

Managing air traffic safely and securely is a critical part of successful command and control operations. Keith Mwanalushi speaks to Dennis Miller, from Harris Corporation, to learn about the significance of tactical air traffic systems for Africa.

Tactical planning a priority to achieve modern goals



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Global interest in the African defence industry, particularly in South Africa, is growing. This is evident from the upsurge in international interest in the continent's defence industries, according to the organisers at the Africa Aerospace Defence exhibition (AAD).

During AAD 2016 in Pretoria, it was largely agreed that the development and supply of innovative products, in line with global trends, was the way forward for Africa.

Dennis Miller, director, business development, radar systems at Harris Corporation, said airspace authorities worldwide were calling on his company for tactical air traffic management (ATM) and precision-approach radar systems to support operations, both at large, established airbases and at smaller, tactical airfields, where mobility was a priority.



"Harris provides full radar-approach control capabilities, including primary and secondary surveillance and precision-approach radars, to address the full spectrum of customer needs," said Miller. "These include long and short-range ATM for fixed-site, transportable and mobile tactical air operations."

When comparing tactical air systems and commercial ATM solutions, Miller stressed that the two are, in fact, very similar. "Harris radars for military airfield operations are applicable to an airport or aerodrome environment. The key distinction is the 'tactical' element, which adds the mobility component, allowing the radar system to be easily transported from one location to another."

Miller said the mobility aspect was something Harris specialised in and was a key discriminator from other air traffic solutions. The suite of Harris capabilities covers the full range of operational scenarios and provides the capabilities required to ensure the management of airspace around airbases, airports and airfields, even in the most challenging weather and low visibility conditions, he added.

The key attribute of these ATM systems is that they can be used for varied critical missions to control,

for instance, trafficking, smuggling and poaching, as well as air defence and aid following natural disasters.

Poaching, in particular, is real problem. Conservation figures show that, in 2007, poachers killed 13 rhinos. By 2013, the annual death toll had reached a staggering 1,000, and they are now killed at a rate of about three per day.

Many of the tactical air traffic systems in sub-Saharan Africa have been in service since the 1980s and are no longer capable of meeting the demands of modern militaries, particularly when it comes to ensuring safety and continuity of operations during missions and in extreme conditions.

"Our current focus is on South Africa but we strongly believe this focus will directly benefit other African nations," Miller stated.

With that said, he recommended solutions that are directly in line with the South African Air Force (SAAF) stated missions, which include air traffic control services, air defence, and surveillance. "Harris is able to meet these critical mission operations with a combination of radar solutions," he said.

Some of those solutions include tactical air surveillance radar (TASR), ground control approach/precision-approach radar and primary and secondary surveillance radar, as well as S-3D medium and long-range 3D surveillance radar.

African States face considerable challenges when maintaining aerial situational awareness. Miller believes South Africa plays a key role in generating interest in future development. South Africa is looking to increase multinational operations and provide opportunities for joint military exercises that will contribute to social and economic growth, as well as stability in the region.

"Their interests [Africa countries] are consistently under attack," said Miller. "Aerial situational awareness will assist in protecting these interests."

"In addition to hostile threats, there is also the challenge of ensuring freedom of airspace navigation and being able to provide humanitarian aid or assistance when necessary. Air traffic management and air defence play a key role in overcoming these challenges."



Military air traffic control-radar by Harris.