



# Aeronautical Radio Thailand

A Thai state enterprise that manages air traffic control and aeronautical communication services for airline operations



Aeronautical Radio of Thailand (AEROTHAI) gears up for visitors to Suvarnabhumi International Airport with Motorola's TETRA System. This contract marks the first TETRA digital radio communications system for an airport in Asia Pacific.

## BACKGROUND

Thailand is known the world over as "The Land of Smiles" – an affectionate moniker that came about through the famed warmth and friendliness of the Kingdom's people. This can only bolster the tourism industry – incidentally one of the key pillars of the Thai economy.

The Tourism Authority of Thailand has set increasingly progressive growth targets for the country's tourism industry, projecting an eventual threefold increase in visitor arrivals from 10 million in 2004 to 30 million in the year 2010.

To cater for the expected visitor influx, the Suvarnabhumi International Airport in Bangkok was opened in September, 2006. The current capacity of the new airport is 45 million passengers per year with its two passenger terminals. However, the airport is expected to handle 100 million passengers per year in four passenger terminal complexes when the airport expands two-fold in accordance with future plans. The need to move huge numbers of people and large amounts of cargo, catering for luggage and service facilities, as well as managing food and beverage supplies requires one huge, complex operation. This demanding environment requires a sophisticated, reliable and efficient communications system for personnel in various functions to work seamlessly together. With these in mind, a suitable communications system was needed to coordinate these challenging needs in the new airport.

The Aeronautical Radio of Thailand (AEROTHAI), a state enterprise under Thailand's Ministry of Transport and Communications, manages air traffic control and aeronautical communication services for airline operations as well as all of the ground operations at the massive airport complex. A Motorola trunked radio system user since 1987, AEROTHAI selected Motorola and its distributor M-Link Asia Corporation Public Co. to design and build a TETRA (TErrestrial Trunked RAdio) digital radio system for the new airport. The contract marks the first TETRA digital radio communications system for an airport in Asia Pacific.

"Motorola's reputation for providing digital radio communications systems to the transportation market and its track record of on-time delivery of its solutions makes it a first choice partner. "Motorola's TETRA system was the solution-of-choice because of its market leadership and operational benefits in the transportation industry."

- AEROTHAI Spokesperson

## CUSTOMER NEEDS

The new airport in Bangkok needed a radio communication system capable of facilitating communications effectively and reliably to provide dependable and uninterrupted services to users, while remaining cost-effective. AEROTHAI's stringent requirements included:

- High voice quality for clear communications
- Ease of operation and management
- Efficient, instant and reliable communication across the network
- Support of wireless data applications
- SCADA Telemetry System
- AVLS (Automatic Vehicles Location System)
- SDS (Short Data Source) Commanding
- Reliable and robust mobile and portable terminals
- Expansion capacity to handle growth in passenger numbers



## MOTOROLA SOLUTIONS

Motorola's 800MHz TETRA system offers radio, voice and data communications for air traffic control as well as ground operations such as baggage management and catering services.

The substantial increase in activities in the airport has established radio communications as an essential element for smooth day to day operations. In order to support the communications requirements of the new airport, an additional three base stations with 15 base radios and 3,250 subscribers were added over two expansion orders. This comes on top of the original 5 base sites comprising 8 base stations with 43 base radios, and 5,190 portables and mobile radios.

The importance of security and safety standards within airport operations was taken into account in the system design and a high level of resilience was included. The system virtually sees no downtime, because when a component is damaged, a fail-safe is automatically activated. Motorola radios are also intrinsically safe and FM-approved for use in hazardous environments. All these are essential for airport personnel who require continuous communication and coordination in order to provide excellent customer service.



**MOTOROLA**

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"This contract marks the first TETRA system to be deployed for airport operations in Asia Pacific. This is a significant step forward for Motorola after providing reliable digital radio communications for land transportation such as high speed rail, metro rail and long haul rail in the region," said John Conrad, Regional Sales Manager in Thailand, for Motorola Networks & Enterprise.

## BENEFITS

The TETRA system will offer extensive benefits in performance, ease of operation, reliability and safety.

- High voice quality and effective communication ensures that timely and accurate information are shared for improved decision-making.
- Immediate and precise communication provides better coordination and control of personnel and resources as well as an improved response or reaction time.
- Efficient and reliable dispatch orders as well as fast identification and correction of problems increase operational efficiency and productivity.
- Seamless roaming access all over the airport, i.e. calls can be made anywhere in the airport, regardless of whether the location is outdoors, in the airport buildings or underground.
- As the first airport in Asia Pacific to be fitted with a TETRA system, Suvarnabhumi Airport gains a considerable operational edge