

**ATTN:**

**Honourable Thomas R. Braidwood, QC  
Braidwood Commissions of Inquiry**

**and**

**Associated Counsel**

**RE:**

**Addendum & Errata**

Automated and Remote Applications of Taser Weaponry  
Jay C Page

**ERRATA:**

- 1) Text describing the: iRobot “**Packhorse**” should read as iRobot “**PackBot**” as this is the actual model name of the product.
- 2) Re: SCHEDULE A: (3/3) - **Taser Robot Video:** Internet links for the video footages have since been removed from the referenced locations. The same footage can be seen at [http://www.dailymotion.com/video/x3pv34\\_le-taser-irobot-packbot-explorer\\_news](http://www.dailymotion.com/video/x3pv34_le-taser-irobot-packbot-explorer_news)

**ADDENDUM:**

- 1) An item **SCHEDULE C** - comprising a computer data format CD containing video segments and other data used in the presentation will be submitted to counsel at the time of presentation.
- 2) An item **SCHEDULE D – Opening statement to Braidwood** – is attached to this document.
- 3) An item **SCHEDULE E – Speaking points** – a detail of points some or all of which may be referenced in the presentation is attached to this document.
- 4) An item **SCHEDULE F – Taser collaboration with iRobot** – NB RANGE: Effective engagement ranges significantly greater than hand held TASER devices (limited only by the communication system of the robotic platform)

## **SCHEDULE D: (1/1) - Opening statement to the Braidwood Inquiry**

Hello, I offer my greetings and service to this Commission of inquiry. I am a citizen of Canada and a born resident of British Columbia.

I would like to open with a brief statement. I will then play a few short video segments relating to the body of my presentation.

My experience and interest is as a Technical Director of high tech computer graphics, Integrating Image processing, artificial intelligence, and automation. I am here to speak my concern and ask questions relating to automated Taser weaponry.

It is my belief that this commission and you sir, the Honoured Commissioner Braidwood are placed at a crucial and unprecedented nexus. A point in time when full diligence and proper bold actions must be taken to protect the public trust, the safety of our social order amidst tides of change, and the right of a person to peaceful enjoyment under our ancient common law.

In order to prevent, or at the least defer the real and immediate threat to the appropriate rule of law posed by armed machines and robots, this commission must fully consider even the slightest involvement of such equipment in the planning, budgeting, field testing and operations of our provincial agencies.

I will demonstrate to the inquiry that such devices, autonomous and self activating Taser devices, exist and are currently being marketed by Taser International and its affiliates.

These products exist today. Some as bolt-on modifications of the X26 Taser platform, and others as new deployment packages. Our public agencies may already have had contact with these devices. Our fair province and its taxpayers may be contributing to the development of such technologies through service and purchase agreements, operational feedback and participation in an advisory capacity to Taser International or others.

Our police, prison guards and other public and private security agencies or retained consultants may have received training and Taser equipment either directly or under the guise of sales solicitations or "field testing" opportunities offered by Taser International and others, including military affiliations.

These automated and remote control mechanisms and their ilk are already common in warfare and, in my belief, must never be allowed in the civilian domain, in civic agencies, in criminal hands or at the bidding of law enforcement agencies.

I ask this inquiry and you sir, Commissioner Braidwood to fully consider the validity of my assertions, my presentation of facts obtained from Taser International and other people familiar with the art. To conclude as I have that automated and remote Taser weaponry, regardless of lethal risk, be banned from use in our province with all haste due to the inherent risks of such technology.

I ask if possible that you publish with haste an interim finding banning this aspect of Taser technology so that contracts and plans relating to the upcoming security budgets and plans for the 2010 Olympics, or other events, may not be overly affected and our citizenry be held secure from the dangerous spectre of armed robots, lest we loose faith that the rule of law be fairly enforced by the good men and women of our provincial agencies. – Jay C. Page – May 14 2008.

## **SCHEDULE E: (1/3) - Speaking Points to the Braidwood Inquiry**

**This schedule is an accumulation of speaking points and internet links relating to the presentation.**

- My profession and background involves new technology integration, risk management and trend analysis in the high tech field. This gives me insight and intuitions re: development paths and methodologies high tech companies (such as Taser International) may use to develop, market and upgrade their products.
- A quote from Marshall McLuhan, referencing bomber pilots and other war fighters indicates that the distance from target creates a willingness to act with greater force than would be used in person. The use of remote controlled Taser weapons may create a similar reaction.
- The use of the Taser as a compliance and possibly a torture technique is already demonstrated in the field. It is reasonable to assume that these usage trends may apply, possibly more-so, to automated and remote Taser weapon systems.
- Training of Taser operators seems to center on situations of violent non-compliance and may not adequately cover appropriate use in situations of non-violent civil disobedience.
- The obligation of reporting the usage and deployment of any automated Taser weapon must have the highest standard, similar, if not exceeding, that of the use of a firearm.
- The Taser XREP shotgun shell has a battery lifetime capable of “several minutes” of discharge. Through computer sensors and software it is instructed to discharge for 20 seconds. It is reasonable to assume that there are many modes of operation of this device, such as automated repeat discharges, continuous long term discharge, not to mention various software programming failure modes and hardware device failure modes due to the impacts on the XREP being fired from a gun and forcefully hitting a target, or hard object in the targets vicinity, which may cause accidental long term Electrical discharge, or rapid chemical fire/explosive behaviour as witnessed in situations of the high discharge of cellphone and laptop batteries.
- Are private security firms being considered for authorized/licensed use regular or automated taser devices, by any regular contracts or special orders?
- Financial or manpower incentives may be justified to economize through leveraging technologies such as the remotely operated Taser weapons. ( Private security firms say they can't keep up with demand of 2010 Games - Sunday, May 11, 2008 - The Canadian Press )
- Videos of the Taser XREP shell and Taser armed PackBot robot show targetting in the body area, in proximity to the heart. There is a study which shows that cardiac effects are likely to occur with impacts in this area.
- The Taser XREP video demonstrates that a central abdomen hit will likely result in the tethered barbs sticking into the genital area; however, the firing simulation portion of the video shows barbs placed lower on the subjects leg. Under what circumstances should massive and possibly minutes of repeated electrical shocks through the genitals be considered appropriate?

## **SCHEDULE E: (2/3) - Speaking Points to the Braidwood Inquiry**

- There are heavier duty tactical robots than the PackBot such as the TALON robot which may be armed with a Taser. Are any robotic platforms currently operational in the province which may be or will be armed with Tasers?
- On video, Taser International brags of their coming future high tech weapons, produced by their engineers in secret. Their current production plans show a trend of integration of the following objectionable methodologies: trends towards microprocessor controlled triggering (XREP, Shockwave and Packbot), trends towards remote operation (Shockwave and PackBot), trends towards automation systems (Shockwave and PackBot).
- Video footage and product webpage of the Taser armed iRobot Packbot has been removed completely from the iRobot website. This video footage has also been removed just recently (possibly through legal request by Taser International due to the start date of this inquiry) from You Tube, a website where people may upload and distribute video content. The hiding of this data previously available both on Tasers website and elsewhere seems to be an attempt to control the public perception and objection to what armed robotic equipment looks and acts like.
- The Province of BC should be a conscious consumer, rather than funding private agencies to research and produce items which the government does not itself have a mandate to produce, such as automated weaponry.
- A Taser armed robot is likely to have several X26 (or similar) Taser weapons mounted on it as the Taser Shockwave does in order to provide the capability of multiple weapon discharges.
- Usage creep: If law enforcement is allowed to use devices, civilian agencies, consumers and criminals may therefore receive less punishment for similar use as the device has been somewhat "sanctioned".
- The consumer level Taser C2 is available in the United States and elsewhere. Homemade versions of the advanced and remotely operated Taser systems may be created by criminal elements for illicit use, or concerned citizens for personal security purposes. Allowing the commercial counterparts to exist and be used may create a lower threshold of wrong doing by these parties.
- Similar to how a digital camera may autofocus on faces, and even now, take pictures when the subjects are detected to be smiling, a camera on a Taser system may be used to target. The TaserCam attachment for the hand held X26 unit may have a use in semi-autonomous application, ie targeting acquisition or timing of the weapon firing even with the existing hand held X26 units.
- An integration of off the shelf technologies such as a combination of a camera based facial recognition system and a remotely monitored Taser weapon could be used at access points to venues ie the transit system or secure compounds such as prisons. This may lead to a wholesale exposure of of the populace to a ready to fire Taser weapon, where a the facial recognition system might trigger upon recognition of suspects wanted on immediate or other matters.

## **SCHEDULE E: (3/3) - Speaking Points to the Braidwood Inquiry**

- People will likely not be used to obeying operators communications coming from a loudspeaker on a robotic device. Confused or agitated people may tend to ignore such stimulus, subjecting them to unwarranted harm
- People may not recognize the communications coming from the robotic device as being directed at them personally.
- <http://www.guardian.co.uk/science/2007/jun/29/usnews.internationalnews> - John Pike director of globalsecurity.org indicates that the trend of development of armed robots is very strong.

## **SCHEDULE F (1/1) :**

### **TASER International Collaboration with iRobot Corp**

<b>Companies:</b>	TASER International (NASDAQ: TASR) and iRobot Corp (NASDAQ: IRBT)
<b>Collaboration:</b>	To integrate TASER electronic control device (ECD) technology into iRobot® robotic platforms
<b>Markets:</b>	Law enforcement, federal, and military use
<b>Capability:</b>	Employ TASER® technology at a remote distance to engage, incapacitate, and control dangerous suspects without exposing operators, the suspect, or bystanders to unnecessary risks
<b>Range:</b>	Effective engagement ranges significantly greater than hand held TASER devices (limited only by the communication system of the robotic platform)
<b>Availability:</b>	TASER International and iRobot are currently soliciting user input on what is desired in terms of combined capability. Product development schedule will be based on that feedback