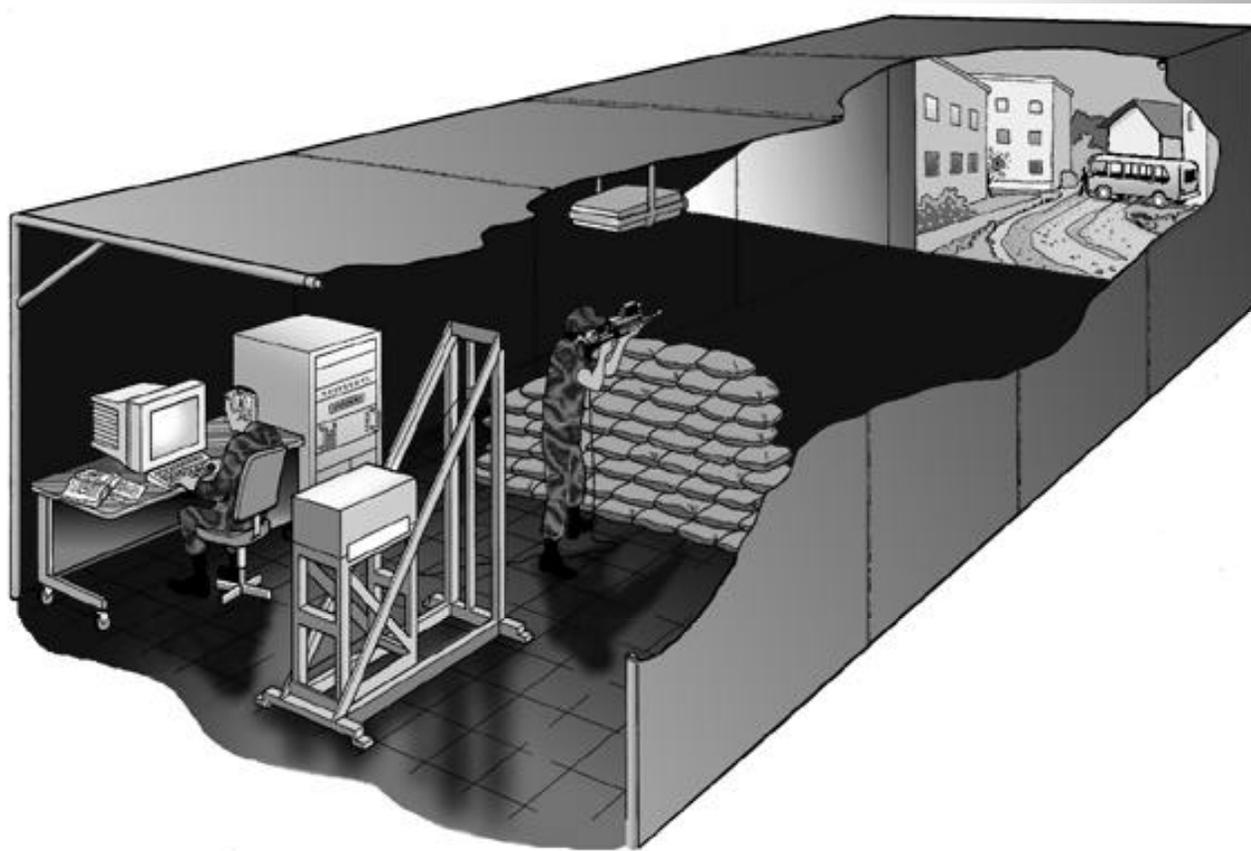


CIDDS Testing on the Small Arms Simulator Testbed



Introduction



- Background on Simulator
- Background on CIDDS
- Objective
- Procedure
- Analysis

Background on Simulator

- Uses de-milled weapons or stereo lithography models
- Projects an IR spot on the screen which is tracked at 60Hz within 1/10 of a mil
- Recoil is calibrated to give the proper rise and deflection of the barrel
- Records data which is not able to be collected on the field, i.e. engagement time

Background on CIDDS

- Combat IDentification for the Dismounted Soldier
- CIDDS Interrogator is mounted on the weapon system and sends out a short IR laser
- CIDDS Transponder is mounted on the PASGT helmet of the soldier and answers the Interrogator with an omni-directional RF signal
- Responds with a friend or unknown response
- Includes an IR aiming light, and MILES/MILES 2K

Objective

- To determine whether or not the added weight of the CIDDS interrogator affects the users ability to engage targets
- Conducted at Picatinny Arsenal, New Jersey on the Small Arms Simulator Testbed
- Done on the M16A2 rifle; Using the CIDDS interrogator, close combat optic, simulated TWS, and PAQ-4C

Procedures



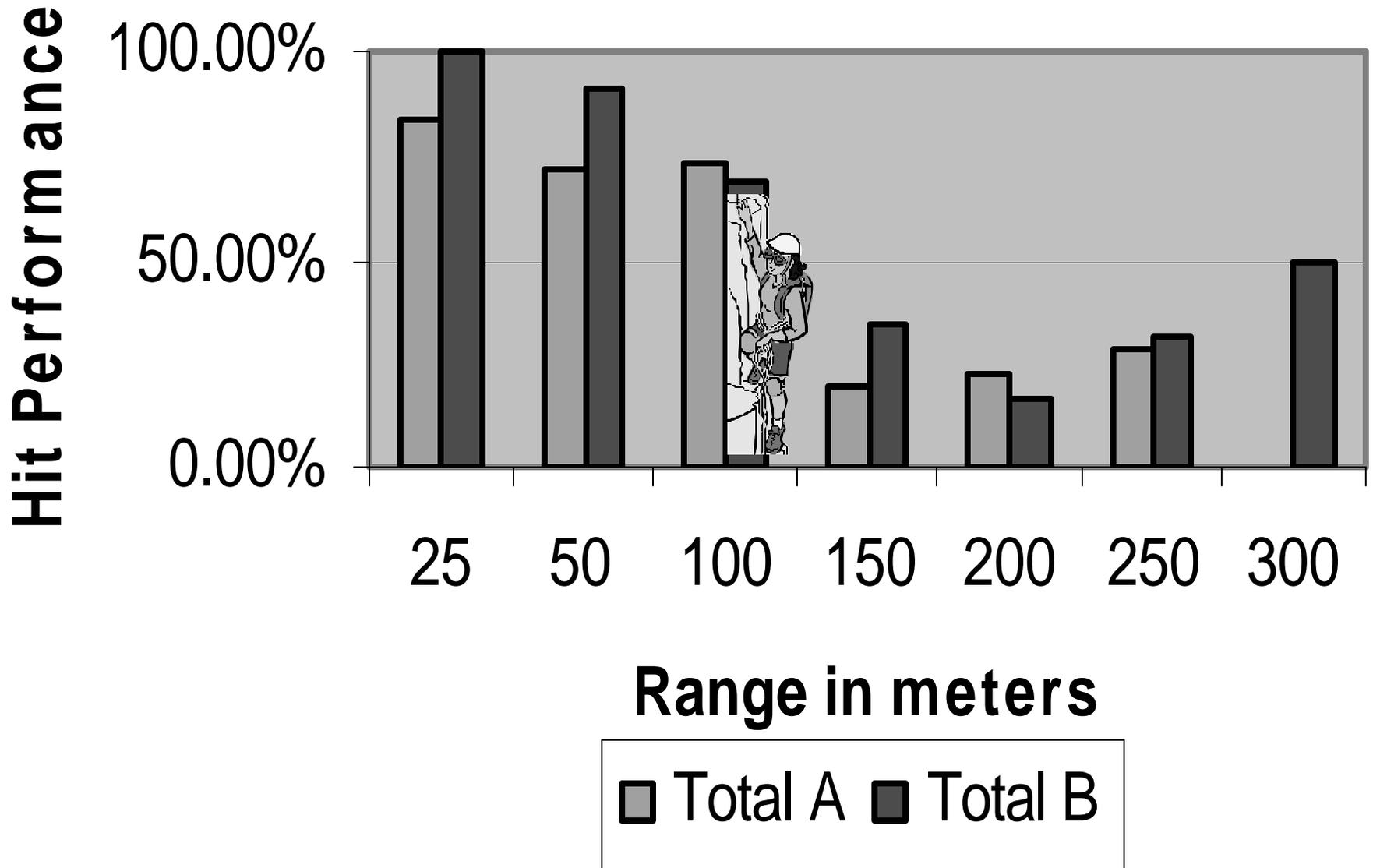
- 8 Volunteer soldiers were used to conduct the test
- Each soldier was trained on the use of the simulator using a test scenario
- 4 conditions were evaluated: light baseline, light test case, heavy baseline, and heavy test case
- The test scenario consisted of 16 targets at different ranges and exposure times

Analysis

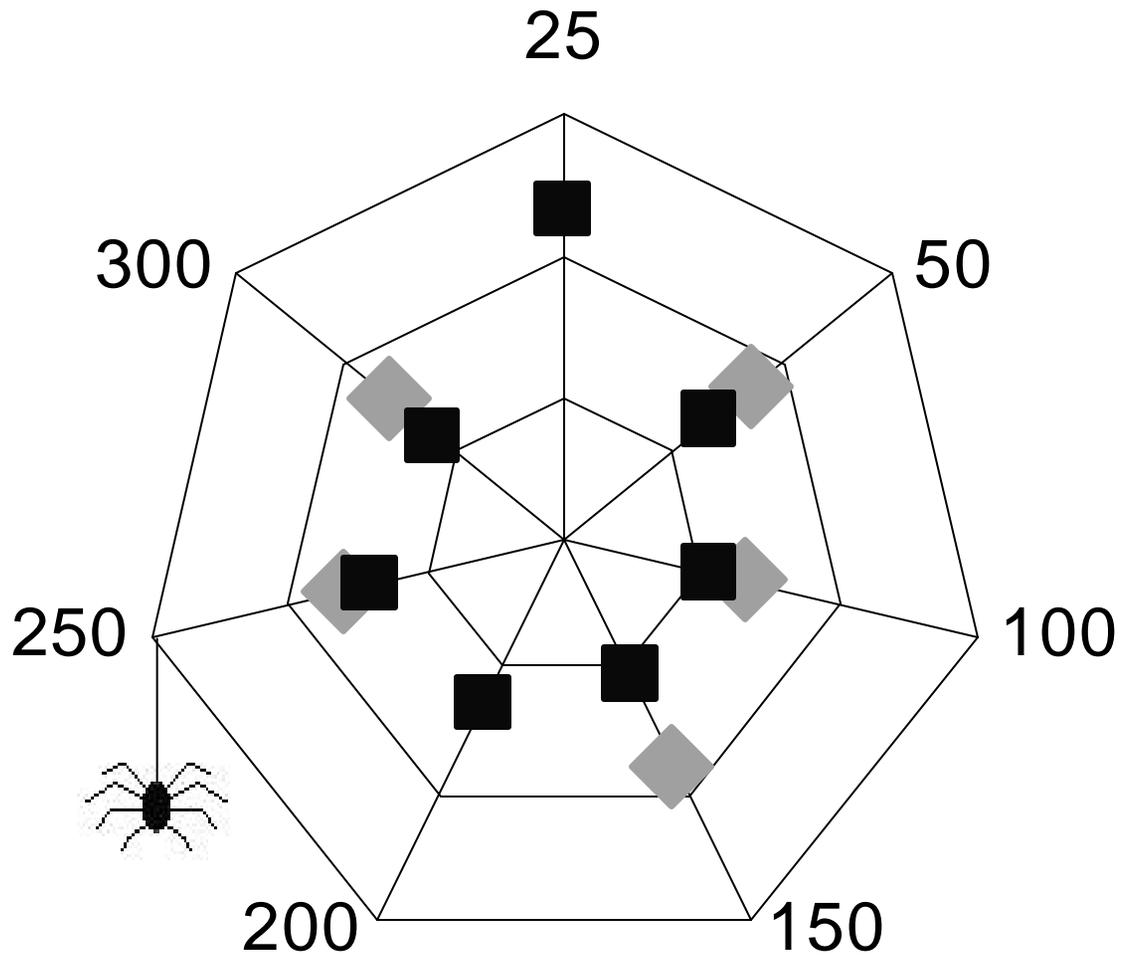
- All data was saved from the Small Arms Simulator Testbed
- Many things were considered in the evaluation of the weight of the CIDDS Interrogator
 - Hit performance
 - Aim error
 - Engagement timeline
 - Number of targets hit
 - Number of targets not engaged



TOTAL Baseline & Test-Case



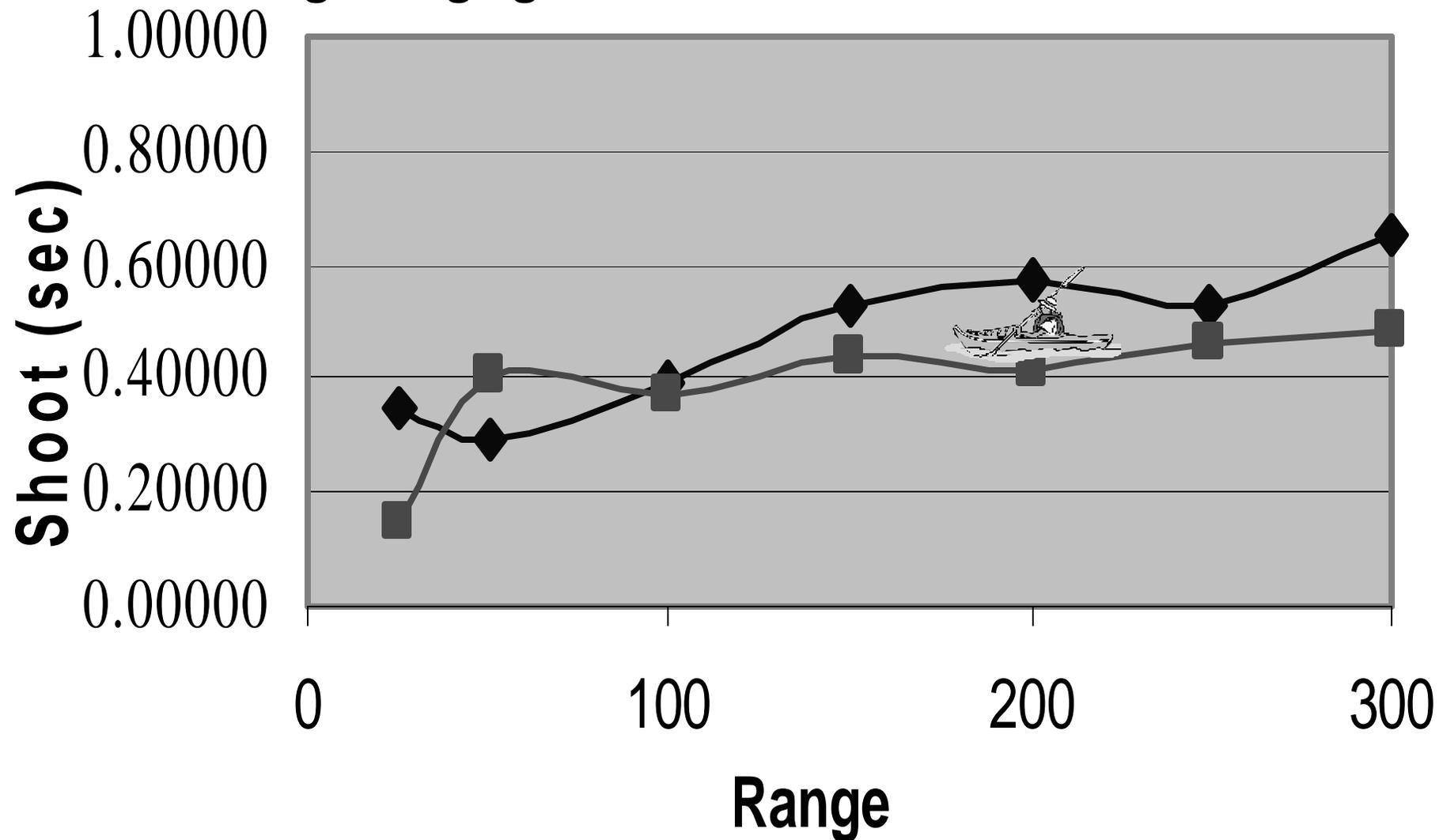
Average Aim Error Baseline & Test-Case



◆ Average A

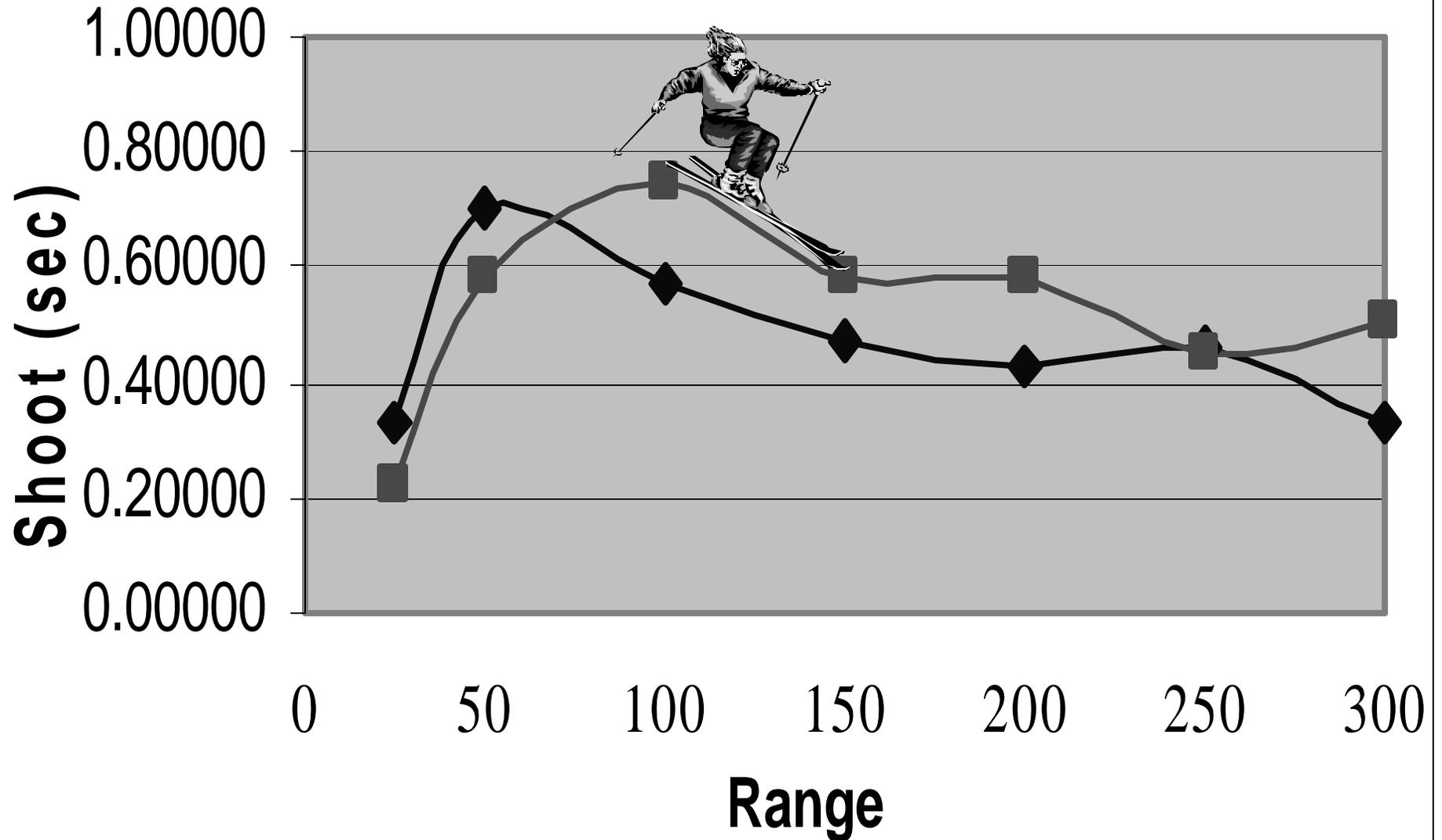
■ Average B

Average Engagement Baseline & Test-Case



◆ Average Engagement A ■ Average Engagement B

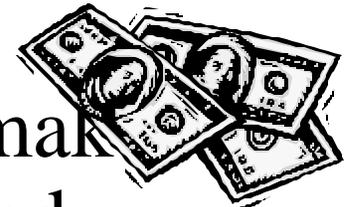
Average Trigger Pull Baseline & Test-Case



◆ Average Trigger Pull A ■ Average Trigger Pull B

Summary

- The weight of the interrogator had negligible effect on the user's ability to engage targets
- The Small Arms Simulator Testbed makes the collection of data faster, easier, and cheaper



- Any Questions 