

Automatic Dependent Surveillance – Broadcast Activities and Implementation Plan for Thailand

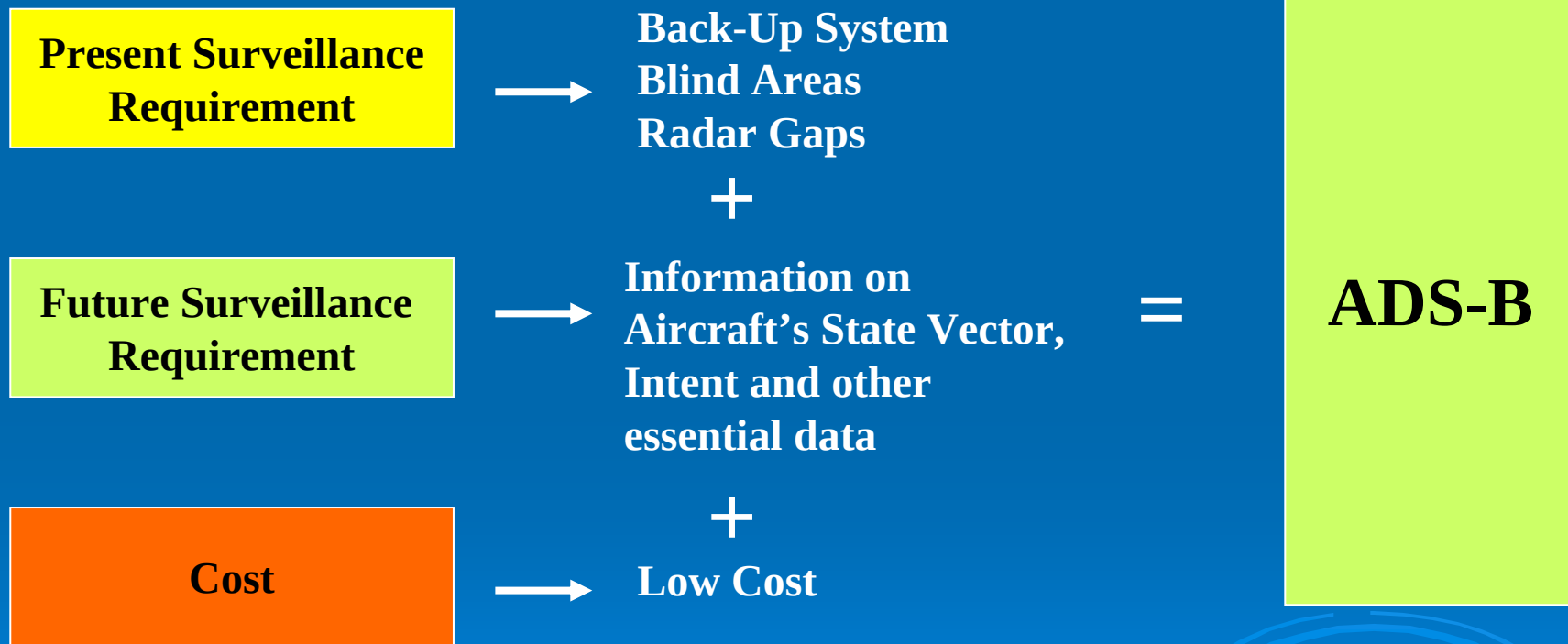
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Current Surveillance Systems

- 4 Monopulse Secondary Surveillance Radar (MSSR)
 - Range: 250 nautical miles
 - Supports En-Route Control Service
- 6 Primary Surveillance Radar (PSR)
 - Range: 50 nautical miles
 - Supports Approach and Aerodrome Control Service
- Additional En-Route coverage is provided by 2 SSR from the Royal Thai Air Force (RTAF)
- Position Reporting used in areas with no radar coverage, radar gaps and blind areas.

Present and Future Surveillance Requirements



Technical Trial

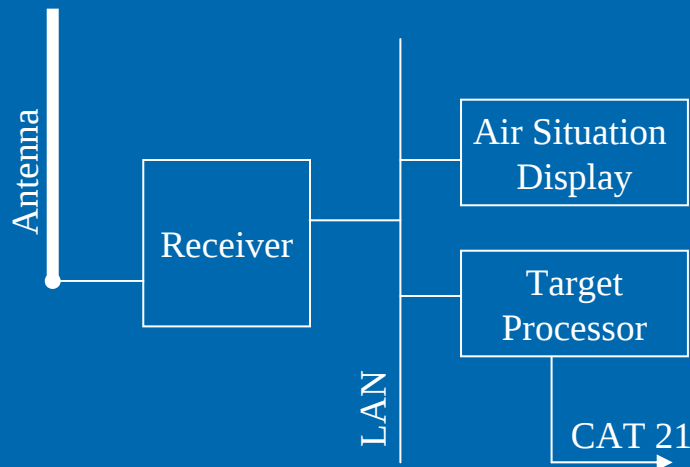


Technical Trial

Objective: To assess the performance of ADS-B in local environment

Scope: Limited to ADS-B System utilizing Mode S Extended Squitter (1090 MHz), Air-Ground Surveillance Performance will only be evaluated.

Trial System Configuration



- Stand-Alone System, High Gain (8dBi) Antenna
- Receive Only Ground Station
- Target Processor
- Maintenance Display Terminal/Air Situation Display

Site Location



Site Location: Bangkok

Installation: Radio Tower

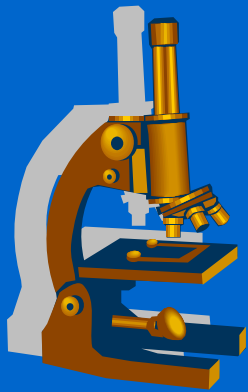
Antenna Height above Ground: 120 m.

Anticipated Coverage Range: > 200 nm.

Data Source and Data Collection

- 1st Choice - Target of Opportunities
- 2nd Choice - Suitably Equipped Flight Calibration Aircraft
- Raw and Processed Data will be collected for further analysis
- Sample Size: 1000-3000

Assessment Methodology



- Applying Statistical Theory
- Comparison of ADS-B with a Reference System – SSR
- Comparison of Performance figures with States or Organization currently involved with technical trial of ADS-B

Performance Parameters under Assessment

- Main Performance Parameters:-
 - system's accuracy, availability, reliability, integrity, update interval and update probability.
- Other Parameters:-
 - track purity, track continuity, ADS-B data elements and latency.
- The number of aircraft with ADS-B capability operating within Bangkok FIR will also be monitored.

Time Frame

The time frame of the technical trial is anticipated to be between 1-2 years, depending on the amount of data that can be collected.



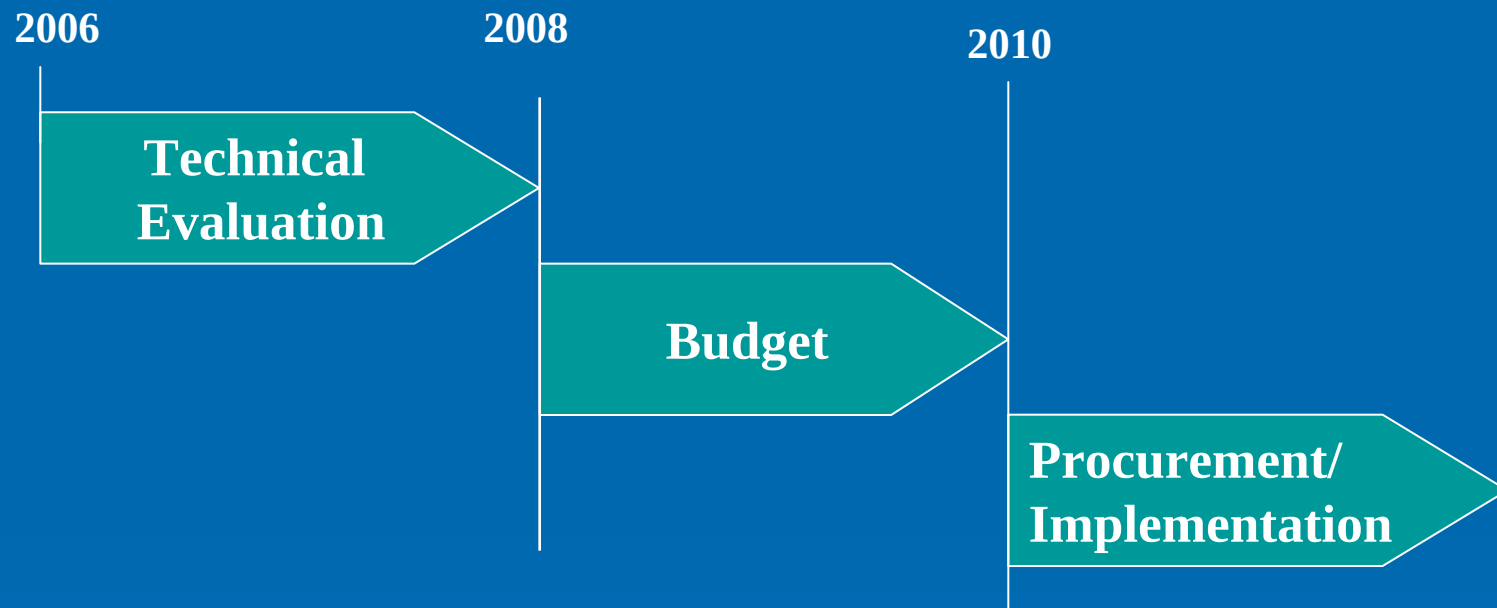
Current Status

- The Procurement Process was completed last month (September 2005).
- Sensis Corporation was awarded the contract for the supply of the ADS-B Ground Station.
- The delivery and installation is expected to be completed by December 2005.
- Data Collection is expected to begin from January 2006 onwards.

Implementation Plan



Implementation Plan



- ADS-B is planned to be used as Supplementary Means to provide radar like coverage for BKK FIR

Thank You for Your Attention!

