



Thai Airways

Thai Airways Takes Off with Panasonic Toughpad FZ-G1, Panasonic Toughbook CF-AX2 and Panasonic Toughbook CF-31; Advancements in Technical Services' Capabilities Facilitate Leading International Airlines Around the Clock

"Smooth as Silk" is a familiar slogan of Thai Airways International Public Company Limited, a national airline that operates commercial flights for both international and domestic routes under the Ministry of Transport. The airline offers air transport services and comprises of various business units including Technical Services, which is mainly responsible for maintenance, repair, and overhauls – MRO. The Thai Airways Technical Department facilitates line maintenance, light maintenance, transit, and night stop.

Currently, Thai Airways Technical Services have three operating bases, including Suvarnabhumi and Don Muang in Bangkok as well as Utapao in Rayong. Suvarnabhumi is a light maintenance station that has the biggest hangar in Asia. It can accommodate three Airbus A380 aircrafts and service 300 flights per day, which equates to approximately 9,000 flights per month. At present, the Thai Airways Technical Department has about 4,000 experienced technicians who have expertise in examining and maintaining aircrafts from all over the world, 24 hours a day.

Technology plays an important role in ensuring speed and accuracy of services delivered by the Thai Airways Technical Department, while enabling the team to effectively manage the high number of flights passing through the airports, and that the aircrafts are safe to fly, and passengers' flight schedules are not delayed.

Challenge 1

Electronic Maintenance Manual

In each maintenance project, technicians here use maintenance manuals which contain specific information for the maintenance as their reference guide such as Aircraft Maintenance Manual, Part Catalogue, Wiring Diagram, Schematic Diagram, Minimum Equipment List.

These manuals are important tools for technicians. Previously, the manual comes with a physical book, but has since been developed into an electronic file in 1995. While the purpose was to enable technicians to review the manual directly on their desktop computers, the technicians required constant access to the Aircraft Maintenance Manual. This meant that they had to access the computers, choose the appropriate file, and print out the document before they could use the manual. This approach was not only more complicated, but was more time-consuming, and resulted in unnecessary paper wastage.

In an effort to improve this, the Thai Airways Technical Department turned to a consumer-brand notebook computer for mobility, but faced problems such as bulkiness, insufficient battery span, non-durable parts that are unsuitable for outdoor use, and slow computer boot up time.

Somkiat Treeratrakoon, Deputy Director of Maintenance Control Center (MCC) said, "In our line of work, we have to work under a limited timeframe and attend to constant incoming aircrafts. Every minute counts for passengers. A delay of five to ten minutes can affect passenger satisfaction. Therefore, we have to find the best way to enhance staff performance."

Solution

The Thai Airways Technical Department needed a tablet that could support its team. Somkiat found that the Panasonic Toughpad tablet was not only durable, but also contained features that most suited the needs of the team.

"A Panasonic tablet is a natural choice for the Thai Airways Technical Department since the brand is well-known for computers used in the manufacturing industry. The operating system of the Panasonic Toughpad FZ-G1 runs compatibly with Boeing, Airbus, and other OEM partners' manuals. The tablet comes in a portable size, is light weight, has long battery life to support each maintenance session, and is durable for any conditions. It manages information better than other brands as it supports visual reporting and enables technicians to effectively access information electronically. We have received positive feedback from our staff who are using the device, especially on its weight and durability. With this new tablet, we expect it will enhance staff performance," added Somkiat.

After purchasing 99 units of Panasonic Toughpad FZ-G1 in the first phase to be used with the electronic Aircraft Maintenance Manual, the Thai Airways Technical Department plans to combine 4G and wifi with Panasonic Toughpad FZ-G1 for technicians to be able to transfer the maintenance photos back into the central system.

Challenge 2

Maintenance Access Terminal (Software Emulation)

Apart from using Panasonic Toughpad FZ-G1 as an electronic maintenance manual, Thai Airways Technical Department also uses Panasonic Toughpad FZ-G1 and Panasonic Toughbook CF-AX2 as Maintenance Access Terminal to connect with Boeing 777, replacing the old laptops. By installing 777AMMA, PMD Tools, 777MATA software on Panasonic Toughpad FZ-G1, technicians can monitor and manage systems in the aircraft.

Thai Airways Technical Department uses Panasonic Toughbook CF-AX2 to connect and control systems in boeing 787 aircraft. Ano Chanthanaine, Aircraft Avionics Engineer of Thai Airways mentioned that, "Panasonic Toughpad FZ-G1 and Panasonic Toughbook CF-AX2 help simplify our workflow. When we connect two devices to computer control system on the aircraft, we can easily upload software to aircraft's equipment, download necessary information from the aircraft to analyze the problem as well as control functional testing of various systems on the aircraft. Moreover, technicians can connect with the aircraft as a wired or wireless system. With the portable and lightweight size of devices, technicians can also carry the device around the aircraft in all areas to work anywhere, anytime"



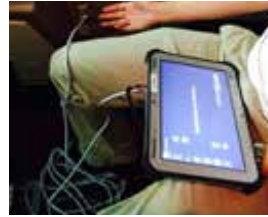
Somkiat Treeratrakoon, Deputy Director of Maintenance Control Center (MCC)



Connect Panasonic Toughbook CF-AX2 to control the aircraft system



Ano Chanthanaine, Aircraft Avionics Engineer of Thai Airways



Connect Panasonic Toughpad FZ-G1 with central control system in the aircraft.



Somkiat uses Panasonic Toughpad FZ-G1 to control the operation workflow of all systems within the aircraft cockpit.

Challenge 3

Professional Tool for Maintenance, Maintenance Laptop (ML)

Thai Airways Technical Department also uses Panasonic Toughbook CF-31, a durable product that has been approved by Boeing, to connect with Boeing 787 as a maintenance laptop for on the ground maintenance for each aircraft.

Moreover, Thai Airways Technical Department uses Panasonic Toughbook CF-31 to connect to the central server of the Technical Department to update the latest version of the software used on Boeing 787 aircrafts including aviation status and important information that are needed for the flights analysis. Then, connect the Panasonic Toughbook CF-31 to the port on the aircraft or via wireless networks to gain information on the Boeing 787 and the Electronic Flight Bag (EFB), which is an electronic device that contains an important manual with information on the flight, airport plan, or specific data that has been keyed into the aircraft's system, providing the aircraft with updated information and software ready for the flight.



Use Toughbook CF-31 for aircraft system's maintenance

Achievements

The deployment of Panasonic Toughpad FZ-G1 helps reduce the use of papers, increase accessibility to the manuals, improve accuracy and efficiency by 50%, and control data security. Up until present, the users satisfaction exceed expectation by 80%. Thai Airways is confident that the satisfaction rate will exceed 100% when the company fully improve internet connection with internet 4G and WiFi in the near future. In addition, Panasonic Toughpad FZ-G1, Panasonic Toughbook CF-AX2 and CF-31 helps technicians to increase work their efficiency when control internal aircraft system.

Future Plan

With the efficacy of Panasonic Toughbook CF-AX2, CF-31 and Panasonic Toughpad FZ-G1, the Thai Airways Technical Department is planning to use the Panasonic Toughpad FZ-G1 as a data monitoring device running on SAP system, logistics management, such as transportation of aircraft parts among three operating bases in Don Muang, Utapao and Suvarnabhumi and inventory management.

