

rounds of ammunition. As well, half a rifle will not generally be effective, except for spare parts. Another consideration would be the cost of seizure for the smuggling organization. An organization that loses 10,000 rounds of 5.56 mm ammunition in transit may in effect be losing a maximum dollar value of about US \$2,500.<sup>49</sup> The equivalent weight in M-16s would be 50 rifles -- it is difficult to believe that they could be purchased for US \$50.00 each. Tracking guns to an illicit source and obtaining a conviction may be easier than trying to do it for ammunition. Most firearms have serial numbers and records are available at least at the new sale level. The same is not true for ammunition. Focusing on ammunition control primarily because it is deemed more difficult or less lucrative for smuggling purposes is, at best, based on speculative analysis. This proposition requires more study as it would appear to be situational in its application -- particularly in terms of a country's willingness and ability to monitor and detect such transactions. On the other hand, monitoring legal ammunition transfers may be more useful as they are generally ongoing and large in scale.

### Detecting Smuggled Ammunition

The ability to monitor and detect illicit ammunition in transit has been the subject of some speculation in the light weapons arms control literature. The focus is on the use of chemical detectors to find "explosives". Most current explosives detectors were developed in the context of airline security and are based, for the most part, on monitoring airport baggage.<sup>50</sup> They are expensive and as currently developed would not generally be appropriate for scans of bulk cargo areas such as large border crossing points and ports. Examples of scanners used at airports include the CTX-5000 produced by InVision which costs approximately US\$ 1 million and Thermedics Inc which produces a hand held scanner called EGIS at US\$ 165,000 -- it is labour intensive and much slower to operate than the CTX-5000.<sup>51</sup> Each must be in close proximity to the source it is scanning. IONSCAN, a Barringer Inc product, can detect some components of ammunition propellants (nitroglycerine and sulfur from black powder), but according to a Barringer representative, current advanced X-ray systems suitable for detecting cartridge cases even through the outside of a truck or container might be more practical. Trace chemical detectors are generally good only for close proximity detection. If the ability to detect ammunition through the development of enhanced detectors or by propellant tagging was improved, it would still require a commensurate commitment by governments to use effectively the resource and may be prohibitively expensive for developing countries. The advent of free

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<sup>49</sup> See pricing details. This is closer to the high end of the cost spectrum.

<sup>50</sup> There are a number of Internet sites that deal with commercially available bomb detectors and explosive detection, particularly within the context of airport and aircraft security. See <http://www.thesite.com/0896w1/life>; <http://www.westergaard.com:8080/Secrime/magsf2.html>

<sup>51</sup> For further details see [http://www/pbs.org/newshour/bb/transportation/jul96/security\\_7.25a.html](http://www/pbs.org/newshour/bb/transportation/jul96/security_7.25a.html).