

# TURBOPK

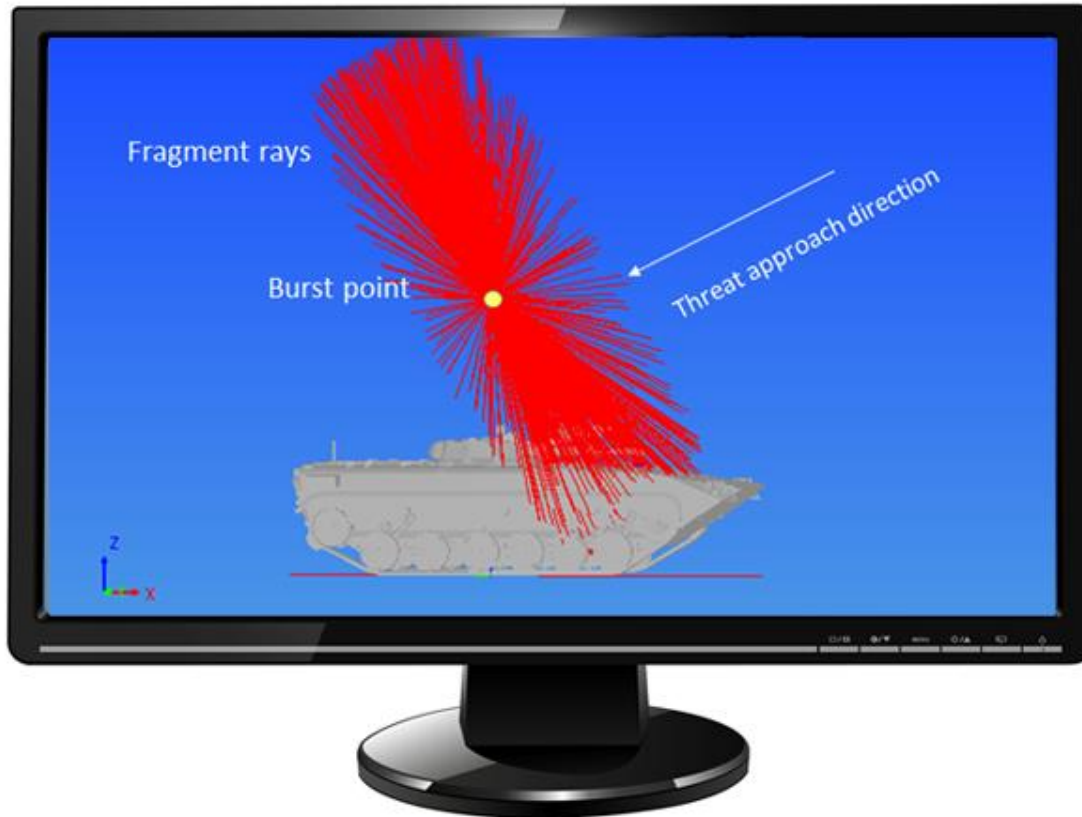
**Survivability / Vulnerability / Lethality Simulation.**

**Projectiles, Fragmentation warheads, air blast.**

**Written to DoD standards.**

**Exceptionally fast.**

**Clean interface, easy to use.**

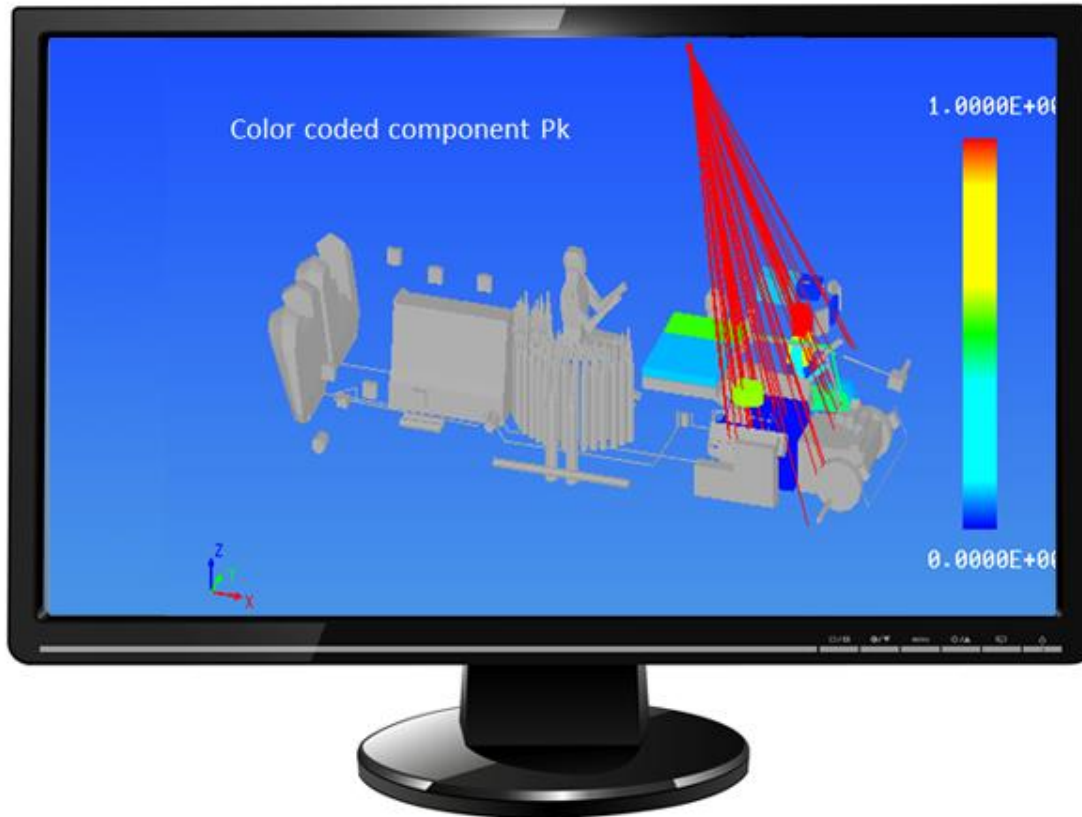


## Fragmentation Devices

Full Point-Burst Monte Carlo simulation:

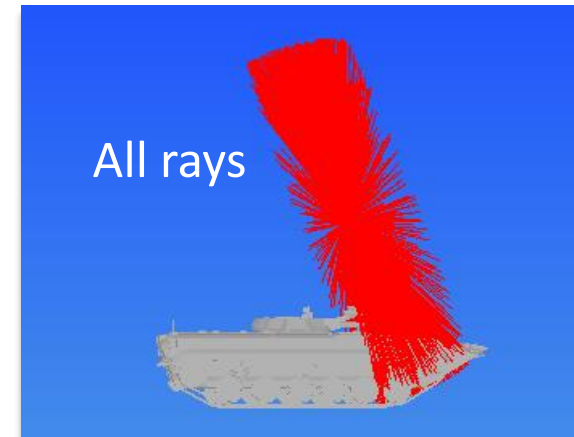
- Fragment pattern generation
- Fragment path ray tracing
- Penetration analysis
- Component damage calculations
- Fault tree evaluation

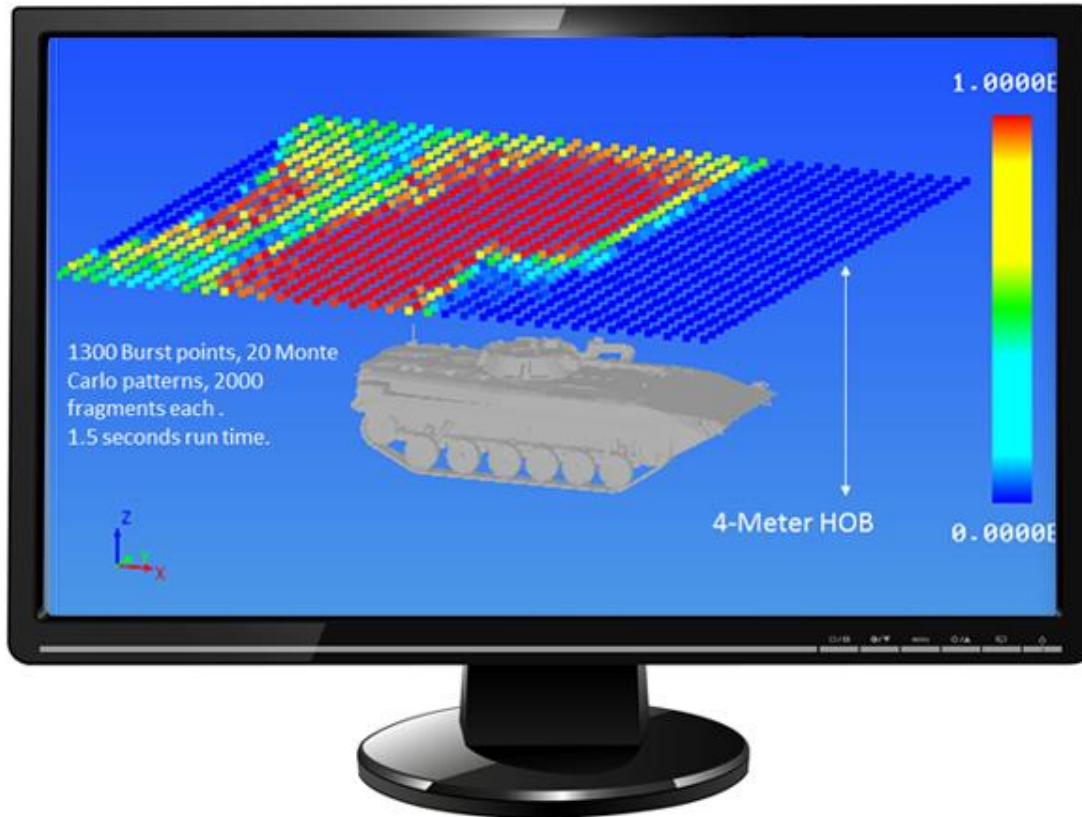
Show rays that hit vulnerable components



## Burst Point Options

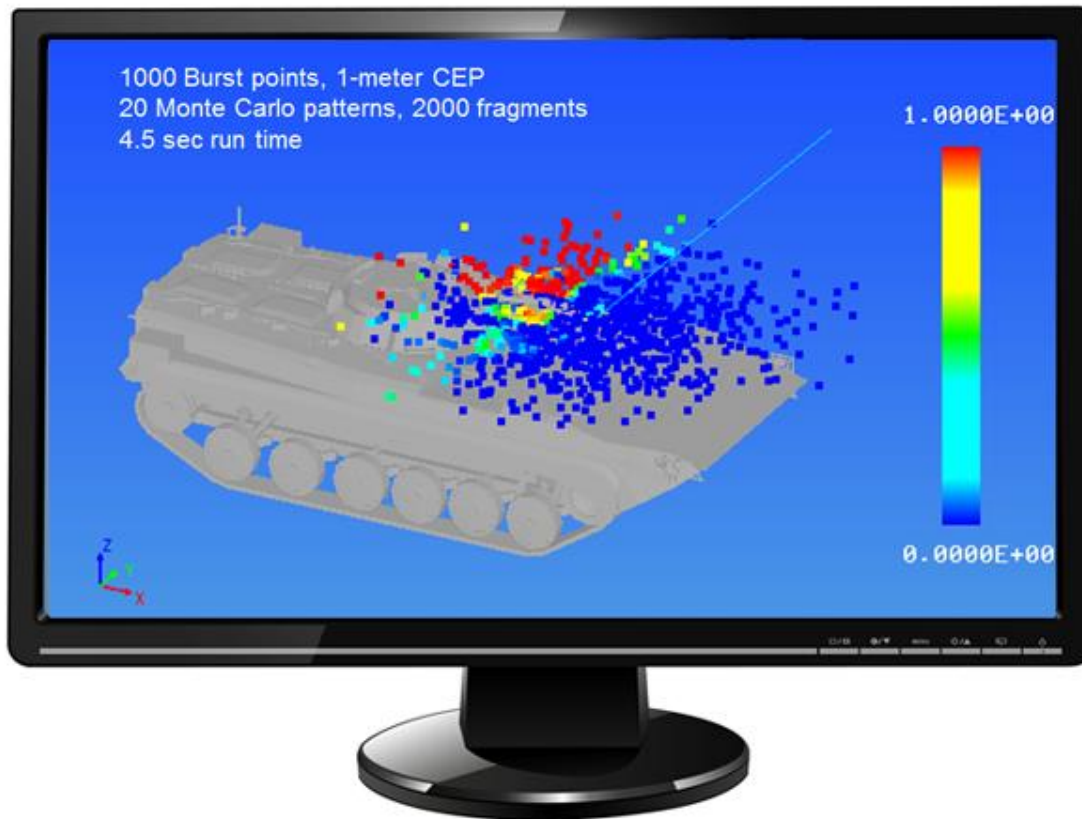
- User-Specified single burst point





## Burst Point Options

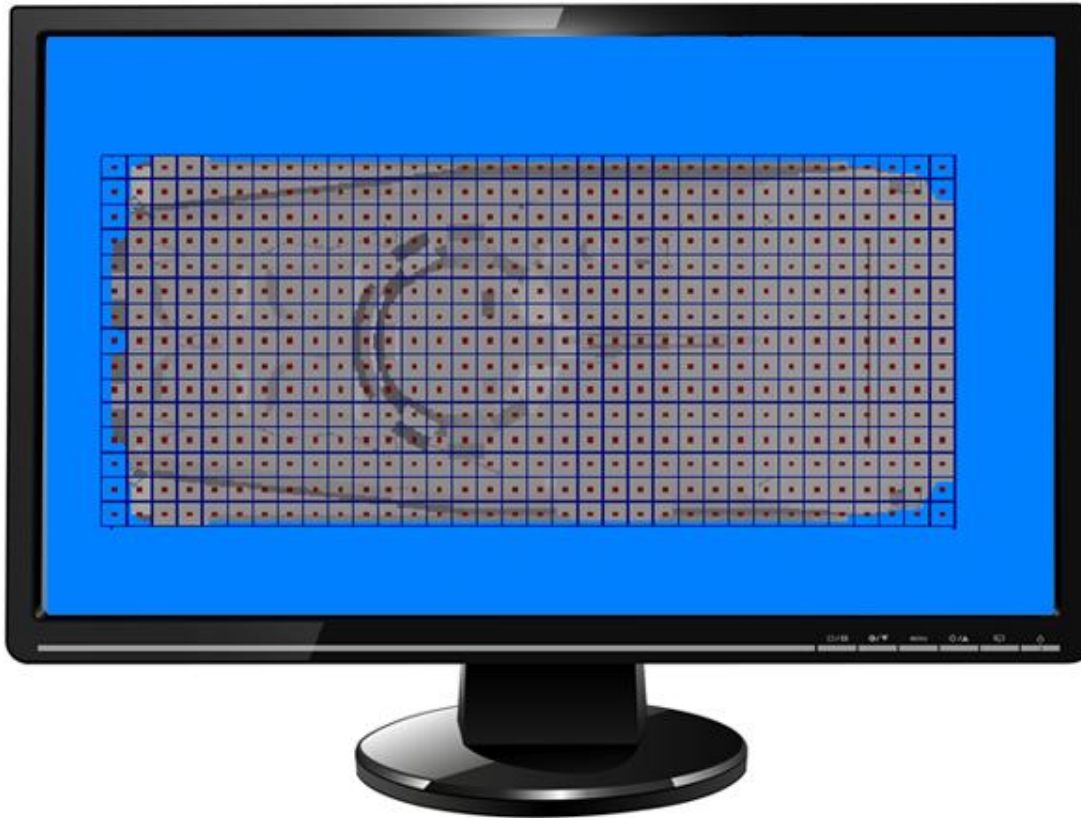
- HOB Burst Point Field
- Burst points evenly spaced at HOB



## Burst Point Options

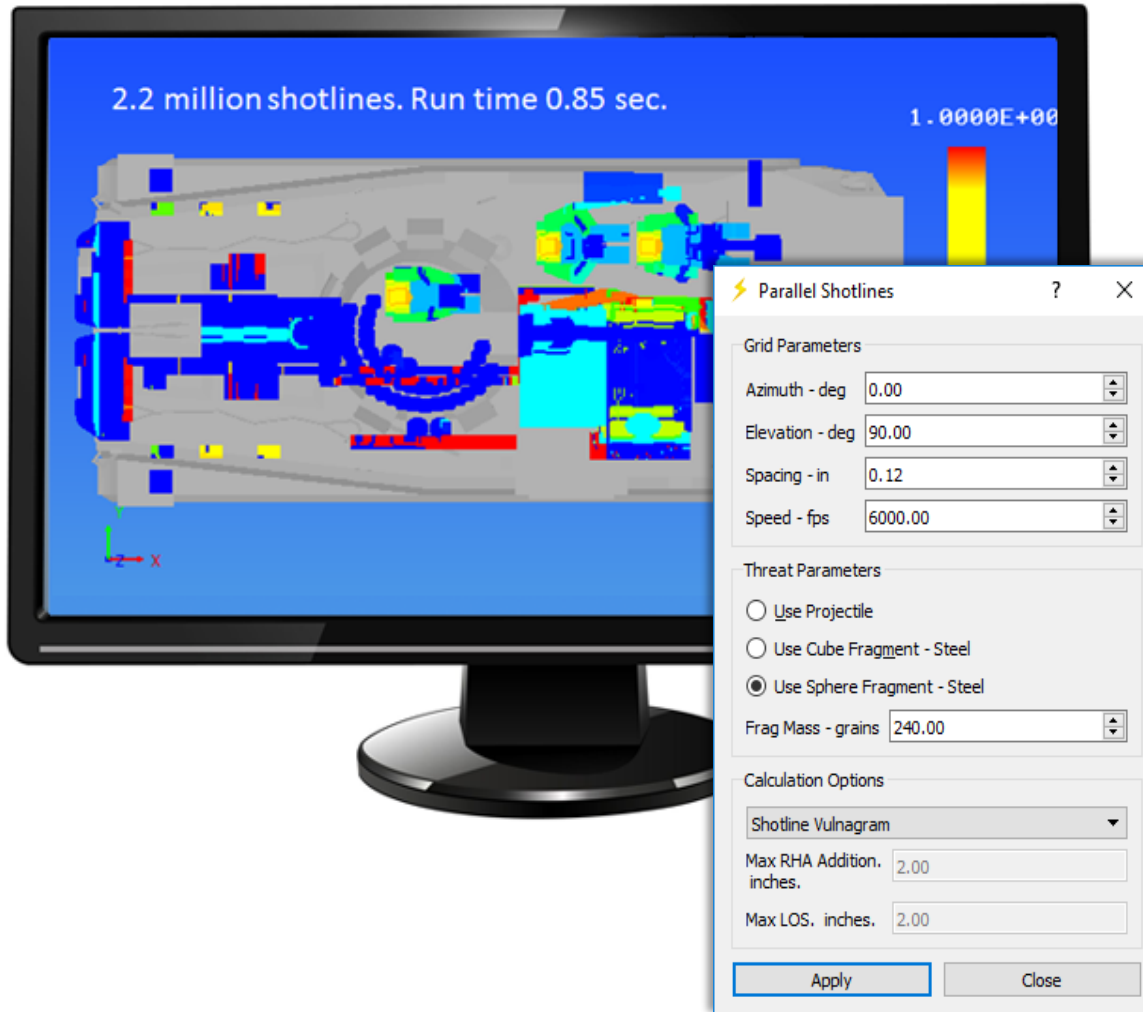
- Rayleigh Burst Point Field
- User specifies angles, aim point, CEP

Top view grid, armored vehicle target



## Shotline Options

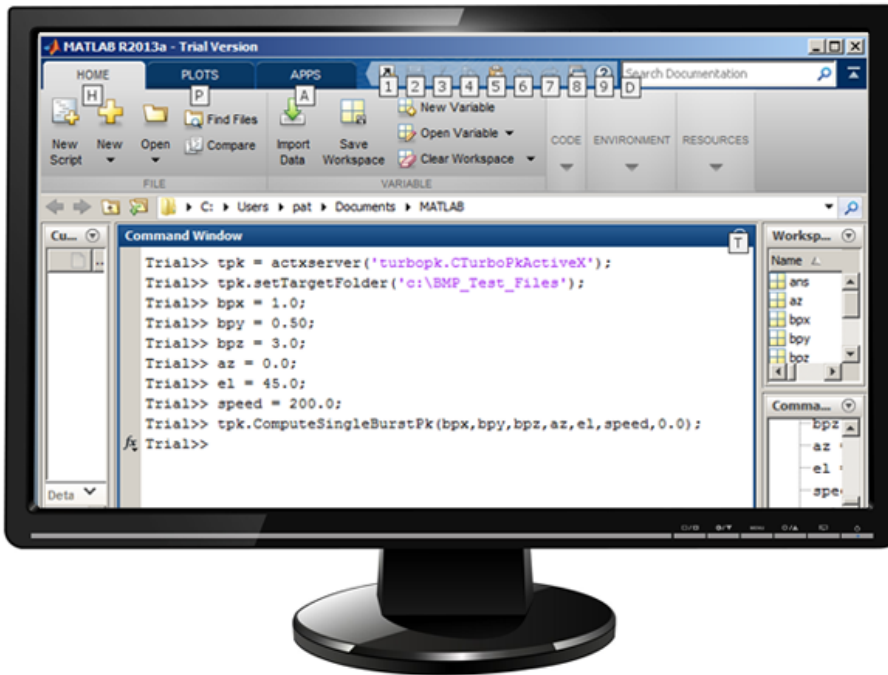
- Superimposes a grid over target projection
- Shotlines placed at grid cell centers
- Threat is “fired” down the shotlines



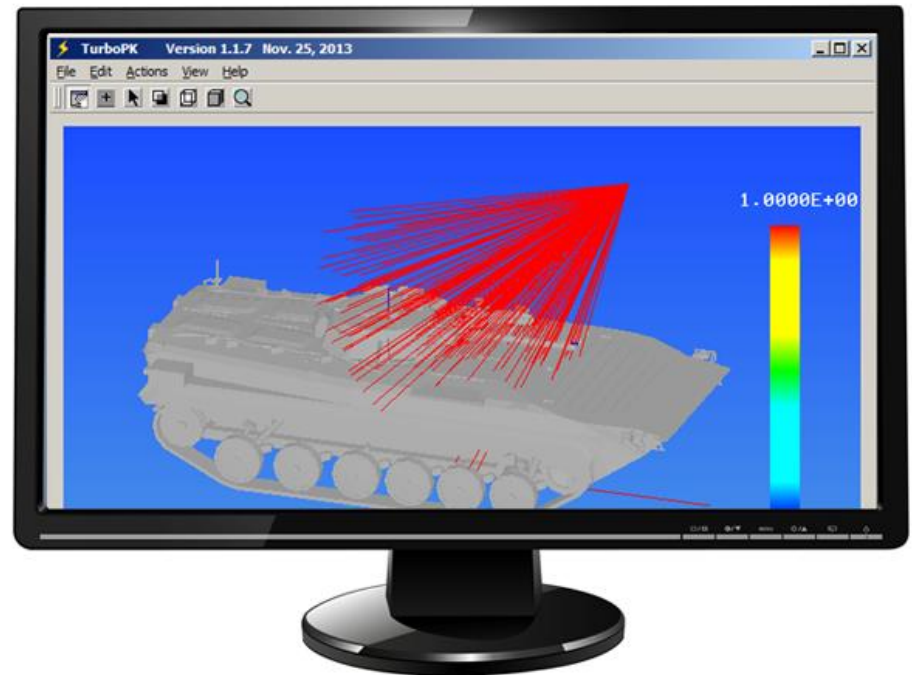
## Shotline Example

- 240-grain steel sphere
- 6000 fps impact speed
- Probability of damaging a component

MATLAB Script defines TurboPK burst point.



TurboPK computes Pk.



**CAN BE DRIVEN BY MATLAB – WINDOWS ONLY**



## Other Considerations

- Adheres to standard algorithms / methods promulgated by JTCG/ME (Joint Technical Coordinating Group / Munitions Effectiveness), a DoD tri-service group.
- Written by subject matter experts, combined 70 years in the business.
- Compares well to COVART and AJEM, the government-provided codes for vulnerability/survivability/lethality simulation.
- *At least* 100x faster than COVART and AJEM.
- Designed for *interactive* use.
- Integrated 3D graphics for immediate visual feedback.
- Responsive developer team. Interested in *user's* requirements and in tailoring the code to meet them.