



# TOOLS FOR MONITORING RANGE ACCESS

## SUSTAINABLE ARMY LIVE-FIRE RANGE DESIGN AND MAINTENANCE (2.5.e)



### *Tools for monitoring range access will:*

- *Identify, evaluate, and document existing government and commercial surveillance and monitoring technologies for their applicability to range access security*
- *Provide recommendations to aid installations in acquiring the needed protection*
- *Incorporate recommended technologies into standard range design criteria*

### **For more information**

U.S. Army Environmental Command  
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<http://aec.army.mil>

Escalating urban encroachment and the rise of international terrorism have resulted in a greater need for intrusion detection systems (IDS) on Army ranges. As force protection requirements increase, and the protection of the public requires additional measures, range operations and safety is an emerging issue for many installations.

Preventing unauthorized range access involves detection and deterrence of intruders. This can be attempted on a wide scale by equipping the range perimeter with IDS and cameras, or on a local scale to protect specific sites on a range. Selection of security equipment depends on which approach will be implemented as well as site specific factors such as terrain, weather, and existing infrastructure. The success of either approach in preventing injury, damage, or theft will depend on the response time of range personnel or law enforcement officers once they have been alerted that an intruder has been detected.

To accomplish these objectives, IDS technology must meet the following requirements:

- be cost effective and require minimum Army personnel interaction
- not impact training requirements
- be able to discriminate between human and animal intrusion
- meet DoD and Army requirements for range access and control
- be incorporated into standard range designs manuals and specifications.

The products of this are:

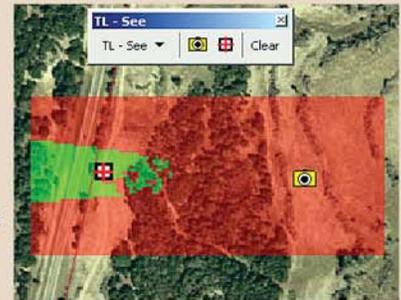
- A report presenting information on intrusion detection and assessment technologies and security scenarios that might be implemented at training facilities;
- Range Intrusion Risk Assessment (RIRA): a computer application which provides an objective determination of the need to implement security measures at training facilities for asset protection and incident prevention;
- Security Technology Decision Tree Tool (STDTT): a computer application which identifies security technologies suitable to the user's application, based on his/her security objectives, chosen means of detecting an intruder and site-specific considerations including terrain, weather, and site maintenance;
- Training Lands (TL)-See: a GIS application that, by displaying a camera's field of view assessing the presence of an intruder, supports cost effective use of cameras for range security by assisting the user in site-specific selection of camera hardware and locations to attain required coverage with the fewest number of cameras.

The report outlines options for detecting and assessing intrusions using commercial off-the-shelf (COTS) and government off-the-shelf (GOTS) equipment. The report and STDTT will assist range managers in selecting IDS technologies best suited to their installation. The STDTT extracts information from a security technology database to identify IDS, cameras, illuminators, and automated video surveillance products that meet the user's requirements.

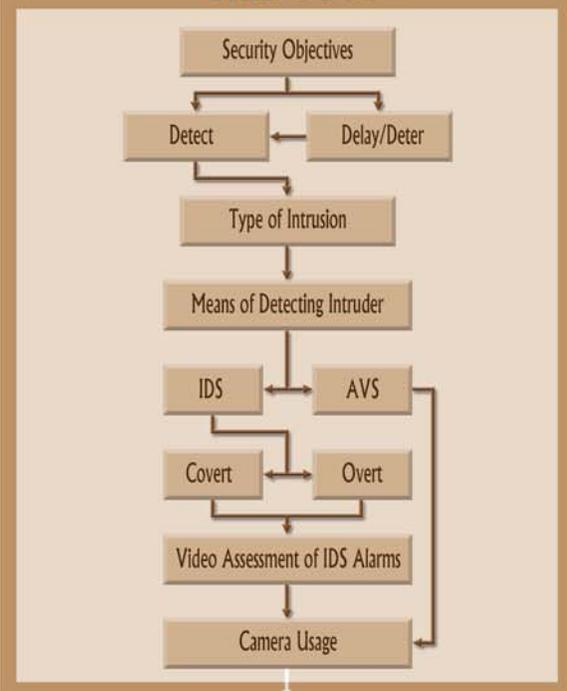
## TOOLS FOR EFFECTIVE USE OF SECURITY TECHNOLOGY

TL-See:

- GIS-based tool for:
  - \* Selection of camera lens/format
  - \* Cost-effective camera placement
- Based on intruder recognition criteria



## SECURITY TECHNOLOGY DECISION TREE TOOL



### Contributing members include:

Army Training Support Center (ATSC);  
Engineering Research and Development Center (ERDC);  
U.S. Army Environmental Command (USAEC);  
U.S. Army Corps of Engineers Huntsville,  
U.S. Army Engineering and Support Center;  
and Aberdeen Test Center (ATC).