NAVISAT Status
EU-AFRICA.AVIATION CONFERENCE
2 - 3 APR. 2009

Presented By
NAVISAT Chairman & CEO
1. Historical background

2. NAVISAT Integration into the Global Infrastructure

3. NAVISAT Studies Status

4. NAVISAT Vision, Mission & Goals

5. Offered Services

6. Recommended Action by Meeting
Since 1997, the "NAVISAT" initiative was presented to different interested entities in the Middle East and Africa regions. A preliminary feasibility study for the project was carried out (June. 2004 – Dec. 2005). The result of the study was promising. During the study, five steering committee meetings took place. The members were the major Civil Aviation entities in the region (ACAC, ICAO regional offices, DGAC & the Egyptian Civil Aviation authority). In 1998, three satellite fillings (API) were submitted by Egypt to the ITU by the names EGYSAT1, 2 & 3. In 2003, new filings were submitted by the names NAVISAT1, 2 & 3.

In November 2006, A company called "NAVISAT Middle East and Africa" was established in Egypt as the current primary mission is to carry out a detailed study for the project.
Historical background

- During its 17th meeting in Rabat (2nd April to 4th April 2007), the ACAC Air Navigation Committee has announced its continuous support to the NAVISAT as a regional system to offer the aeronautical communication and navigation services as the offered services are cost effective than the similar available services and a NAVISAT group was established by the ACAC Air Navigation Committee during its 18th meeting, held in Rabat, 13-15 August, 2007.

- A working paper was presented to ICAO PBN/GNSS TF/1, Cairo, 20-23 October 2008.

- A working paper was presented to ICAO MIDANPIRG/11, Cairo, 9-13 February 2009.
Integration into the Global Infrastructure

- NEXTGEN
- SGB
- IRIS
- SESAR
- NAVISAT
- MTSAT
The NAVISAT detailed studies composed mainly of two groups of studies, The Business & Technical Detailed studies and the Complementary studies.

- The Business & Technical Detailed studies Plan is composed of 4 Phases for implementing the Business & Technical Detailed Study as follows:

  1- Phase 1-A : Strategic Objectives & Detailed Planning
     - Duration: 1 month (Awarded & Completed – detailed below)
     - Purpose: To define the optimal pathway for scoping the later business case, requirements definition, design phases by capitalizing on Phase 0 study outcomes, identifying potential gaps, and providing an updated and comprehensive strategic outlook
Phase 1-A study was awarded in 11 September 2008 and the project kick off meeting was held on 12 October, 2008. The study included a 3-day-workshop. Phase 1-A was completed and all deliverables were accepted in mid January 2008.

The purpose of the workshop was to capture information and views from NAVISAT potential stakeholders and future users in the regions. The workshop was attended by a number of organizations representing the Aviation Field. Separate meetings were held with the MID Region ICAO WG including representatives of 17 countries, and with Egypt Air Technical and Operations Teams. The workshop included 3 main sessions, addressing the following issues;

- Business/commercial aspects
- Technical/operational aspects
- Governance & regulatory aspects
• 2- Phase 1-B : Business Plan and System Specifications
  – Duration: 5 months (awarded)
  – Purpose: To establish the business case for NAVISAT and define the service technical specification as well as the Space System and Ground System Requirements leading to a business scenario decision point at the end of this phase.

• 3- Phase 1-C : Sales / Marketing / Operating / Implementation Plans & RFI Development
  – Duration: 6 months (planned to start after the end of phase 1-B)
  – Purpose: To further develop the business case for the selected scenario, define the organization, prepare market capitalization plan and release and evaluate an RFI package for the technical implementation.
4- Phase 1-D: Detailed SOW and RFP Development & Bid Evaluations

Duration: 5-10 months (planned to start 3 months after the start of phase 1-C)

Purpose: To develop a SOW, RFP and associated Technical documentation to support a competitive procurement, evaluation of proposals, and final contract negotiations
The RFP for implementing the following Phases (1-B, C, D) was launched in December 2008, and the Technical & Commercial Proposals were received, and evaluated.

Phase 1-B study was awarded in the 19th of February, 2009. The project kick off meeting was held on the 1st of March 2009.

Frequency coordination, regularity and certification activities

The RFP for implementing the Frequency Coordination / Regulatory & Certification Studies (Phase 1) was launched in January 2009, and the Technical & Commercial Proposals were received and evaluated.
The Frequency Coordination / Regulatory & Certification Studies (Phase 1) was awarded and the kick off meeting was held on the 10th of March 2009.

The RFP for phase-2 finalized and it will be lunched by the end of the 1st phase

Complementally study

The RFP’s for the complementary studies, listed below, were finalized, and they are planned to be launched by the beginning of April 2009;

- Human Resources Studies
- Financial Studies
- Legal Studies

The fund raising process is planned to be executed during phase 1-C of the Business & Technical Detailed Study in the 4th quarter of this year.
As a result of phase 1-A study NAVISAT project has a solid strategy (vision, mission, objectives, goals and service portfolio)

**NAVISAT Vision**

NAVISAT intends to become the dominant and preferred Africa and Middle Eastern regional supplier of satellite-supplied services for Air Traffic Management

**NAVISAT Mission Statement**

NAVISAT is an international organization that fills the regional gap in worldwide satellite-based Air Traffic Management services for the Africa and Middle East region with a safe, dependable and economically viable satellite system, and which provides value-maximising services to adjacent markets

**Strategic Objectives**
The NAVISAT Strategic Objectives

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<tr>
<th>NAVISAT High Level Strategic Objectives</th>
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<tr>
<td>1. To allow <strong>Major Improvements in CNS/ATM services</strong>, and to contribute to improving the safety and efficiency of air transport.</td>
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<td>2. As a secondary mission the system shall support other <strong>Aviation, Maritime and Land Based Complimentary Services</strong></td>
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<td>3. To be the <strong>Preferred Provider</strong> in terms of <strong>Quality of Service &amp; Cost-Effectiveness</strong> from both the system operator and the users' viewpoints.</td>
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<td>4. To use <strong>Existing Infrastructure</strong> to the extent reasonable and possible.</td>
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<td>5. To cover a large region (AFI/MID), while being <strong>Interoperable</strong> with systems from other regions.</td>
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<td>6. To setup a <strong>Governance Structure</strong> that reflects the international nature of the project.</td>
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<td>7. To have an <strong>operational system</strong> in place by 2012</td>
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NAVISAT

AERONAUTICAL MISSION
- Mobile Communications for civil aviation's and airlines
- Ground-air voice and data communications for air traffic control and operational services

COMPLEMENTARY MISSION
- Fixed Communications for civil aviation's
- Navigation Payload
- Ground-ground voice and data links for air traffic services and operational services
- Telecommunication and/or Meteorological Observation
- • GPS-like signals
  • Integrity data
  • Correction data
  • Enhancement of GPS availability

Offered Services

Different service offerings for different applications and different users

- Airlines
- State ATS providers
- Service Providers Aeronautical Communication
- Aeronautical VSAT Network Operators
- Air Traffic Services
- SBAS Service Providers
- Passenger Communications
- Remote CNS infrastructure operations

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The NAVISAT is planned to offer the following services in the Middle East and Africa regions at competitive price.

- **Aeronautical services (it is the main mission):**
  
  The ICAO CNS/ATM requirements will be completely fulfilled.
  
  - Mobile Communications services for civil aviation and airlines (data services and voice services) other services like telemedicine and security may be offered.
  
  - Fixed Communications services for civil aviation and airlines (data links with different bit rates can be offered through VSAT systems)
  
  - Navigation services (broadcasting of the augmented navigation signals over the region).

- **Complementary services**

  Other communications requirements for the passengers will be available (e.g. GSM, internet .....)
The meeting is kindly invited to:

1. Take note of the contents of this WP paper,

2. Consider NAVISAT as a regional project for Middle east and Africa In any national/international conference/meeting for CNS/ATM
Thank You