



Next Generation Technical Documentation at Cologne/Bonn Airport

The DocuTecNextGen (DTNG) project allows the infrastructure at Cologne/Bonn Airport to be always one step ahead of the general airport environment development.

A guest article by Peter Kautz, manager center for technical data and information. For most people, the term »innovative airport« does not mean technical data and information services but primarily construction sites during operation or new payment methods. However, a complete documentation chain of technical data is the prerequisite for the success of an airport. Stronger obligatory documentation requirements, raising efficiency and a demanding clientele are driving forces, which – just like in an industry environment – enabled the 4.0 development. In the course of my professional career at Cologne/Bonn airport, I accompanied

all development stages. After drawing (1.0), CAD (2.0) and complete data storage in databases (3.0), 4.0 is going to create digital spaces, providing users with helpful information for efficient workflows – in the office, during meetings, at workbenches or directly on-site on mobile devices. When replacing our system in 2011, I wanted to create a basis for this – with DTNG. The aim was to build a new infrastructure that is always one step ahead of the general airport environment.

Wanted: Web-based and standardized
The infrastructure created by DTNG requires an entirely web-based system.

It retrieves all data from databases and is administrated and filled with data exclusively with standard tools. The system has to accept interfaces and must be fit for further development via short communication channels and also with moderate budgets.

We chose aimPort, as other German airports did later on. Soon after, we put the DTNG seal on aimPort by adding the concept of building rotation. With this, documentation should not stop at the border of a building, but enter it, change floors – while turning the ground plan parallel to the monitor, as we know it from analog drawings.

[continue page 4](#)



Editorial

Dear readers

In October, we will exhibit for the first time at inter airport Europe, a major exhibition for airport equipment, technology, design and services. The present in.shape edition therefore focuses on airport-specific topics. Airports feature high security standards and latest technology. Cologne/Bonn Airport with its DTNG project is a great example for innovative infrastructure administration. Düsseldorf Airport also chose aimPort at an early stage for the documentation and monitoring of a variety of processes. Both successful projects are excellent references giving us the opportunity to participate in the bidding process for Munich Airport. We are proud to realize this new project in the South of Germany. Although they have demanding jobs, our colleagues never tire in their free time. See page four.

Enjoy reading.

Uwe Meyer

Impressum

Published by: g.on experience gmbh
Willy-Brandt-Weg 29 • 48155 Münster
www.gon.de

Responsible for Content: Dr. Uwe Meyer
Concept, text, layout: Andrea Schmitz Marketing Services • www.as-marketingservices.com

Munich Airport opts for aimPort

Munich is the fourth large German airport that finally decided in favor of aimPort. We conquered Germany's »Deep South«!

Yes, we are proud: In the spring of 2015, Munich became Europe's first airport to be granted five-star status. This title, considered the »Oscar« of the aviation world, is awarded by Skytrax, a highly respected London-based aviation research institute. Shortly after, this first-class airport chose our aimPort software as the platform to manage its infrastructure.

It was not a quick decision: Throughout the bidding process we had to face powerful competitors – but in the end we came out first: FMG is going to replace their existing CAFM/GIS (Computer Aided Facility Management/Geographical Information System) called »VisMan Web« by aimPort.

Already in the past, we often scored with the restrictive compliance with international standards by using Oracle

circumstances, before taking a decision. Wolfgang Haller, Manager Technical Documentation at FMG, during the kickoff event in June: »VisMan Web based on g.on technology is going to be an important element in the administration of our building and technical asset data. We are convinced to have chosen the right product. From the start, I felt that aimPort was an interesting software, because it had been successfully used at other airports.«

FMG project leader Irina Graf about her experience when working with us so far: »After the two-month period of ongoing project work, the cooperation with g.on experience has proved very good and efficient. Results are being developed in a fast and structured way. What's more: The vast experience of FMG and g.on leads to a mutual profit of both companies.«



Participants of the kickoff meeting at Munich Airport in July 2015

databases. Also, aimPorts excellent performance when providing mass data with web technology convinced in various existing airport applications.

Convincing references

In the past couple of years, aimPort has been in operative use at other major German airports, such as Frankfurt, Dusseldorf and Cologne/Bonn. This way, FMG was able to get a »live« impression of the software under similar

Good quality in all price ranges

We are especially glad about the fact that a price battle not always leads to success. Once more, aimPort convinced by technical quality. By the end of this year, we are going to provide a low-budget hosting solution based on aimPort. It will also comply with the database standards of the AMDB (Aerodrome Mapping Database), as this will soon be a basic requirement for air traffic data administration in Europe.

Düsseldorf Airport counts on Database Supported Business Logic



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Düsseldorf Airport is the third largest airport in Germany, the major international air traffic hub in North Rhine-Westphalia and is a pioneer among aimPort users since 2012.

Our interview partner is Uwe Ciminski who, having been working at the airport for 25 years, knows it better than his own household.

Mister Ciminski, you are responsible for data management and documentation in the Real Estate Management Division. Could you tell us more about your job?

UC: With the support of my team of four, I take care of the system administration for our CAFM but also of DUS GeoWeb (that's how we call »our« aimPort).

At the same time, you are involved in several branch-specific committees. What exactly is this about?

UC: Well, yes. Mainly, there is Arbeitsgemeinschaft Deutscher Verkehrsflughäfen (ADV), a consortium of German airports, where I am technical project manager for the ADQ project. The Aeronautic Data Quality is based on a regulation of the European Union, which will soon organize a standardized data exchange between airports and air traffic control.

Are there more committees?

UC: Yes, of course, many. But personally, I am only involved in some of them, e.g. the Aerospace Standards Committee (DIN NL). You know, these committees are very helpful to gain useful information that can be integrated in daily business. Especially, you are always one step ahead, if you take part in the decisions yourself.

How did you learn about aimPort as a technical platform?

UC: As often, I learned from the »neighbors«. Talking about beer, my colleagues from Cologne/Bonn Airport and myself don't share the same opinion. But when they told me about aimPort in 2011, during the annual CAFM CAD GIS meeting (a working group within ADV), I got quite curious about it. Well, one year later we also worked with aimPort.

What do you like best in aimPort? What makes the difference?

UC: A conventional GIS generally follows the graphics tool. aimPort, however, allows to tap and visualize

a variety of data sources, entirely independent of the graphics system. Whether SAP, mobile applications or the monitoring of technical facilities: The business logic is based in the database, not in the application! Therefore, it enables users to easily »build« new own applications. For example, I am thinking about (apron) slab cadastre, »in-motion real time visualization of aircrafts« or »airport map damage cadastre«.

Do you think, aimPort stands in competition to other systems, such as CAD, CAFM, ERP – or GIS?

UC: No way, in the contrary. aimPort extracts from all systems those components necessary for a reasonable use. Which brings us back to the database-supported business logic.

What is going to happen in the next stage of extension?

UC: Currently, we think about connecting the air traffic itself. With some kind of positioning matrix for aircrafts that also recognize the respective aircraft type. Very useful for the daily business of air traffic controllers.

One Sport is not enough?

People who cannot decide between running, swimming and biking, participate in triathlon competitions.

We even have two colleagues who like breaking their chops during their spare time and pump everything out of their bodies. Probably not for lack of challenge in their job.

Marko Franke, our Oracle and FME expert, came in 177th (out of 5000!) at the ITU World Series in Hamburg in July this year. We think, this is not bad. Also Nicole Greger, data management LIDS and MicroStation, is practicing some seven hours a week. She will also achieve a good ranking – in September at the Triathlon competition Cologne Smart Distance.

We wish both of them further success!



Marko Franke in Hamburg

Continues from page 1

Data keep their original format

We focused on the approach to fetch information where it originates, and in its original form. External data providers don't have guidelines for CAD documentation with regard to data structure and parameters. However, they must provide a seamless documentation of their activities. Within the DTNG project, we developed a so-called TTK (TurnTheKey) tool. In the context of quality assurance, the CAD data of external providers are transferred into the structure of the airport CAD system and then into the DTNG database. Within the current DTNG-pack3 project, technical data, which the respective departments keep exclusively in SAP, can be retrieved online via DTNG. Equipment that is generated in SAP can now be generated and located in DTNG – within the SAP environment.

As easy as shopping in the Internet

For us, it was equally relevant, that the user likes to work with the new system. We keep us up-to-date and are continuously in the departments to create applications that are really helpful for the users. Here, we are supported by the popularity of the Internet. The users are not very keen on learning new computer software. On the other hand, they are often surfing the Web. Hence, the programmatic slogan that created sympathy for DTNG from day 1: A technical information system »as easy as shopping in the Internet«. That is the benchmark of success for DTNG.

Access to all Systems

Which technical data are going to be visualized via DTNG or reached by DTNG? All of them! DTNG provides a universal access to all other expert systems. Among them a document management system with monitoring



Peter Kautz in front of a vertical take-off aircraft, Dornier museum Ludwigshafen

function containing complete approval documentation since the beginning of the airport history, a filing location for CDs, SAP-PM and also Eplan, to retrieve electric circuit diagrams from the floor plan. All this works mostly bidirectional. Each new project at the airport (e.g. apron management, BIM or laser scanning) is immediately checked on how DTNG data can be included or how the new applications might be integrated in DTNG.

What else is waiting for us?

Personally, I see a lot of potential e.g. in the area of data capture: Street-view-like mapping combined with laser scanning (also in the interior) create models for precise route and area surveying, which could replace many traditional maps. Laser scanning of existing data and their extension by the planner's (BIM) intelligence might one day replace the general »reallocation« of planning data. Who knows? Maybe integrated RFID chips will allow future facilities to document themselves without further involvement!

I am curious about the visions that will be offered by the generation of the »digital natives«, who did not experience analog applications themselves. And the story continues...