Case Study

AudioSoft

Record ▶ Analyse ▶ Visualise

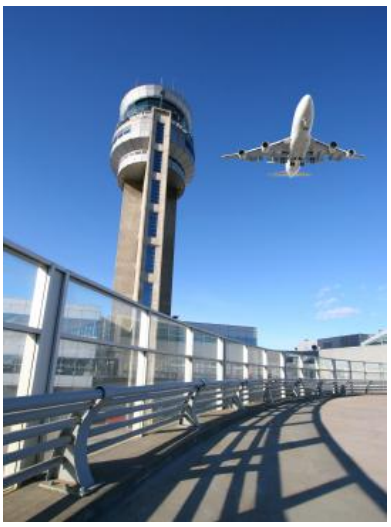
Eurocontrol listens to the skies over Europe

The Eurocontrol Upper Area Control Centre which provides Air Traffic Control services across the Benelux countries and North-West Germany has seen a significant reduction in operator intervention times since the introduction of a 480 channel digital recording system from UK manufacturer AudioSoft.

Background

Since 1972 EUROCONTROL Maastricht Upper Area Control (UAC) has provided air traffic control services in the upper airspace of one of the busiest regions in Europe. From the Centre at Maastricht in the Netherlands, a multinational team controls air traffic operating at 24,500 feet and above in the skies over Belgium, Luxembourg, the Netherlands and part of Germany.

Owing to the geographical proximity of Europe's busiest airports (London, Paris, Frankfurt, Amsterdam, Copenhagen and Brussels) and the positioning of several national military areas, air traffic in the Maastricht UAC controlled area is not only very dense, but also one of the most complex in the world. As a result, the Centre does not only handle level flights, but also a significant amount of climbing and descending traffic, creating a heavy workload for controllers.



The Challenge of Change

Due to the ever increasing volumes of Air Traffic a decision was made in 1999 to replace ageing analogue recording devices with a digital Voice Logging System (VLS) in full compliance with ICAO's regulations Annex 10, Volume II, Paragraph 3.5. The existing machine had entailed long operator intervention times due to the constant requirement to replace tapes. As a result digital mass storage devices were a prerequisite of any proposed solution.

The specifications called for the ability to record 400 analogue voice channels to an undistorted and intelligible level. Each recording required stamping of UTC time code to indicate to precise levels the moment in time that conversations occurred. A database of all recordings was required for a minimum of 31 days with easy access and replay facilities available over a local area network.

The specifications required that all recordings should be tamperproof and compressed for incident reconstruction at a later date, if required. Finally the recordings of voice had to synchronise with the replay of radar playback to an accuracy of a second tolerance.

Competitive Tender Process

European legislation required Eurocontrol to issue the requirement specifications via open tender. Eurocontrol evaluated 5 products in detail. After a full technical and cost evaluation AudioSoft was eventually chosen as the preferred supplier to Eurocontrol.

"The proposed solution fully matched the specifications for a competitive price" Ronny Missault, Head COM Domain at the Maastricht Centre

AudioSoft Ltd., 3 Longwood Court, Love Lane, Cirencester, Gloucestershire, GL7 1YG, United Kingdom.

Case Study Solution

AudioSoft

Record ▶ Analyse ▶ Visualise

Eurocontrol listens to the skies over Europe

A Comprehensive Solution

The AudioSoft solution to the complex requirements of the Eurocontrol VLS was a recording system comprising of six AudioPC-2080 systems (each an 80 channel recorder) which met the requirement of 400 recorded channels with the addition of a hot standby system of 80 channels. The recorders were mounted into two 19" rack units for ease of access. Each recorder unit contained four 36GB hard drives arranged in a RAID level 3 assembly. Not only did this arrangement meet the required channel hours recording throughput it also offered dynamic error correction, extremely high data transfer rates and hot swappable modules should any component require maintenance.

Further system security was added by the inclusion of dual redundant power supplies and SmartAlarm, a system health monitoring program which has four triggerable alarm levels.

Remote local area network playback of recorded audio was provided by four AudioPC-1002 systems which included AudioWord a sophisticated transcription device that allows audio analysts to control the playback, fast forward, rewind or pause of recorded audio from within Microsoft Word® by the use of a foot pedal. This greatly eased the task of transcription for incident reconstruction.

Operational Benefits

Installation of the AudioSoft AudioPC systems occurred in 2000. A smooth changeover from the old analogue system to the new AudioPC system was completed over a period of six months including an overlap. Initial feedback to the new system was extremely positive.

"There have been no significant technical problems" Ronny Missault

"For the incident investigators it was a big leap forward thanks to the easy access to all recordings."

As operators and audio analysts became familiar with the new system significant operational benefits and advantages became apparent.

"One of the most striking benefits is that we got rid of the cumbersome and time-consuming tape handling".

Looking Ahead

Air traffic continues to grow as indicated by the graph of traffic between 1990 and 2001. In 2002 Eurocontrol handled 1,182, 601 flights, the peak day was 27 September, when 3,869 flights were processed through the Centre's airspace. On average the number of flights handled by each operator is 6400 flights. AudioSoft is well placed to meet the needs of Eurocontrol as volumes of air traffic increase.

Explained Ronny Missault, "the data volume is not really an issue as bigger hard disks become available for the system".

Building the Relationship

The relationship between AudioSoft and Eurocontrol continues to grow and Eurocontrol has the confidence to comprehensively recommend AudioSoft products to potential purchasers.

According to Ronny Missault: "AudioSoft should always figure on every list of potential ATC suppliers".

AudioSoft Ltd., 3 Longwood Court, Love Lane, Cirencester, Gloucestershire, GL7 1YG, United Kingdom.