



# Italy's Soldato Futuro: Towards Final Troop Trials

Paolo Valpolini reviews Italy's recent progress toward a major contract for Soldato Futuro planned for 2010

**As with most Future Soldier programmes, Italy's Soldato Futuro has also suffered delays. However, final testing should start soon and the contract for a first tranche of systems, to be distributed to the first digitized units should be signed during 2010.**

A contract for 92 pre-production units was signed during 2008 and a first tranche of ten systems, sufficient to fully equip an infantry team, were issued to the Infantry School for an operational stress test in September 2009. Those kits were to be delivered in the second quarter of 2009, however, the delay allowed for the establishment of a more stable configuration leading to fewer than predicted changes during the stress testing. "These tests allowed us to further identify those technologies that were not yet 100 percent mature. Therefore some modifications have been required and those systems will be delivered back to us by industry in late January-early February for further testing," said, Brigade General Nicolò Falsaperna, Deputy-Chief of the Army HQ Logistic Division, responsible for the requirements and the systems acquisition.

One of the items for which those changes will be quite apparent will be in the NIMOS, the Night Mobility System developed by Selex Galileo. In the past, the night sensor was located on the side of the helmet, while a whole redesign of the system in order to improve its balance will bring the sensor to the front of the helmet. This partial redesign of the system will be designated version 1.1, and the first 30 systems will be employed by the Infantry School in late February. These 30 kits will be available in different variants; six of the commander version, six grenadier and 18 in the rifleman configuration, allowing a test at platoon strength.

"Once that further stress test will be concluded, the 30 kits will then be issued to the Digitization

Experimental Unit (USD being the Italian acronym) where the integration of the Soldato Futuro with other digitization assets such as the SIACCON command and control system, the SICCONA command and navigation system, the BTID battlefield identification system and the SICCONA MLO, the C2 system for lower echelons, will be tested," Gen. Falsaperna says. These tests, which will allow also to verify the compatibility between Soldato Futuro and Forza NEC, the Army battlespace digitization programme, will start next April and should develop the system to the final test version, known as the 1.2

configuration; this process might take four to five months, then the remaining 62 systems will be produced at that latest standard, the 30 existing systems being retrofitted, enabling company level testing at the USD.

Quality, reliability and scalability are the three major issues being considered by the Army, the latter being of paramount importance as it is becoming clear that the actual configuration of the system – what to carry and what is not to be carried on each mission – will be decided on a case by case basis by the unit commander, according to the mission profile. While the Soldato Futuro



All AFVs at the USC will be capable of being equipped with the maximum radio fit in order to be able to change the vehicle's role according to need © Paolo Valpolini

► is made of a certain number of subsystems, not all of them will be carried by all team members. The Army is considering this and is still making it mind up, however, the first 92 systems will provide all the subsystems planned for the various configurations to all the soldiers. Company level testing will allow the refining the type and number of subsystems required. The outcome of this will determined the content of first contract for 1,583 systems at the 2.0 standard which should be signed in late 2010 and will be worth some €80million, financed by the Ministry of Economic Development. Should the 1.2 version provide a sufficient reliability, the Army Staff also plans to deploy two infantry teams equipped with such systems in an operational scenario in order to get better feedback on its performance.

Some components of the system have already been deployed downrange and other will soon reach the theatre. Some dozens of ARX-160 assault rifles were used for two months by the Folgore Parachute Brigade in Afghanistan; following the lessons learned review, it was decided to shorten the rifle butt by 20mm in order to improve ergonomics when the soldier wears the body armour, to modify the bolt which can now be disassembled, and to adopt a harder plastic for some components. The Army plans to get the modified weapon in January 2010, and an order for 800 ARX-160 and about 200 GLX-160 grenade launchers with the Scorpio Fire Control System should be signed in 2010; this contract will be totally independent of Soldato Futuro and aims to speed up the deployment of the new rifle. "We are

not necessarily linked to that programme for acquiring those components which are ready, such as the rifle, the new body armour and the new helmet," Gen. Falsaperla said. The new body armour, developed by the Army HQ and by the General Directorate of Land Armaments, considerably improves the ergonomics of the system, while the new helmet is manufactured in polyethylene fibre, increasing the V50 to 620 m/s (a further model will bring it to 680 m/s), while being also more comfortable, more stable and providing more room for radio headsets. Both have already been ordered in initial batches.

As for digitization, in December 2008, a first exercise was carried out at Capo Teulada, Sardinia, with 12 Freccia, 4 of them equipped with the digitization equipment. A number of the soldiers were equipped with the Soldato Futuro's IPR radio and with the wearable computer, which were used to test cooperation between the vehicle and a 60 mm mortar team, the vehicle providing the range thanks to its laser rangefinder, transmitting the data via IPR to the mortar's computer, considerably increasing accuracy. The company commander was also able to use the vehicle radio via the USC (Unità Smistamento Comunicazioni) communications management system, also when dismounted, via the IPR. Currently the backbone for data communications is the ITT High Capacity Data Radio (HCDR) radio, supported by additional on-board radios such as the SINCARS VHF and the Selex CNR 2000 HF. Four of the 12 Freccias deployed in the exercise had also received a provisional release of the SIACCON digitization services which allowed the vehicles to send their exact position provided by GPS, inertial and odometer systems, to exchange formatted and free format texts, send updated operational situations, share the laser warning receiver inputs, and instantly establish geographical grids on the digital map. One of the vehicles was also equipped with the Selex Galileo Janus panoramic sight, the Exercise having provided an opportunity for a first tactical assessment of this system; with ten such systems being installed within the first batch of 54 Freccia 8x8 AIFVs. Another decision that has been taken and that will be implemented on the second batch of 109 Freccia, 71 of which will be of the combat type while the remaining 38 will be in the command post, antitank and mortar carrier versions, is the adoption of a screen in the rear compartment which will provide the infantry team the picture seen by the vehicle commander, giving them a degree of situational awareness. This item will also be retrofitted on first batch vehicles. The number of radios on each vehicle will depend on its role, company and platoon commanders vehicles having extra radios. First batch vehicles were fitted with radios according to their role; it was decided to fit all second batch vehicles for all radios, in order to be able to change the vehicle's role according to need. ■



Operational testing for the ARX-160 assault rifle by the Folgore Parachute Brigade in Afghanistan has led to several modifications, with new modified rifles due to be delivered in January 2010 © Paolo Valpolini