

Aurix asr - Case Study - Military Fast-Jet Pilots

Aurix has investigated and developed the use of Aurix asr automatic speech recognition technology in fast jets for many U.K. Ministry of Defense (MoD) projects. This work has resulted in the company having an unrivalled level of expertise in these demanding environments.



The Problem

The continually increasing level of technology in modern aircraft cockpits is placing high demands on the pilots and system suppliers. Pilots have to master many more systems with increasingly complex controls at the same time as they are expected to make full use of Head-Up Displays (HUDs) - both fixed and helmet-mounted.

A further problem in many aircraft is that the same equipment may be fitted in different places in different aircraft! Finding the radio to change frequency can be very confusing if pilots change to alternative aircraft.

Trials with airborne recordings have shown that Aurix speech technology can deliver increased levels of performance.



The Problem contd.

The environment in fast jets is also very hostile; the sound pressure level (SPL) can vary a great deal and reach an ear-shattering SPL of 120dB.

The environment can also cause physiological changes to the pilot's voice; the worst cases are when the aircraft pulls significant g-forces and when the pilot has to breathe oxygen under pressure (due to g's or altitude) - both of these can significantly distort the pilot's voice.

The Solution

Aurix speech recognition technology can provide a simple and convenient voice interface to enable a pilot to communicate with the aircraft systems. The benefits include:

- o enabling direct communication both with real instruments and synthetic instruments in a Head-Up Display (HUD)
- o maximizing the pilot's head-out time
- o reducing the need to stay head-in when stepping through multiple menu levels on multi-function displays
- o improving the pilot's situational awareness
- o speeding up more complex functions
- o reducing the need for 'real-estate' for knobs and switches within easy reach in the cockpit (and for pilots having to remember where these are mounted).