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Agile Target Effects Data Management Tool—ATE DMT

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Agile Target Effects Data Management Tool—ATE DMT

- Developed under Agile Target Effects Systems (ATES) Science and Technology Objective
- Originally a research tool with a narrow application in directed energy
- Relational database running on Microsoft SQL Server
- Links materiel to directed energy (DE) effects database
- Links materiel to fighting tips
- Allows best-guess inferences based on fundamental technology (“All else being equal….”)
- Links targets to “fighting tips”

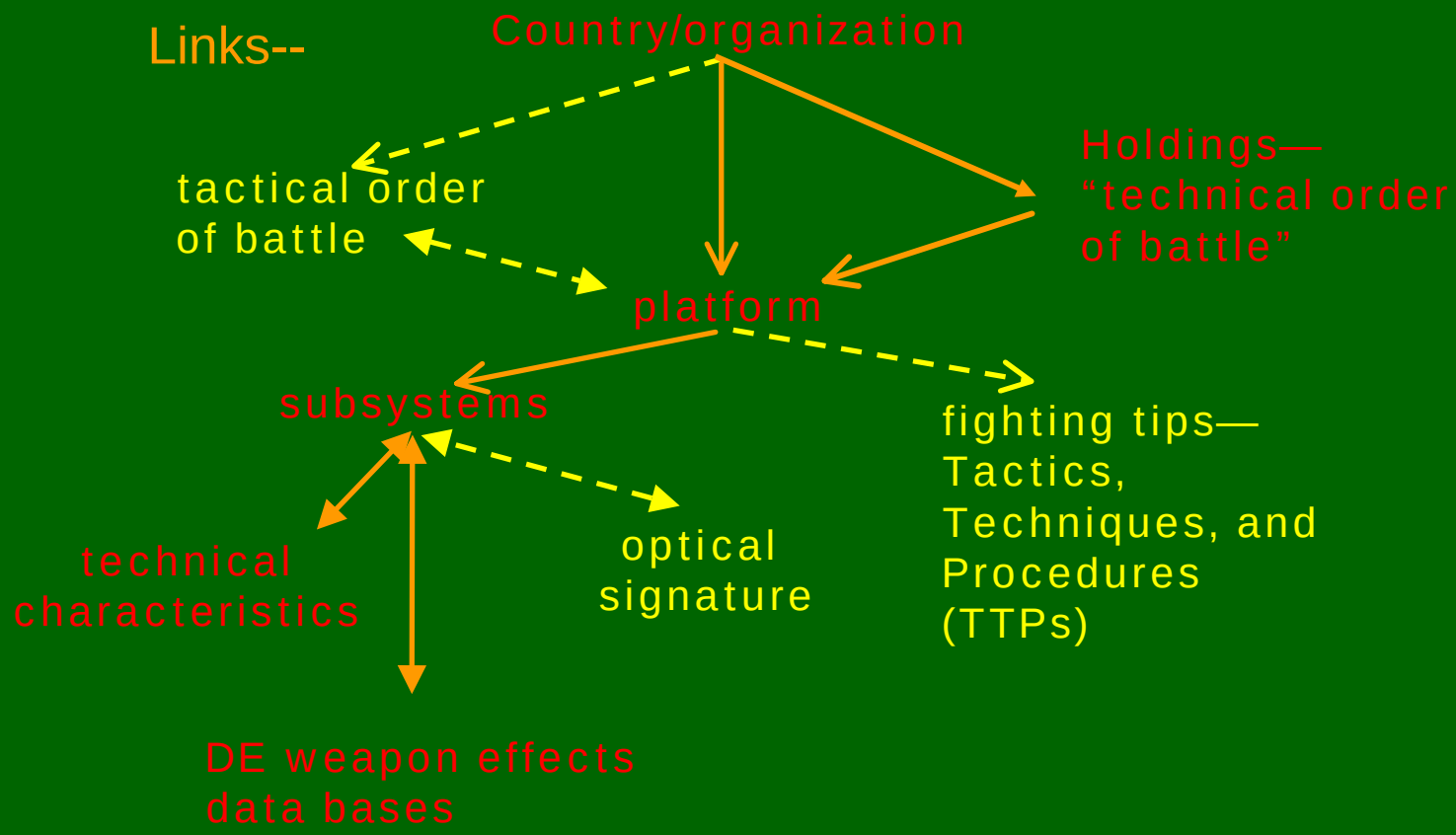
⟶ Multi-use tool:

> Materiel developer
> Combat developer
> Battle staff

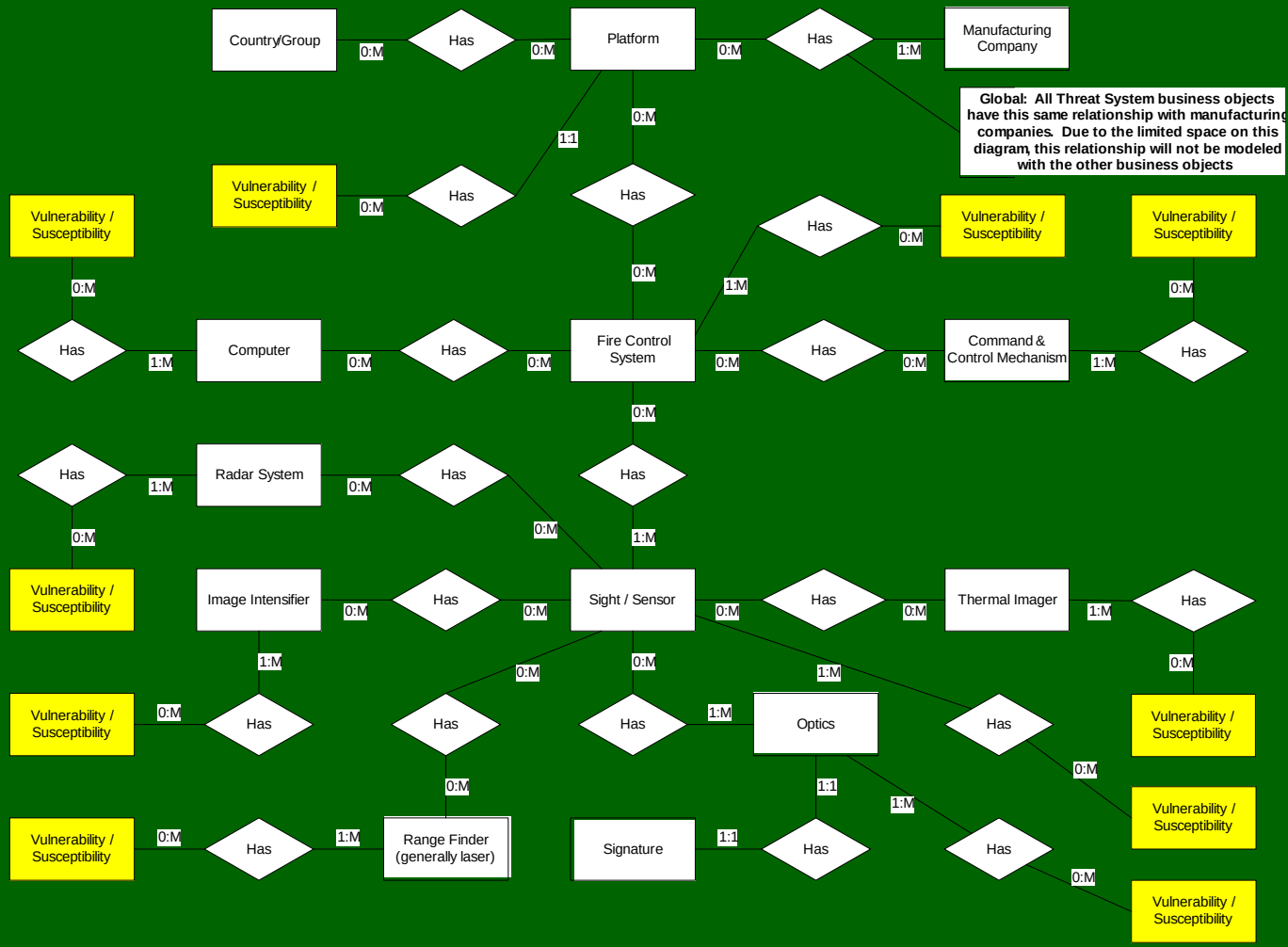
Agile Target Effects Data Management Tool--continued

- Runs on laptop—planning on the fly
- Web based application or standalone
- Web paradigm allows
  - > central management
  - > central configuration control
  - > *fast* update in response to field emergencies
  - > remote access to current info
- Materiel and combat developers can interrogate effects database
- All users can access updated Tactics, Techniques, and Procedures (TTPs)
- Can be used by battle staff to plan and to respond to unexpected technical situations
- Aid to data fusion
- Not limited to DE effects and data
- Version 1 completed; version 2 will include enhancements such as “fighting tips”
- Fighting tips must be cooperative effort between battle staffs, R&D, combat developers

Basic information links



Simplified organization, version 1



Basic point of entry to database

Can be used to assess impact of technologies

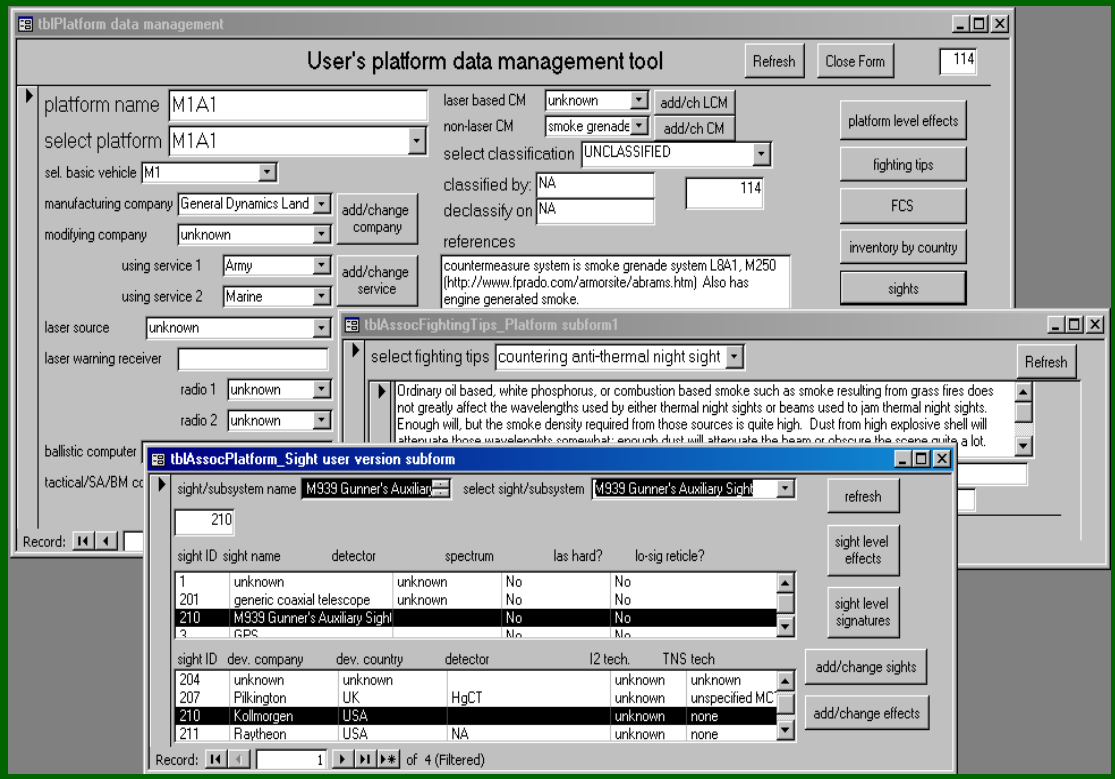
Advanced energy technology → platform or specific effects on that platform—not limited to DE

Can be used to investigate platform configurations

platform → detailed technical info on that platform *(not limited to fire control, electronics, etc.)*

Can be used to investigate technical aspects of opposition—planning on the fly

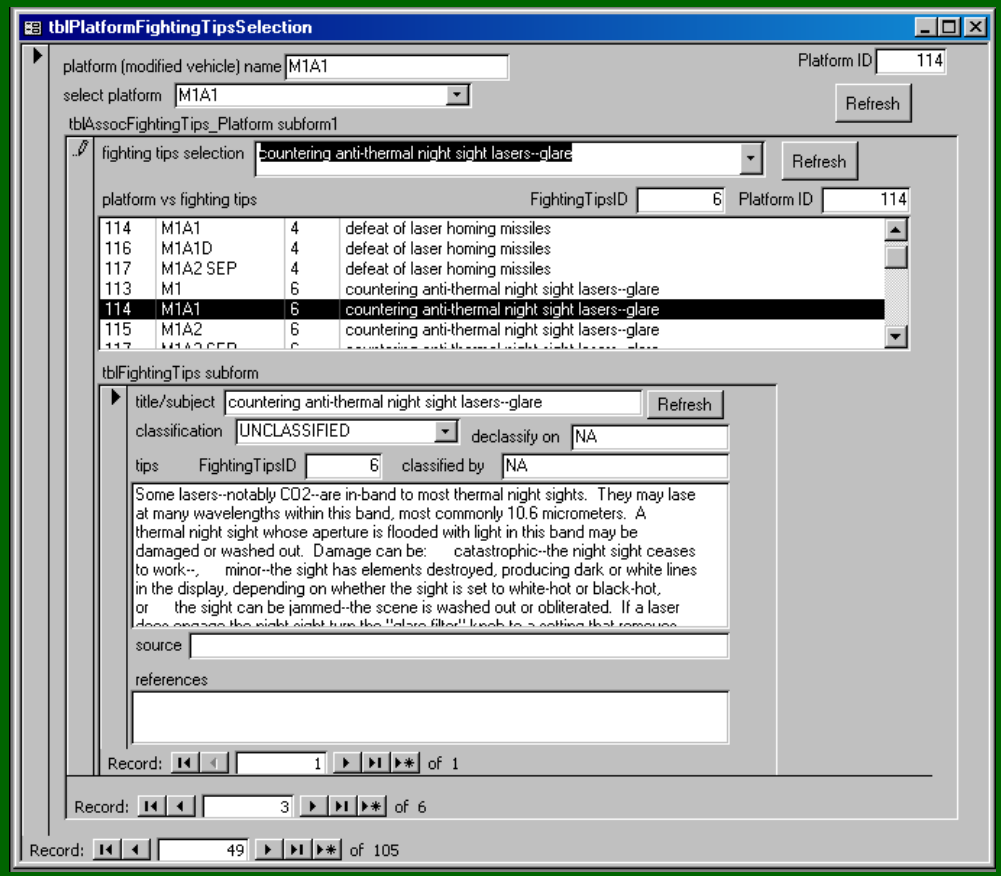
Country → platform → detailed technical info on that platform *(not limited to fire control, electronics, etc.)*, and how to exploit or counter them



(to be added in version 2; Access forms shown here to illustrate functionality)

Can be used to investigate technical aspects of opposition—planning on the fly

Platform → fighting tips, triggered by situation encountered



(to be added in version 2; Access forms shown here to illustrate functionality)

Can be used to investigate technical aspects of opposition—planning on the fly

Platform → fighting tips

Example scenario—

Expeditionary force Task Force Smythe air landed in distant island to bolster indigenous forces against expected air and sea assault

Helicopter gunner reports dazzling green flash just before pilot loses control and crashes

Light armored vehicle commanders report enemy vehicles appear to be Chinese type 98 tanks

Infantry units report dazzling lines of light targeted on missile crews, but missile crews using thermal sights engage successfully

S-2 interrogates ATE DMT terminal on type 98—data base responds that some type 98s were reported on the internet with a directed energy search/blinder countermeasure set (http://www.sinodefence.com/army/tank/type98.asp, accessed 17 May 2005)

Fighting tip—TTP—corresponding advises engagement wit thermal sights, luring enemy engagement with dummy I2 sights to make enemy disclose position, then engage with thermal night sights and conventional rounds or Javelin

S-2 passes info to units

Units report success in destroying enemy tank unit

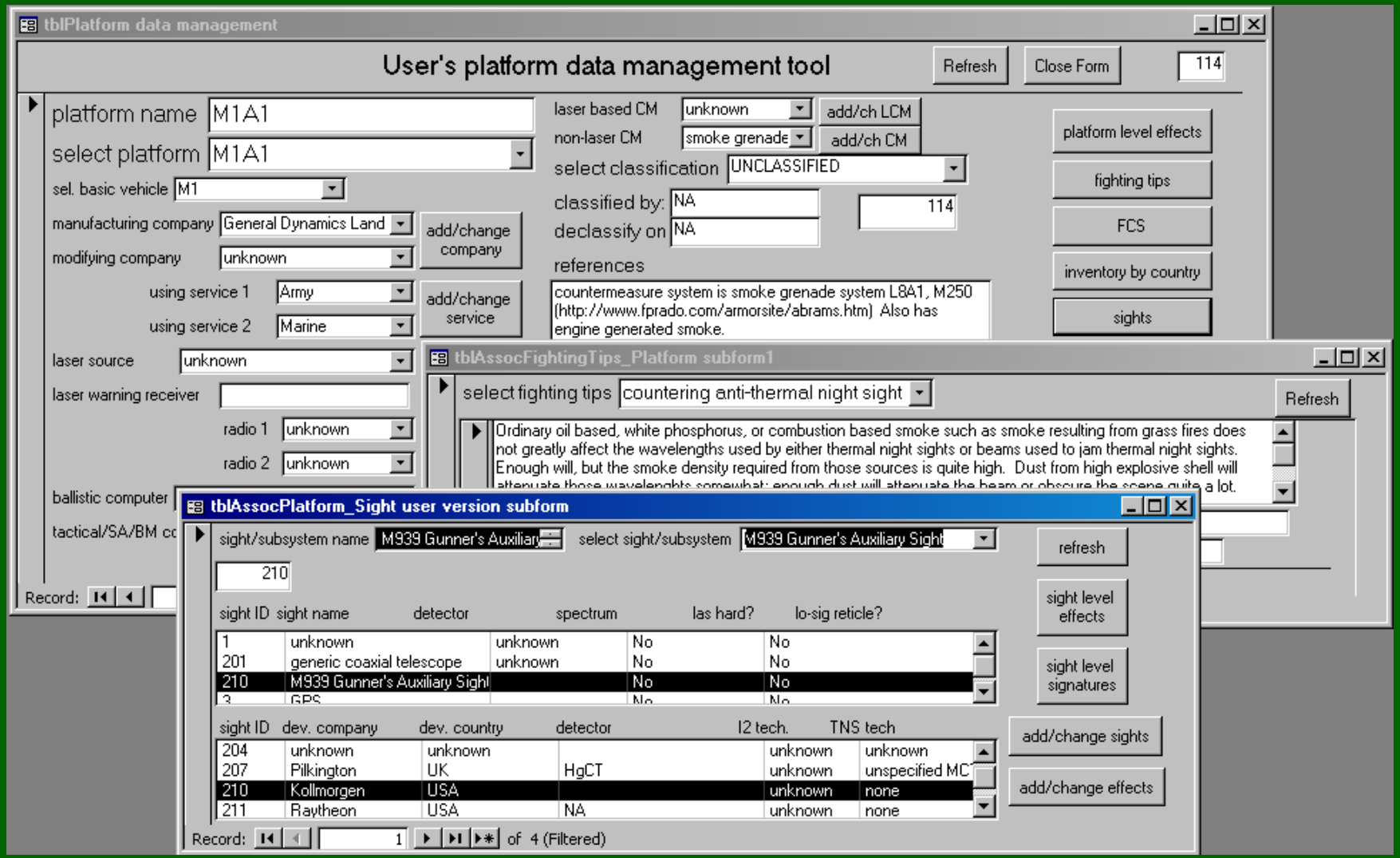
Summary

The ATE DMT

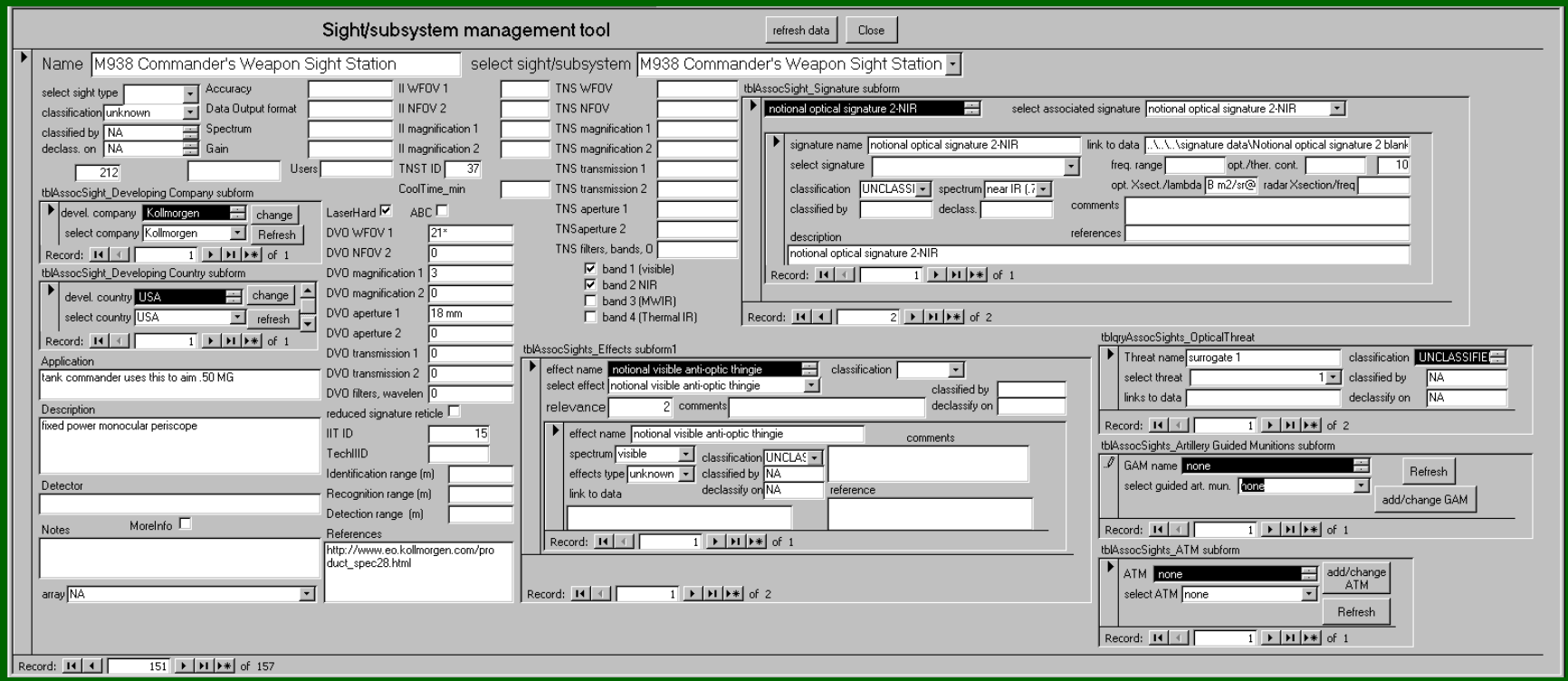
- Has the potential for drastically reducing the time for an analyst to devise an evaluation plan
- Can substantially aid an analyst or designer in picking through the technological options available
- Has the potential to aid an expeditionary battle staff in countering unexpected technologically sophisticated enemy systems
- Can help battle staff and commanders use their systems to gain the most advantage

Backups

Simplified interface



Materiel developer tool—sighting subsystems



Signature search tool