DEUTSCHE FLUGSICHERUNG GMBH (DFS)

In January 2008, the DFS (Deutsche Flugsicherung GmbH) started an initiative to implement a COTS Recording Solution independent from their ATM system, for their control center in Karlsruhe.
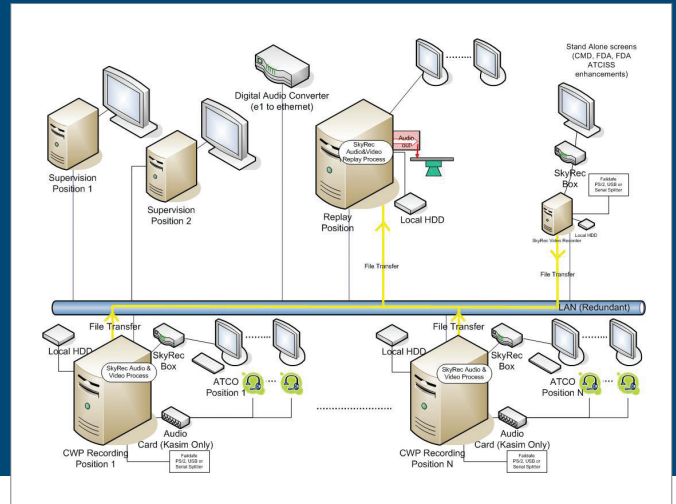

DFS Deutsche Flugsicherung

The DFS looked at the major potential vendors on the market and launched an international call for tender including several months of test of a trial system. In August 2009, the contract was awarded to SkySoft-ATM and marked the start of a long term relationship. This first phase consisted of the recording of approximately 1300 channels enabling to record and replay one to one the controllers' workplaces: 600 video channels, 400 serial channels (mouse, keyboard, TID) and 300 audio channels.

The main goal of the DFS was to support the Operational Safety Management investigating the incidents of specific situations. VRAP (Video & Voice Recording and Playback) significantly helped the DFS improve the quality of the analysis and dissemination of the findings to enhance preventive and proactive actions.

It had never been easier to create Safety Briefing and reporting.

In parallel, VRAP was heavily used by the DFS System's and Product Management to analyze the behavior of the new ATM system implemented at that time. Recordings were used to provide the ATM System Manufacturer with input about desired modifications or corrections. The training department is another important user of the system, essentially for On The Job training. Indeed, the system provides synchronous and parallel replay at several controller working positions. Following this success, the system was extended to the brand new control room in Karlsruhe as well as on some training and simulation platforms in Munich, Langen and Bremen.

At present, in total, more than 2200 video, serial and audio channels are recorded on a 24/7 basis.

The solution used by the DFS is the SkyrecBox, a hardware based, multimedia recording solution. The SkyRec solution consists of BlackBoxes and recorders installed in the Controllers' consoles and several replay positions distributed on the DFS network. The entire system is monitored by a SNMP compliant supervision system.

The DFS was amongst the pioneers to implement that type of system at such a large scale. Since then, many more customers have followed, such as the Irish Aviation Authority and the Argentinean Air force, which have chosen to use Skyrec with a tight integration of the Atis Uher Voice recording system. In Slovakia, LPS also equipped their newly opened control room of Bratislava.

The market clearly tends to adopt the screen recording as a mandatory requirement for ATM systems, just as, many years ago, Radar data and voice communications recording was imposed. As a non-intrusive solution, Skyrec is extremely flexible to meet all possible customers' architecture requirements and now shares the same hardware platform as WEY Distribution Platform.

SKYGUIDE TOWER ZURICH

Skyguide is responsible for safe and reliable air navigation and Air Traffic Control (ATC) throughout Switzerland. Skyguide operates from 14 locations across the country, including the Control Tower of the Zurich Airport.

FACTS & FIGURES

Desktop Integration
6 Triple-Screen Desks
with Multifunctional Keyboards

WEY Distribution Platform
20 Multimedia sources
(Keyboard, Video, Mouse, Audio)

Remote Solution
IP Remote (12 Receivers and 20+ Transmitters)

Due to space restrictions in the control tower environment, Skyguide has to cope with a set of unique challenges to save on floor and office space.

In the tower, Skyguide operates six triple-screen ATC desks. Each desk needed to access a single dedicated PC as well as shared and backup PCs. This amounts to a multitude of computers which must be housed close to the ATC controllers. Furthermore, not only do all of these systems take up a lot of precious floor space, but they also produce uncomfortable heat and noise emissions.

WEY provided Skyguide with a world class solution by deploying the WEY Distribution Platform (WDP) in the tower environment. Thus, Skyguide has been able to remote all of the computers into a special service room on another floor in the tower where there is no scarcity of space and the PCs are centrally and efficiently cooled. Using WEY's unique IP Remote devices and the WDP switching capabilities, every system (including all the back-up systems) is available at each operator desk and just a keystroke away. Each desk now actively uses three systems and simultaneously accesses eight additional shared back-up systems.

The operators themselves enjoy all the benefits of a free-seating arrangement, meaning that they can quickly and easily access any and all of their systems from any desk. Each workplace is equipped with a single highly ergonomic WEY Multifunctional MK06 Keyboard, ensuring full, accurate and easy control over all systems from each console. The WDP user database provides the strictest levels of system security, so that only operators with the appropriate user rights can access and control the ATC systems. After successful login, operators easily switch between their systems with a mere keystroke on their multifunctional keyboard.

Although WEY solutions are well known for their reliability and system stability in high-performance work environments, Skyguide's solution also includes multiple backup scenarios to guarantee continuity of service in this highly sensitive environment. For the Skyguide operators, the WEY Distribution Platform enhances working efficiency in the Control Tower environment, increases flexibility and reduces downtime for the Skyguide organization.