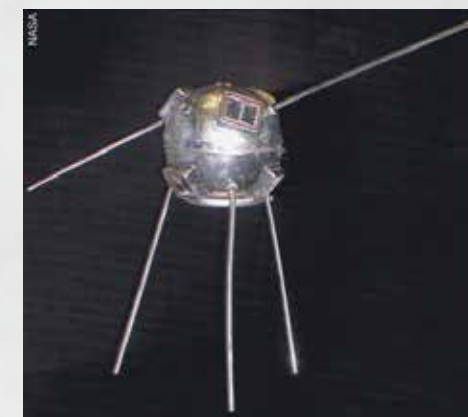
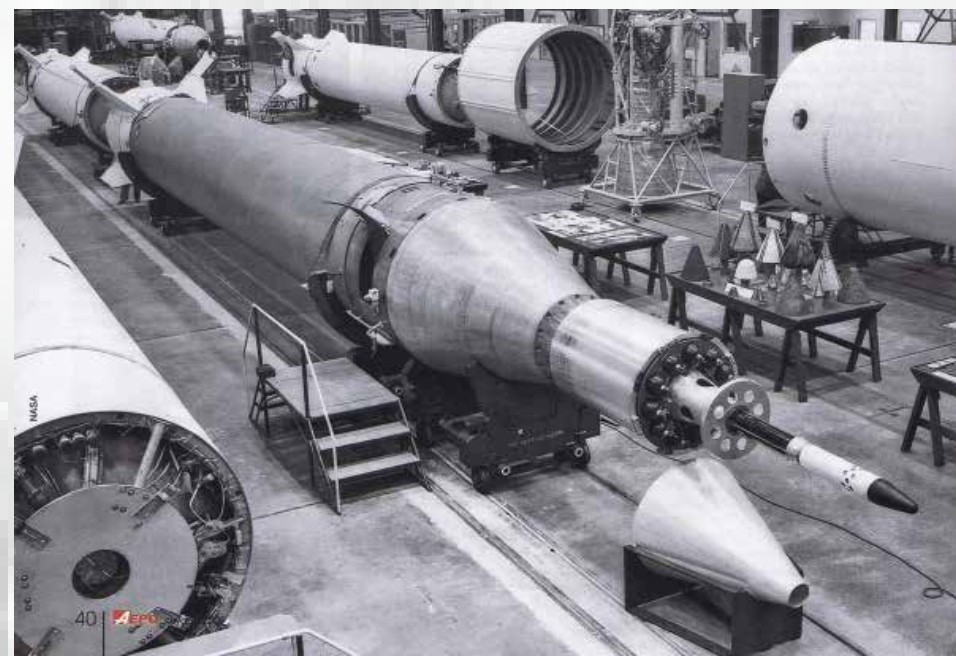
What happened next is detailed in numerous publications and reports, but my favourite description was that of CBS reporter Harry Reasoner. He passionately told his listeners how the rocket was heading for the space faster than the human eye could follow it. The sad truth is that no eye could follow the rise of the rocket into the air, simply

because it was not there. Rising only about one meter over the launch pad, the rocket started to sway violently. The nose cone fell apart, the fuselage split in two and the pieces fell on Earth, leading to an enormous explosion. Propelled by the powerful blast, the satellite came down in the wild vegetation. Its transmitter turned on and started emitting its signals. For the launch team, the sound coming out of the receiver in the blockhouse was a stark reminder of the suffered failure.

The media wasted no time to plaster the event across their headlines. Even the tone of defeat coming from the satellite tumbling onto the grass was not omitted. There was no end to journalists' creativity in coming up with humiliating names ending in "-nik". One of the favourites was "Kaput-nik", reminding everyone of the German connection.

### The success

For the staff at Cape Canaveral such explosions were almost a daily routine. The Vanguard team reacted unfazed: "We clear the launch pad and try anew". The reason for the blast was discovered after a short



investigation. Fire had started at one of the fuel pumps and had spread towards the fuel tank. The design of the pump was changed and the reserve rocket prepared for flight. Pressure to succeed was even higher this time, also because of the recent arrival of "Rocket 29" at the launch site.

After McElroy took office, Von Braun was "turned loose" and his rocket dream began to materialise. "Rocket 29", nicknamed Juno after Jupiter's wife and queen of gods in Roman mythology, was taken out of storage. The Jet Propulsion Laboratory (JPL) at the California Institute of Technology was commissioned to build a satellite. The CalTech team was led by William Pickering and the scientific experiment was prepared by James Van Allen from the University of Iowa. The cylindrical satellite had mercury batteries, a Geiger-Müller counter for measuring space radiation, five sensors for reading the temperature inside and outside of the satellite, an acoustic probe for registering micro-meteorite strikes and measuring their power and a transistor, an FM transmitter emitting signals on frequencies 108.0 and 108.03 z.

The satellite itself had a solid-fuel rocket developed by JPL, and can therefore be considered as the fourth stage of the rocket. Designed on short notice in response to the "Sputnik", the project was codenamed "Deal". The term was borrowed from the game of



poker: those who lost the game had nothing else to do but one thing: deal again!

And so, on launch pad 18 the reserve Vanguard was prepared for a second try. Starting on January 22nd, the countdown was again frequently interrupted: there were problems with the fuel system and on top of that, strong winds and even hail disrupted things. Rainwater had leaked into the satellite module and caused a short-circuit in the radio transmitter. The real problems however were in the second stage of the rocket. Over the several days of the countdown, the tanks of the first stage were filled and emptied three times, while the second stage remained filled in all the time. The highly corrosive fuel, comprising of nitrogen acid corroded the reservoir and leaks sprang in several places. In the end, it was decided to scrap the launch and the rocket was taken off the launch pad for repair.

This cleared the way for the Juno project. To his regret, Von Braun couldn't be present at the start. Together with Pickering and Van Allen, he was to spend the following days in the Pentagon, ready to give a press-conference in case of a successful start. Responsible for the organization of the works at Cape Canaveral were General Medaris, and the launch team lead by Kurt Debus, a Von Braun's associate since the times of V-2. On the morning of January 27th, Medaris arrived at Cape Canaveral. He was informed right away of the unfavourable weather conditions: meteorological balloons had been launched in what looked to be bright blue skies, but they brought bad news. The jet stream had moved to the south of its normal route and was now right above the launch site. Wind speeds between altitudes of 7000 and 12 000 m sharply gusted to 320 km/h. All data processed by the computer at Huntsville confirmed apprehensions that this wind shear was capable of completely

destroying the rocket. They had no choice but to delay the launch. The weather at Cape Canaveral remained sunny and calm, but the strong wind continued blowing high above the launch site for three more days. On the evening of January 30th, the jet stream started moving north and, although wind speeds remained over 180 km/h, launch preparations resumed the next day.

The countdown began at 13:30 on January 31st. Confident of the success, Medaris decided to stay at the hotel until late afternoon. He would need the rest, as the press conference after the successful start would continue till late the following morning. When he arrived at the blockhouse at 18:30, the countdown was only 5 minutes behind schedule. It continued normally and without any delays until late that evening. An hour and a half before launch, the rocket's self-detonation unit was activated. Twelve minutes before time, the lights in the blockhouse were dimmed. The launch pad was vacated and all unnecessary equipment removed. Using an electric motor, the satellite was set to spin around its longitudinal axis. This would help to stabilize the trajectory after separation from the third stage. The service tower was removed under the sounds of a siren, announcing the forthcoming launch.

A telex was sent to the Pentagon, explaining that the rocket will not lift off immediately after the ignition, but would remain static for some seconds. This was not a reason for concern. Two minutes prior to the start, Debus received a report of some minor problem, but the team decided to push ahead. When the countdown clock reached "0", the command "IGNITE!" was given: fuel was pumped under high pressure into the engines' combustion chambers, where an electric spark ignited it. Initially the flame was invisible, but within few seconds, when the chamber

reached its normal temperature, valves, regulating the fuel flow, opened up completely. The roar of the engines became deafening as the rocket slowly left the launch pad in clouds of black fumes. Initially, it seems as if the rocket stalled, but gradually it picked up speed and climbed into the sky, followed by the blinding flame of the engines. The gates of the blockhouse opened and everyone not involved in tracking the flight rushed out-



side to track out the result of many years of hard work, quickly vanished rushing towards space.

Just like their Soviet colleagues, they also needed to wait until the satellite completed an orbit before they could claim success. Eight minutes after the calculated estimate, the tracking station in California wasn't picking up any signal from the satellite. In the Pentagon, Von Braun's nerves were tested to their limits. To everyone's relief, a sound came out of the receivers just a minute later. With its appearance over the western coast of the USA, the satellite was renamed Explorer 1. Its orbit was 358 2550 km with a period of 114.8 minutes, slightly larger than estimated; that explained the eight-minute delay.

At the press conference, which continued well into the small hours of the next morning, Von Braun, Van Allen and Pickering proudly showed a model of Explorer 1. Dozens of camera flash bulbs went off as they raised it above their heads.

A month and a half after the Von Braun's success, Vanguard TV-4 finally succeeded to launch a miniature satellite into space. Its orbit was so high - 650 3969 km, that the little metal sphere is there today, the oldest artificial satellite to orbit planet earth.

### The birth of NASA

While the success brought relief to the USA, they were met with mockery in the Soviet Union. Khrushchev compared the American



satellite with oranges and didn't miss any opportunity to point out that the Soviet scientists were dealing with serious science: their tests with animals were preparing to send people into space in the near future.

But international scientific community thought differently: James Van Allen's contributions were highly praised. The Geiger-Müller counters, carried on Explorer 1 and later Explorer 3, confirmed Van Allen's predictions of the existence of belts of charged particles, captured by the magnetic field of the Earth. In the end of 1958 the Van Allen radiation belts were announced as the main discovery of the International Geophysical Year.

The successes of the Juno and Vanguard programs restored the reputation of the Eisenhower's administration to some extent. They still needed to catch up with the USSR and faced with fierce attacks from the opposition and President Eisenhower accepted a proposal from Vice-President Richard Nixon to reform of the National Advisory Committee for Aeronautics (NACA) into a completely civilian organization. This would be aimed at

the peaceful and scientific exploration of space. The idea conformed to Eisenhower's attempts to limit the influence of the expanding military industrial lobby. It would remain a fighting point until the end of his term. The proposal was accepted by Congress and became law on July 29th 1958 and came into effect on October 1st. It's known as the Space Act and it defines the rights and the responsibilities of the new National Aeronautical and Space Administration, NASA.

Thomas Keith Glennan was designated as its first administrator. Until then, he had been the president of Case Western University and a member of the board of the National Scientific Foundation. Former NACA administrator Hugh Dryden became his deputy. As the newly founded agency had no counterpart in American history, they were both given powers to absorb all government organizations into NASA as they deemed necessary. Within a couple of months, JPL became a part of NASA, but others took a lot longer. After a long political struggle, General Bruce Medaris lost the battle and in Huntsville joined NASA together with the entire team of doctor Von Braun.

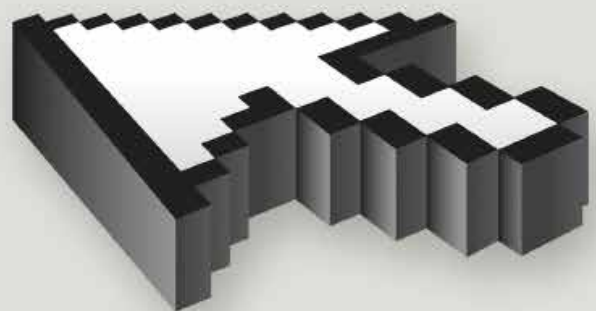
In the summer of 1958, several months before the official constitution of NASA, Dryden had instructed one of the highly promising young engineers at NACA, Robert Gilruth, to set up a working group to fast-track a manned space program. Codenamed Mercury, it would take less than three years to bring the first American astronauts into orbit.





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