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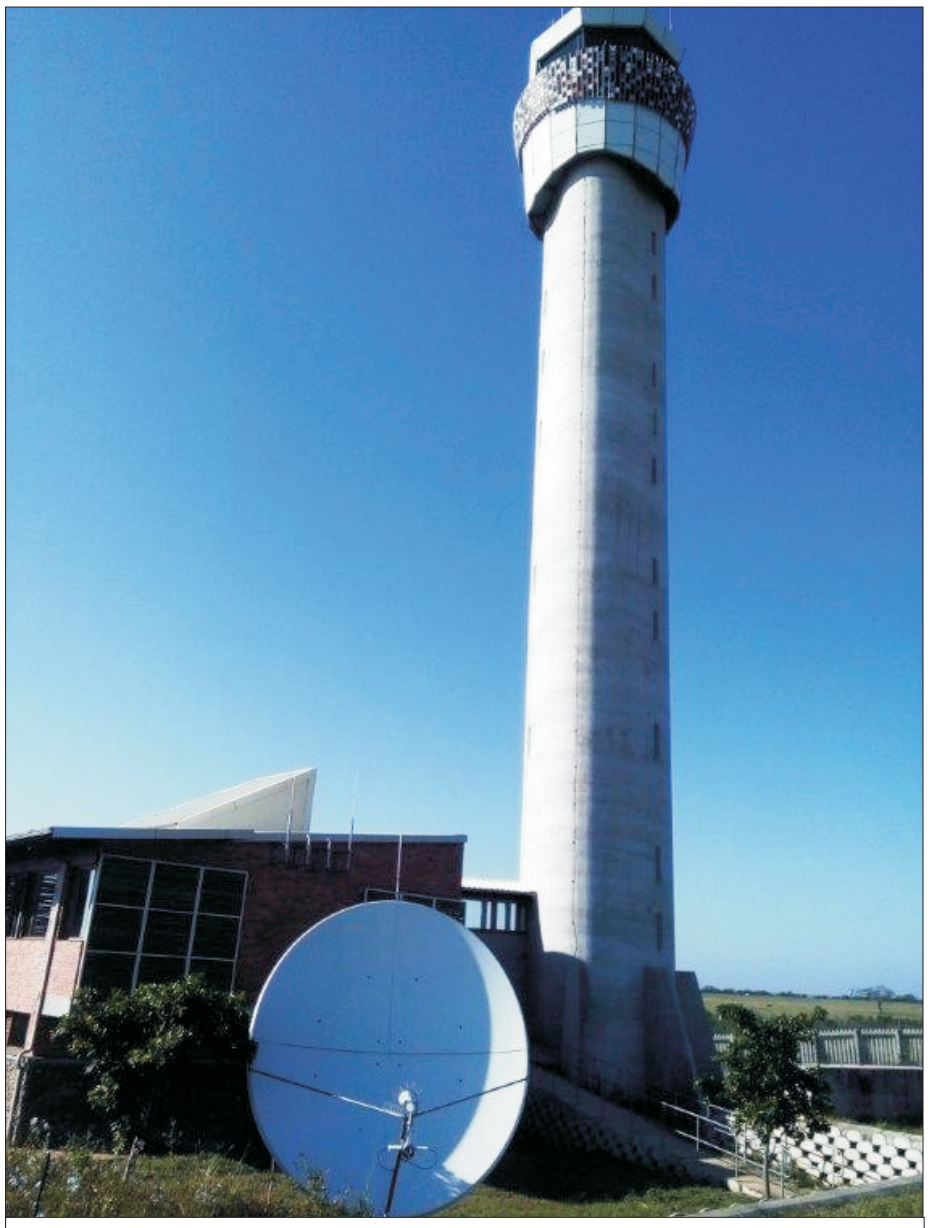
ENSURING SAFER SKIES THROUGH ADVANCED TECHNOLOGY!



A VSAT on display next to the air traffic tower at KM III International Airport

The aviation world is an interesting and complex one. Aviation is an efficient form of transport and safety is not a compromised factor: at its heart is technology which is significant in operations to ensure safer skies. That was the focus of the SADC Very Small Aperture Terminal (VSAT2) 14th Supervisory Board Meeting recently held in Swaziland. The VSAT is a satellite broad communication platform.

The Swaziland Civil Aviation Authority had the pleasure of hosting the SADC VSAT delegates at the 2018 14th Supervisory Board meeting, where issues relating to the performance of the SADC VSAT2 network were discussed. VSAT is a two-way satellite ground station with a dish antenna that is smaller than 3.8 meters and comprises a network with voice and data capability between Air Navigation Service Providers (ANSPs). It links ANSPs with various airports and is used to share aeronautical information, including flight plans, weather information and airport statutes among others.

This Board meeting is held annually on a rotational basis, per the SADC member States arrangement and was coordinated by the Air Traffic Navigation Services (ATNS), a South African organisation that provides Air Traffic Services and Engineering Training to the South African airspace, as well as 10% of the world's airspace in conjunction with African airlines. The VSAT Supervisory Board Meeting is a forum to discuss issues related to sustainability and performance (technical, operational, financial and corrective measures as appropriate) of the SADC VSAT.

SWACAA's Director General Mr. Solomon Dube officially welcomed all the delegates to Swaziland as the host country and thanked ATNS for facilitating the SADC VSAT2 Supervisor Board Meeting. He also thanked the delegates for attending the meeting, especially SWACAA and ATNS for organising it. He highlighted the fact that the objective of the network is to provide interconnectivity in the SADC region and beyond, which supports the Kigali declaration and the free movement of air traffic across the region and indeed the single African sky. Mr Dube further made note of the successful upgrade of the system which took place in the beginning of March 2017, mentioning the minimal interruptions to operations through well coordinated processes. He also highlighted the excellent performance availability of the network of more than 99%.

Attending the meeting were 13 of the SADC states: Angola, Botswana, Burundi, Lesotho, Madagascar, Malawi, Mauritius, Namibia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe. The DRC, Mozambique and Rwanda were not represented.

How has SWACAA benefited from the VSAT NETWORK?

The benefits to SWACAA are, among others;

- Sharing of operational and technical information between SADC and other regional aeronautical networks.
- Improved efficiency for seamless coordination of air traffic between adjacent Flight Information Regions (FIR), such as Johannesburg, Maputo and Beira.
- Annual Sponsorship for SWACAA engineering personnel to undergo theoretical and practical training at the ATNS Training Academy in South Africa. The VSAT Project Training objective is to build capacity to carry out installation and maintenance requirements for the network.
- Over the past seven years Air Traffic Engineers have benefitted from installation and maintenance courses that aim to reinforce corrective maintenance, perform routine preventive maintenance, analyse and measure equipment performance, and carry out first level maintenance support.
- Completion of the upgrade of the VSAT Network Technology platform to enable migration of services to the modern equivalent of ATS Message Handling System (AMHS), ATS inter-facility Data Communications and Voice-over Internet Protocol (VoIP).
- Revenue collection per the FIR crossing, which is billed and collected by ATNS on behalf of Eswatini.
- Services provided by the VSAT Network are supported through a bilateral agreement with ATNS, which offers remote maintenance support in conjunction with the SWACAA Air Traffic Engineers. The network performance is very reliable as a result of the centralised maintenance model.

Future plans for the network.

Using the ICAO Aviation System Block Upgrades (ASBU) methodology, the SADC states plan to modernise the CNS/ATM infrastructure, particularly communications, that will use the upgraded VSAT Technology platform as the enabler for the modernisation and implementation of additional Airport Operations ATS services.

The added services to be implemented in the future and carried by the network include the sharing of infrastructure and services, such as data exchanges between ATS Flight Data Processing Systems (FDPS), Operational Meteorology (OPMET) Data Exchanges, Operational Aeronautical Information Management, Administration support, ADS-B and Radar exchanges, and the Aeronautical VHF Radio extended range.