



IdZ-ER prepares for series production

Dr. Karl-Heinz Rippert, Project Leader U42 Soldier Equipment at Germany's Federal Office of Defense Technology and Procurement, reviews progress on the programme's development testing and further work to be done ready for series production

Rheinmetall Defence, the prime contractor for the development phase of Germany's Infantryer der Zukunft – Enhanced Systems (IdZ-ES) programme, delivered two Systems, each consisting of ten sets of equipment plus a range of additional items to the IdZ programme office in August. Testing of these systems was completed at the end of 2008 and the programme offices are already preparing the contract for the next phase, which will ultimately result in series production. Dr. Karl-Heinz Rippert, the government head of the programme explained, "We will go to the Bundestag in 2011 and first series deliveries will be at the beginning of 2012."

TESTING

IdZ-ES' testing has covered systems testing across a rigorous range of different scenarios and missions. Dr. Rippert said, "The current testing is with two complete, independent systems and a lot of extra components. It covers human factors: how soldiers work with the system and how robust the functionalities are."

In the C4I domain, the IdZ-ES Testing phase is also being used as a piloting programme for the Bundeswehr's new Battle Management System, FührungsInformations-System des Heeres (FüInfoSyS H). As a consequence, Dr. Rippert explained that IdZ-ES' development testing phase included assessment of interfaces with different Armoured Vehicles with IdZ having a 'hook' into the BMS. "This is something quite new. Never before have our soldiers been connected to a BMS on platoon level and below via data and voice.

Work is still ongoing as Dr. Rippert explained, "We are now working on future hardware prototypes and we still

have a lot of competing requirements to address. We have, for example in the demonstrator quite a number of different screens that we have to sort out the most relevant ones' in the C4I system. Integration to more than 10 different platforms needs to be done. All this has to be successfully approved before we get to final production."

IDZ-BS, IDZ ES CROSSOVER?

In regards to the IdZ Basic System, already in service, Dr. Rippert explained that the number of ten-man systems, fielded will remain at 938. The final number of IdZ-ES systems has yet to be determined, although, Dr. Rippert expects the first series to be, "only a few hundred." He continued, "In 2009 we will begin risk reduction and finalisation for series production and then we will decide how many items we will buy for the first series." There is no clear outcome on which unit will receive the systems first although previously the first systems were issued to parachute troops.

While interoperable, Dr. Rippert sees limited crossover between today's fielded IdZ and IdZ-ES. "IdZ-ES is not a further development of an existing system, so it is difficult with this highly integrated system to use items from the Basic System. Up to now however, we have used parts of the legacy system in IdZ-ES during testing, for example cameras. Typically those we use are components which are not highly integrated and we will use them at least until a replacement is issued."

EXTREME ENVIRONMENTS

The Basic System was deployed to Kunduz, Afghanistan after fielding, as part of a rotation of German troops to Afghanistan for a five week period in early 2005. As part of the IdZ-ES test, no new ensembles will be deployed as

part of the International Security Assistance Force. Desert testing for IdZ ES has already taken place in the US at Fort Bliss, Texas. At the other end of the scale, in late 2008 winter testing began in Germany's Alpine region.

Germany has a number of large scale specialist units including Mountain, Airborne and Airmobile units which will be equipped with the IdZ-ES system.

Each requires some modification to the system. Dr. Rippert said, "The parachutists, for example, have a special requirement for drop-off. They are not allowed to wear the entire IdZ-ES systems while jumping, so they have a special rucksack for certain components. When they jump however, the entire system will still be switched on and running for communication and navigation. They also have further safety regulations to consider and a suitable helmet which fits to their extended safety needs is currently under discussion."

In regards to mountain operations, Dr. Rippert commented, "The problem here is that troops are far away from their platforms. They would normally climb up the mountains, taking up this equipment in a rucksack. They must also carry a change of clothing, because, by the time are in position, they are also sweating heavily. That is dangerous in low temperatures. For their needs we will have to add an extra bag to carry that."

Altitude and low temperature are very important factors during mountain operations, to ensure the uninterrupted operation of electronic subsystems. Dr. Rippert said, "All IdZ-ES subsystems are protected to military temperatures, down to -55 degrees Centigrade and beyond. The question of today is how to solve altitude limitations of fuel cells, if we were to introduce those fuel cells for the mountain infantry. We are going to adapt those components, which are newly