

EDA, NATO Team on Soldier Systems

Soldier Modernisation talks to the EDA about its work with NATO on soldier architectures

The European Defence Agency (EDA) is harmonising its work on standard soldier architectures with NATO, with the aim of making a comprehensive open reference architecture for soldier systems available for national military use from 2020.

The EDA is working on two projects under the Standard Architecture for Soldier Systems (STASS) banner, said Marek Kalbarczyk, project officer – land systems technologies in the agency's CapTech Ground Systems group. The first, known as STASS I, focuses on power infrastructure and management, while STASS II looks at information management and infrastructure.

"The aim of both of these studies is to develop a comprehensive open architecture for soldier systems that can be used by national militaries," said Kalbarczyk. Individual nations could use elements of the reference architecture to support the development of their own national architectures, he explained.

The EDA is coordinating with NATO on the standard architecture project, Kalbarczyk said. There is a great deal of commonality of members between the EDA and the alliance, and it was felt to be a waste of time and resources for both organisations to not coordinate their efforts. The EDA's work will therefore feed into and support NATO's Generic Soldier Architecture, which should be available at some point around 2020, Kalbarczyk said.

"The idea is to have coordination at the expert level between the NATO group and EDA STASS I and STASS II, and use as many developments [as possible] from STASS I and STASS II to support the development of NATO Generic Soldier Architecture."

The EDA's work on STASS I and STASS II are the benchmarks for work under Preparatory Action on Defence Research (PADR), a European Commission initiative for financing defence research that is being implemented by the agency. The PADR work programme 2017 has three strands, with STASS part of the 'Force Protection and Soldier Systems' focus.

Under the Force Protection and Soldier Systems side of PADR, the EDA aims to prove the technical feasibility of

the open architecture developed under STASS. Work under PADR will continue in 2018/19 as the EDA looks to develop the architecture and verify it from a technical perspective.

"This is a continuation of what we are doing in the EDA and NATO," he said. "The idea is not to have only a theoretical assessment and analysis, but also to prove it from a technical perspective ... by 2020 we should have a very solid, open reference architecture for soldier systems, which is technically verified and approved."

The architecture will be open to anyone, without needing to be a member of NATO, the EDA or the EU. It will cover everything connected to the electronic aspects of a soldier's equipment. The basic goal is to allow nations to develop systems that can readily adapt to the rapid speed of change in the IT sector or a changing mission profile. The GSA work therefore focuses on 'interfaces', Kalbarczyk said: if the most important internal and external interfaces in the soldier system are identified and standardised, then it should be possible to easily integrate subsystems as they change.

"So if a new sensor or component is available, you don't need to change the entire soldier system," he said. "You just need to change that sensor or component, and the rest of the equipment will continue to operate."

PADR's Force Protection and Soldier Systems arm also covers two other technologies that are relevant to soldiers, Kalbarczyk added. The first is tailor-made blast, ballistic and CBRN protection for military personnel, with an aim of reducing the weight of ballistic and blast protection equipment by at least 20% when compared to existing solutions.

The second additional focus is looking at novel developments in active and passive military camouflage methods. The aim is that a soldier could be camouflaged in both static positions and when moving, Kalbarczyk said, though technological advances in that area are some way off, he said. ■