

# METAL STORM LIMITED

A.C.N. 064 270 006

# CHIEF EXECUTIVE OFFICER'S ADDRESS ANNUAL GENERAL MEETING

### 25 MAY 2007

Ladies and Gentlemen,

The theme for my presentation is "Delivering the Real Thing". Today, this is what managing Metal Storm is all about.

Metal Storm technology is a revolution in the design of weapons. Yet, as with many revolutionary ideas, it takes time for people to trust and adopt them. On Wednesday a shareholder relayed to me the story of Samuel Colt, who acquired the patent on a "revolving gun" in 1836. It took many lean years and dogged determination before he finally got a deal of 1000 pistols sold to the US Government in 1847. To do this he had to demonstrate and deliver the real thing.

Metal Storm must also deliver the real thing. People think the idea is great – they have for years. But before anyone digs deep into their pockets to buy 1000 Metal Storm weapons, they want to know what they are buying will really work. Defence purchasers won't buy it if they can't hold, aim and fire it themselves.

So, to be successful, Metal Storm must prove it can deliver credible weapons on the battlefield. *Rugged, practical, reliable weapons*. As a Company we must design, build and deliver <u>real</u> weapons that prove beyond reasonable doubt that Metal Storm technology can be used in practical warfare.

Today I will comment on the company strategy and the fundamental changes that we have undergone. I will then give a more detailed commentary on our two branded products, Redback $^{\text{TM}}$  and 3GL, also where we are with our US contracts, before closing with some insight on the direction the company is headed moving forward.

# **Strategy & Change**

The company has realised that its strategy had to move from Technology Showcasing and IP licensing, to designing and building a practical family of Metal Storm weapons.

To do this the company itself had to change, and this transformation has been substantial.

First, the company has restructured its staffing. At the beginning of 2006 we had 24 full time staff, of which 10 were engineers, 12 were in management and administration and 2 were in sales. Now we have 25 staff, of which 17 are engineers, 5 are in management and administration and 3 are in sales. We have almost doubled our engineering capacity and have increased our sales capacity by 50%.

Second, the company has changed its facilities. At the beginning of 2006 the head office was in Central Plaza One, a smart office block in the centre of Brisbane. Now the company head office has relocated to a warehouse facility in Brisbane's industrial belt. We have our own machine shop, electrical workshops, firing range and design offices. We can now design, machine, test fire and modify our ammunition and weapons in a cycle that lasts hours rather than weeks. The resulting increase in output has been tremendous.

Third, the company continues the process of improving operations. Net cash burn is down by 29% from the beginning of 2006. Improvements have been made to internal controls, forecasting and reporting, and a more appropriate accounting system has been implemented.

Also the company continues to ramp up its sales. In 2006 the US Office had AU\$1.58 million in revenue, compared to AU\$230,000 the year before. As our products mature the sales & marketing function is going to be paramount. I am in the process of re-engineering this area to ensure that as our products come on-stream, the market is ready to purchase them.

What are our products?

Redback and 3GL, and the associated munitions, are at the core of our product development efforts. We will sell these as branded Metal Storm products. They are our most important long term initiatives.

However, the progress we have made to develop Redback and 3GL will allow us to also offer a family of modular component products that can be configured to suit many military and law enforcement applications. These components include single and multi-barrel gun pods, miniaturized fire control systems and a range of 40mm ammunition. When married with our technical expertise, we are now capable of configuring component weapons systems to suit specific contract requirements. This will help us considerably in securing further contracts in the USA and elsewhere to provide short term revenue and, in the longer term, to expand our weapons sales.

This modular component product strategy is important as it means we can address a range of applications quickly and with relatively low risk. Important Metal Storm markets will include arming UAVs and UGVs, under-slung multi-shot infantry weapons, less than lethal crowd control and force protection, asset and perimeter protection and vehicle mounted selectable response weapons. We are already delivering on a range of prototype development contracts in these. In the future, when we move toward high velocity 40mm weapons the opportunities will further expand.

### Redback

This video shows Redback. Redback has been developed in collaboration with Electro Optic Systems (EOS), and Singapore Technology Kinetics (STK). It is a 4 barrel Metal Storm weapons pod, integrated to an EOS gimbal and mount, and an EOS targeting and firing system. Together with Metal Storm modified STK 40mm HE and Airburst ammunition it forms a fully functional remotely operated weapons system.

This video shows the targeting and automatic tracking capability of Redback – note how it can track this vehicle automatically, either in visible light or at night using its infra red camera.

The terminal effect of Redback warheads can be dramatic – this video shows the impact of multiple simultaneous 40mm airburst warheads of the type used with Redback.

When integrated, the Redback system can rapidly target a number of threats and deliver multiple 40mm warheads to each – the short spacing between projectiles can clearly be seen. This demonstration video shows the use of inert rounds, we will shortly be testing this capability with HE and Airburst rounds.

This characteristic is important when attempting to target fast moving objects such as Rocket Propelled Grenades (RPGs). Being able to place multiple airburst warheads, close together at a specific point in space and time, exploding simultaneously, would create a shaped, controllable "kill envelope" within which the target would be incapacitated.

Redback is a sophisticated weapon. Shown here is the integrated fire control system within the pod. Also shown here is a microprocessor at the end of the muzzle which detects when a round has left the barrel, permitting another round to then be fired.

Two Redback weapons pods are currently in transit to Singapore for extensive test firing. Once this is complete our next step is to commence live fire demonstrations in the USA.

Redback will initially be sold as a Remotely Operated Weapons System (ROWS). [We will continue further work and testing with our partners EOS and STK, to develop and release a second version with Anti-RPG capabilities With this capability, Redback would present a compelling acquisition, providing a multi-role system with defensive anti-RPG, offensive ROWS and a selective munitions (multi-barrel lethal/less than lethal) capability simultaneously available and all in the one weapon.

3GL

This is a 3GL complete with its shoulder stock. In order to bring it here the Queensland Police asked that I disable its capacity to load or fire. We have done this by removing an essential breech plug. As you can see the weapon is light, short, simple to open, load and operate and can be mounted to most current assault weapons.

This video shows how the 3GL is loaded and fired.

3GL is an impressive engineering achievement. The fire control system is now smaller than a credit card, and the barrels are an aluminum and carbon fibre composite to reduce weight.

3GL is the only under-slung 3 shot semi automatic 40mm grenade launcher that doesn't need mechanical reload. Some other competitors are shown here. Either they are single shot, are bulky or use smaller calibers with much less terminal effect. Some designs make it impossible to fire or reload the weapon from the prone position.

3GL is a force multiplier – it would give a typical infantry unit 3 times the grenade firepower compared to the M203 without needing troops to carry large grenade launchers such as the Milkor. It can be fired from the prone position, and would allow the soldier to "walk the rounds to the target" by firing successive rounds without needing to stop and reload.

In a firefight most troops with an M203 single shot grenade launcher use one shot, then stick with their main assault weapon, simply because they don't want to stop, reload and risk getting shot. With the 3GL they have 3 grenades at their disposal before reverting to their main assault weapon. Also in urban firefight environments the 3GL lets the soldier use the first grenade to breech a door, quickly followed by a second and third grenade to clear the room of hostile forces before entering.

With over 250,000 single shot grenade launchers in circulation, the market for 3GL is large and its competitive advantages are clear.

#### Ammunition

Working with Singapore Technology Kinetics (STK) Metal Storm has created a range of 40mm ammunition natures to suit various operating environments. This includes HE, Enhanced blast and Airburst.

This is a typical piece of Metal Storm ammunition. A Metal Storm tail is attached to the warhead, and the tail contains the propellant, the electronic primer and an induction coil. The gun barrel has a matching coil. The fire control system sends a specific electronic pulse to the gun coil, inducing a similar pulse into the tail coil, firing the primer and sending the warhead on its way.

In stacked projectile weapons the design of the ammunition is paramount. The tails must be strong enough to withstand the forces applied when rounds ahead of them fire, but also exhibit a range of other properties, such as the ability to flex, clip together, handle rough treatment during transport and storage, load and unload repeatedly and fire reliably even if dirty or wet.

We have several tail designs. For example, whilst most Metal Storm guns are loaded with individual rounds, the entire stack may need to be unloaded. This tail has special clips at the end which, as the round enters the breech, clips onto the round in front. This allows you to pull a stack of rounds back out. As they come back out they release. The process can be repeated over and over again.

In some operational scenarios, quick reload is essential. Our "Stick Round" design, shown here, allows us to make a stick of multiple grenades, and rapidly slot the stick into the gun. If the stick is partially fired, the soldier can clip more grenades on to the stick to quickly reload. Importantly, the stick can be easily broken apart into individual rounds, and rebuilt later as needed.

These are some of many examples of critically important engineering innovations that are being applied to move Metal Storm from a technology concept to practical weapons that soldiers can trust in battle. Terry has already acknowledged the hard work of our engineering team, and I would like to reiterate that – their skill and dedication is clear from the progress we are making

# Singapore Firings

As we speak, our engineering team, and the Redback and 3GL systems are in transit to Singapore for the most extensive test firings Metal Storm has ever undertaken. With our partners Singapore Technology Kinetics and Electro Optic Systems we will be taking a significant leap forward toward our final products. In addition we will test and expect to meet the milestones for the convertible note holders before 30 June.

We will release video and details of our successes in Singapore over the coming weeks.

# **US Operations**

While our Australian engineering team has been focusing on core R&D, Redback and 3GL, our US Operations have been winning and executing a variety of military contracts.

These contracts are important as they establish our credibility in the US Defense community. They may also lead to volume weapons purchases.

In 2006 we completed two major contracts, being the weaponization of a UAV in association with DPI Inc, and the development of a short range weapon system for the Department of Energy.

In 2007 we have several contracts ongoing which I will now outline.

The Office of Naval Research (ONR) and the Space and Naval Warfare Systems Center (SPAWAR) has contracted us to deliver a 4 barrel unattended weapons pod on a ROWS mount, deployed on a UGV for active protection. Also the contract includes Metal Storm demonstrating an anti-RPG system.

For the US Army we have two contracts underway. The first is a Phase 2 SBIR contract to demonstrate a ROWS mounted crowd control weapon with a family of less than lethal munitions.

The second contract is to enhance the capabilities of Explosive Ordnance Disposal teams that currently use UGVs to destroy the improvised explosive devices (IEDs). IEDs are responsible for most of the coalition casualties in Iraq. Currently these UGVs carry single shot weapons that fire a full bore disruptor munition. If the shot misses, or there is more than one IED, it causes significant operational difficulty. Metal Storm is adapting the existing munition to be stacked in a Metal Storm launcher so that the UGVs can have a multiple shot capability.

For a civilian company, StarChase, we have completed a Pursuit Management System that includes a launcher mounted in the front grille of a police car, and a specialized munition that carries a real time GPS Tracking unit. We have completed the design and build, and initial field trials have been successful. We are now building a number of systems to the same design as a part of the contract.

Finally, for the US Marine Corps Warfighting Laboratory we are developing a Metal Storm lightweight 18mm 4 shot under-slung mini grenade launcher using the existing Frag-12 grenade. The supply of a test launcher and 600 rounds of ammunition are included in the contract. This is a very exciting contract which is able to gain considerably from our developments with the 3GL.

The US Operation is continuing to seek new contracts and to take the existing contracts further toward volume weapon delivery.

# The Way Forward

Metal Storm is committed to delivering the 3GL and Redback weapons systems and winning further weapons development and configuration contracts.

We expect that 3GL and its munitions will be certified for man firing in the second half of 2007, and be tested on an M16 by the end of the year. Further refinement through the second half of 2007 should result in limited release prototypes in early 2008 with field demonstration weapons and munitions that prospective customers can trial by mid 2008. Feedback from these trials will be incorporated into the final designs. Once firm expressions of interest and pre-orders are received, 3GL and its munitions will enter production engineering, manufacturing and final certification.

Redback enhancement will continue in the second half of 2007 with additional work on automated target detection and tracking for anti-RPG functions, and further enhancement to its munitions suite. It will then go through a similar enhancement and production process to 3GL.

Both our US team and our Australian team will be increasing the level of sales and marketing activity performed, with the intention of speeding up contract awards and warming the market in advance for the arrival. We will show our products at AUSA and Changi Air Show, in addition to arranging specific demonstration firings for interested parties.

### Summary

In summary, the key messages I would like you, our shareholders, to take away with you today are:

- Metal Storm must demonstrate real, practical weapons if it is to be successful
- We have re-engineered the company to deliver this outcome
- Redback and 3GL are real, practical weapons we are well advanced with their development and we believe we will pass the milestones of the convertible note holders in June.
- In addition we have a family of weapon system components that we can configure to arm other platforms for other purposes.

• Our US operation continues to be successful and many of the current contracts hold the potential for volume orders in the future.

In short, Metal Storm has developed the capacity to deliver the real thing, and it is now in the business of doing so.

Thank you.