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Metal Storm, DSTO and Airtronic sign agreement

Metal Storm Limited has signed a Collaboration Agreement with the DSTO and US company **Airtronic USA, Inc** to further develop and demonstrate a 40mm Managed Lethality Grenade Launching System (MLGLS).

The prototype MLGLS, developed by DSTO, is a non-lethal 40mm weapon system that can automatically select the kinetic energy of its blunt impact rounds depending on the distance from the weapon to the target. Conventional blunt impact rounds have a fixed kinetic energy, and can only be used safely in a very narrow range bracket - if a target is too close the rounds can be lethal, too far away and the ammunition has minimal effect.

The MLGLS eliminates this issue by automatically sensing the range to target and selecting the muzzle velocity and kinetic energy of its projectiles at the moment of firing to provide an effective yet non-lethal impact from very short to longer ranges.

The MLGLS attaches to a conventional grenade launcher and can also fire conventional 40mm grenade ammunition. It can be used as a stand-alone weapon, or underslung onto conventional assault rifles.

Metal Storm's initial role is to contribute its extensive knowledge of electronic fire control systems and electronically initiated ammunition, together with providing access to specific patented intellectual property.

Airtronic USA, Inc. is the leading provider in the US of M203 40mm grenade launchers. It will contribute its mechanical interface expertise, manufacturing experience and the benefit of its extensive business relationships with all branches of the US DoD market.

The partners aim to present the MLGLS weapon and ammunition system at the North American Technology Demonstration Non-Lethal Capabilities Conference in Ottawa, Canada in October 2011.

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Response from this international event will be used to refine MLGLS requirement specifications, to engage potential early adopters, and to provide further data to quantify the expected global market potential for the product. If market response meets expectations, Metal Storm and Airtronic intend to further negotiate with DSTO to commercialise the MLGLS for sale to international military and law enforcement markets.

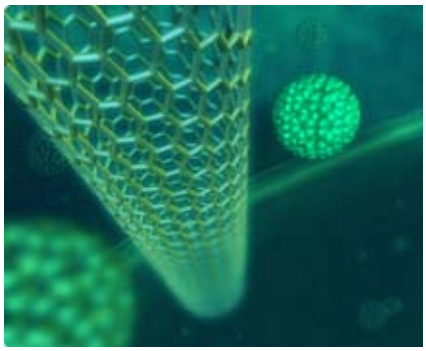
Metal Storm CEO Dr Lee Finniear said that the collaboration agreement offered Metal Storm the chance to leverage its existing expertise and IP in electronically initiated ballistics beyond the current Metal Storm stacked projectile systems.

"We have already developed advanced electronic fire control systems and ammunition initiators for our stacked projectile weapons, and with minor adjustment we can integrate these existing systems to improve the performance of the MLGLS." Dr Finniear said. "The MLGLS system and its unique ammunition represent a significant sales and revenue opportunity for Metal Storm."

Airtronic CEO, Dr Merriellyn Kett said that the MLGLS weapon system gives users of the M203, one of the most widely used grenade launchers in the world, the ability to escalate or deescalate force based on a perceived threat.

"With the M203 Managed Lethality System in place, the host grenade launcher retains its full capability to launch all standard 40mm grenade ammunition," she said. "But it can now also operate as an advanced less than lethal weapon system. This is a vital capability for many of the current conflict zones around the globe".

Quickstep in nanotechnology R&D program



Quickstep Holdings Limited is participating in a US$10 million European research project to investigate the use of nanotechnology to improve the material properties of advanced composites used in global transportation industries. The project is being undertaken by Quickstep's German subsidiary, **Quickstep GmbH** whose share of the project is approximately US$445,000.

The nanotube technology at the heart of this research program involves the introduction of tiny 'nano sized' carbon tubes into the host composite resins. It is believed this could lead to improved properties including enhanced electrical conductivity and greatly increasing component strength.

Electrical conductivity is a key challenge in aerospace manufacturing because aircraft need protection against electromagnetic interference and lightning strikes. Due to the relatively low conductivity of traditional carbon fibre materials, existing manufacturing solutions require that composite aerospace parts be covered with a metallic 'mesh' that significantly adds to the overall weight of the aircraft structure (around 900kg for a modern **Airbus** or **Boeing** aircraft) without making any structural contribution.

Carbon nanotubes have been found to dramatically increase the electrical conductivity of composite materials, meaning that this metallic mesh could be significantly thinned or removed altogether – leading to a reduction in an aircraft's weight and an increase in its fuel efficiency.

The research project is evaluating the manufacture of composite materials infused with carbon nanotubes, with a sole focus on "out-of-autoclave" composite manufacturing technologies – such as the Quickstep Process – to eliminate the negative aspects of autoclave processing. The benefits of out-of-autoclave processing techniques can include reduced capital investment, reduced cure cycle time and lower running costs.

Earlier this year, Quickstep signed a contract with **Northrop Grumman** to manufacture composite airframe components for the F-35 Joint Strike Fighter using its own out of autoclave process.

The research project is being undertaken by an alliance of 16 different organisations. In addition to Quickstep, participants include **EADS; SLCA** – a subsidiary of the **SAFRAN Group** which undertakes design and manufacture of composite parts for airliners, regional aircraft, business jets and helicopters; **Alstom** - one of the world's largest providers of rolling stock and rail transport infrastructure; the **University of Cambridge**, the **University of London** and the **Catholic University of Leuven**; and **Coexpair**, which will act as the project manager. The project is expected to be completed by the end of 2013.