Airports Authority of India (AAI) manages a total of 125 Airports. AAI also provides Air Traffic Management Services (ATMS) over entire Indian Air Space and adjoining oceanic areas with ground installations at all Airports and 25 other locations to ensure safety of Aircraft operations.

AAI’s successful implementation of Automatic Dependence Surveillance System (ADSS), using indigenous technology gave India the distinction of being the first country to use this advanced technology in the South East Asian region thus enabling effective Air Traffic Control over oceanic areas using satellite mode of communication.

The ageing airport surveillance radar (ASR) and mono-pulse secondary surveillance radar (MSSR), popularly known as primary and secondary radars, had to be replaced by new ones. While the primary radar is used to track aircraft up to a distance 111 km from the airport, the secondary radar is used to track planes up to 463 km. The twin radars are crucial for the operation of any major airport because they help planes converge and land as well as take off without incident.

The orders for ASR and MSSR radars have been placed with Czech Republic company Eltis. Eltis’ advanced radar technology allows controllers to automatically detect and identify multiple aircraft at the same latitude/longitude co-ordinates but in different altitudes. The new radars will also increase the robustness of the system as the present radars are susceptible to breakdown. During busy hours, it is not uncommon to have more than one aircraft in the same position on the radar screen. If there are four such aircraft, stacked on top of each other, the identification procedure that we follow at present is cumbersome because the tags of each aircraft have to be verified manually. The controller speaks to the pilot of each aircraft to make the confirmation. Once the new radars are installed, the identification procedure will be simplified as it will be automatic and not require voice communication.

While the local supply of surveillance systems is handled by Eltis, ABB India has been chosen to provide the uninterruptible power supplies for all eight sites. The surveillance radar system will be secured by a redundant UPS solution installed...
on the international airports at Mumbai, Chennai, Kolkata, Amritsar, Cochin, Trivandrum, and Ahmadabad.

The UPS order comprises:

- Eight PowerWave 33 UPS systems including redundancy (2 x 80 kVA)
- 30 minutes battery backup capacity at each location of the eight airports across India and all required items for system functioning

Reliability of the equipment will not only be increased by new and robust radar technology, but also by the redundant UPS solution provided by ABB India. The new set-up is a big relief for controllers as well as engineers.

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