



TIA CASE STUDY

RUGGED TOUCH SCREEN MONITOR

One of the bespoke developments we have completed for our highly valued customer Pennant International PLC was to develop a Rugged Touch-Screen Monitor for use with their fantastic Integrated Avionics Maintenance Trainer (IAMT).



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The IAMT is an aircraft structure with a full-size cockpit, with unglazed canopy, representative of a military aircraft combining modern digital displays with older analogue gauges to enable the student to experience a range of aviation technologies.

One of the key features of the IAMT is a Ruggedised tablet to select & connect virtual test equipment to the aircraft system emulations; this is the RTSM developed by TIA. First raised during a Critical Design Review (CDR) for another development, we engaged further to get a comprehensive understanding of the requirement specification and context of use for the product and very quickly provided a ROM quote for its development.

Following contract award, and during more detailed research, we attended Project kick-off meeting with their PM and Technical Staff establishing some key milestones and deliverables before setting to work. During the development, we continued to work closely with the Pennant team to suggest, refine and improve the design to add real value to the ergonomics and technical performance. On a complex development such as this, it would be naïve to think everything went exactly to plan, however, our hiccups and delays stayed well within our contingency for timely delivery and included some rework for an unexpected minor issue. All of this added up to a delivery that was 2 weeks past our forecast date, but Pennant were as pleased with our support as they were with the final product.

The RTSM is a Human Media Interface (HMI) designed for use across Pennant Platforms for virtual and visual representation of LRUs and test equipment. It is envisaged that the RTSM will be used across various new projects to reduce the need for expensive and bulky GSE.

The RTSM was designed to be operated during day to day activities and potentially under maintenance circumstances, with this in mind the target users included students, instructors and maintainers and is capable of being used on a frequent basis and by inexperienced or low competency users.

The main function is to be connected to the Training Aid (TA) via a single cable harness with the ability to visually display a virtual environment and communicate changes made back to the TA while producing any associated relevant sounds as required.



Key features:

- 15" Ruggedised Touchscreen
- Capacitive Glass Screen (No multi-touch requirement)
- Screen environmentally sealed to the enclosure
- Built in speaker for simulation sounds (4ohm mono)
- 1080P Resolution (16:9 ratio)



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