

## Zeroshift tool tracker increases aerospace maintenance efficiency

August 14, 2007 Anyone with a tool shed will be familiar with the scenario - your beautifully erected shadow-board is all but empty because tools are strewn all over bench-tops or have long since disappeared into the ether. In industry this can be much more than just a minor frustration - particularly in safety intensive fields like aerospace where missing tools lead to serious productivity, procedural and safety headaches. A new solution from Zeroshift that automatically records who removes and returns tools from the cabinet seeks to



redress this issue in a less intrusive manner than via the use of barcodes or RF tags. The Intelligent Tool Control System (ITC) has been developed by Zeroshift specifically to solve many of the tool management problems faced by aerospace manufacturing companies.

The Intelligent Tool Control System (ITC) is supplied as an exceptionally strong tool cabinet available in a range of standard sizes. Tools are fitted into a precision cut, solvent resistant polyethylene foam available in a choice of colors. The electronic control system is a modular design to simplify maintenance and minimize downtime. To access a tool, users must first enter their PIN via either a swipecard or a keypad. The system will compare the PIN with its internal or network database and allow (or disallow) access to the tool drawers. An optical sensor mounted under the tool cavity notifies the control system when a tool is removed or replaced. Tools can be made of any material including wood and plastic and even very small items such as precision sockets can be accommodated. Cabinets can operate as individual units or can be networked to provide an integrated tool monitoring system managed by remote PC. Management software allows tool usage to be tracked by user and by time and for missing tools to be quickly identified along with the last user.

By keeping track of tools the Zeroshift ITC will help to eliminate Foreign Object Debris (FOD - items that shouldn't be in aircraft during flight), increase the availability of tools and provide useful productivity information. "The US Federal Aviation Administration (FAA) has estimated the cost of FOD at more than \$60 million per year," explains Zeroshift's ITC manager Paul MacGregor.

At high speeds and g-forces, anything left in an aeroplane can be extremely harmful to pilots and other occupants. It can also damage engines, jam control systems and impact other equipment, interfering with safe flight. "Tools are the second biggest contributor to engineering-related FOD, after fasteners," says MacGregor. "The FAA suggests depanelling, non-destructive inspection and even x-rays to locate missing items. A single missing tool can cost hundreds of thousands of dollars to find and lead to significant delays."

Zeroshift ITC launched at the 28th National Aerospace FOD Conference in Texas, August 7-9. In the UK, ITC will be shown at the Aero Engine Expo, Olympia (London), September 12-13.

