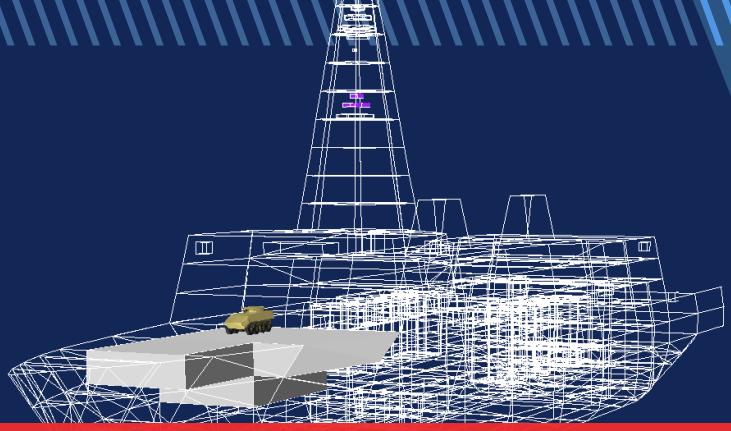


SURVICE ENGINEERING COMPANY

PMC OPERATION

SURVICE's PMC operation out of Socorro and Albuquerque, NM, applies physically-based modeling and advanced mathematics toward solving complex engineering problems in computer software. We have a long-established history of supporting DoD and industry and a reputation for results.

SURVIVABILITY SIMULATION

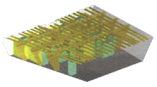
LASERFX (LASER LETHALITY ASSESSMENT TOOLSET) – SURVICE, in support of the Air Force Research Laboratory Directed Energy Directorate (AFRL/RD), develops and maintains the LaserFX toolset, a set of software tools that support laser lethality assessment by putting advanced modeling and simulation tools in the hands of lethality analysts. LaserFX is the primary tools used by the Directed Energy Directorate's Laser Effects branch for the development of laser lethality data used in one-on-one to many-on-many engagement and force models.

ADVANCED SURVIVABILITY ANALYSIS PROGRAM – SURVICE, in support of the Naval Surface Warfare Center - Carderock Division (NSWC-CD), develops and maintains the Advanced Survivability Analysis Program (ASAP). ASAP serves as the US Navy's primary survivability simulation software for large warships. It was designed using a highly modular software model, and it integrates the most advanced techniques for modeling primary and secondary weapon effects that are available.

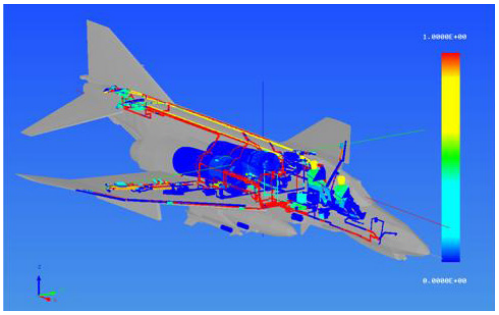
HEL-MSAS (HIGH ENERGY LASER MODELING AND SIMULATION FOR AIRCRAFT SURVIVABILITY) – SURVICE, in support of the Army Test Resource Management Center (TRMC) is developing the HEL-MSAS, a set of software modules that support laser survivability assessments. As credible HEL threats to US systems are identified, these tools will enable HEL survivability model developers to remain on the leading edge of HEL damage assessment technology.

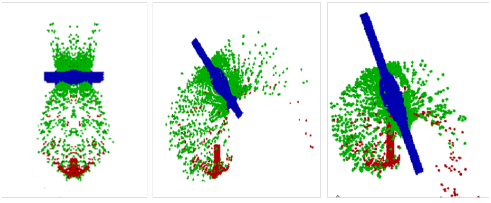
WEAPON MODELING

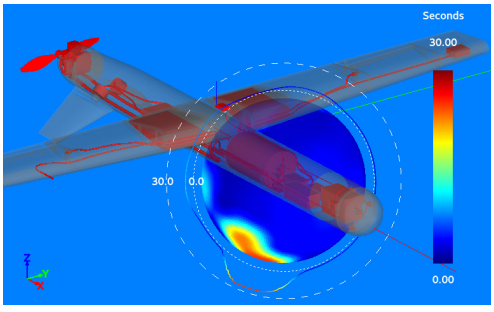
SURVICE designs, develops, maintains, and optimizes a number of weapon system modeling tools. Additionally, we utilize these tools to analyze things such as weapon design and effectiveness, as well as assess target vulnerability.

GEOMETRY MODELS	
Weapon Simulation	Structural Response
• Blast • Fragments • Shaped Charges	• Shock • Holing • Finite Element
Secondary Effects	System Analysis
• Fire • Flooding	

TOOLS		
TurboPK	**SC3D**	**LaserFX**
Vulnerability assessment with high-speed raytracing.	Desktop-based shaped charge design.	Laser analysis using high-speed raytracing techniques and thermal fluence calculations to predict the amount of energy needed to damage aircraft components.







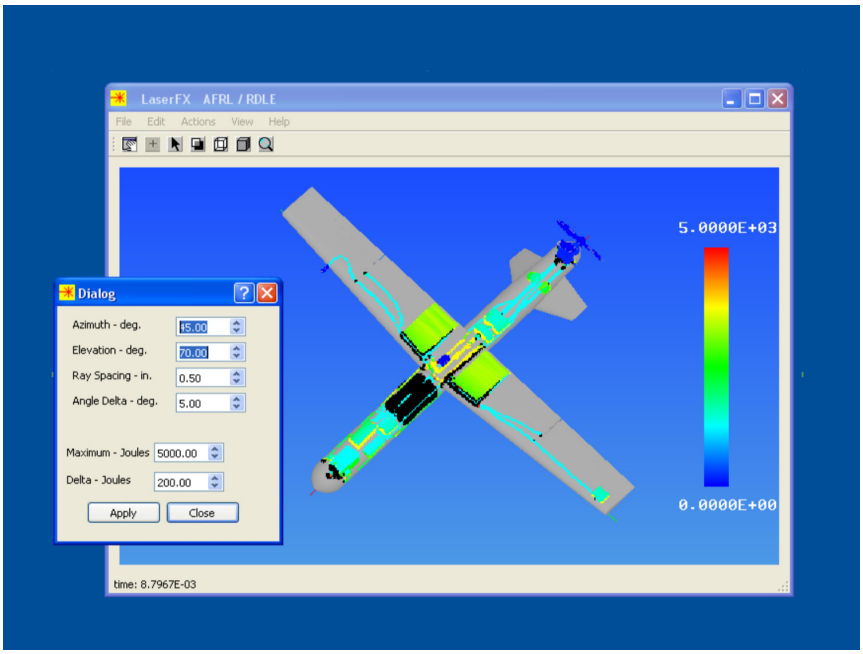
More examples of work on back

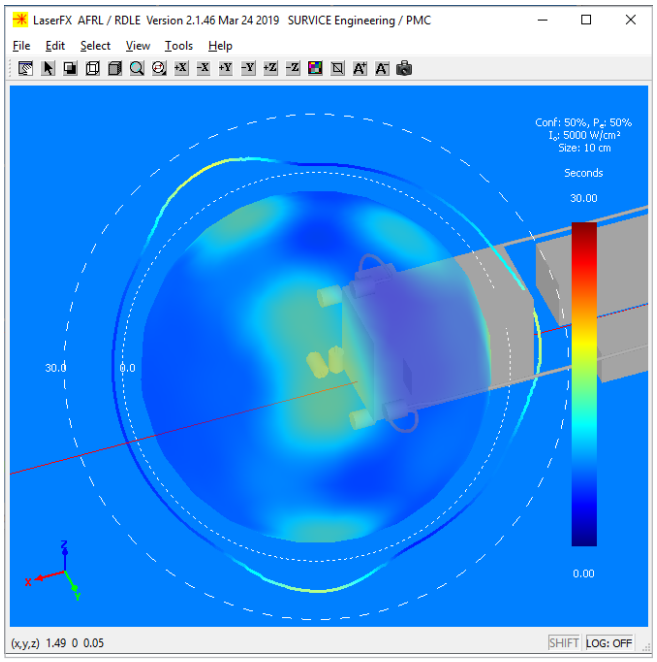
2019

WWW.SURVICE.COM

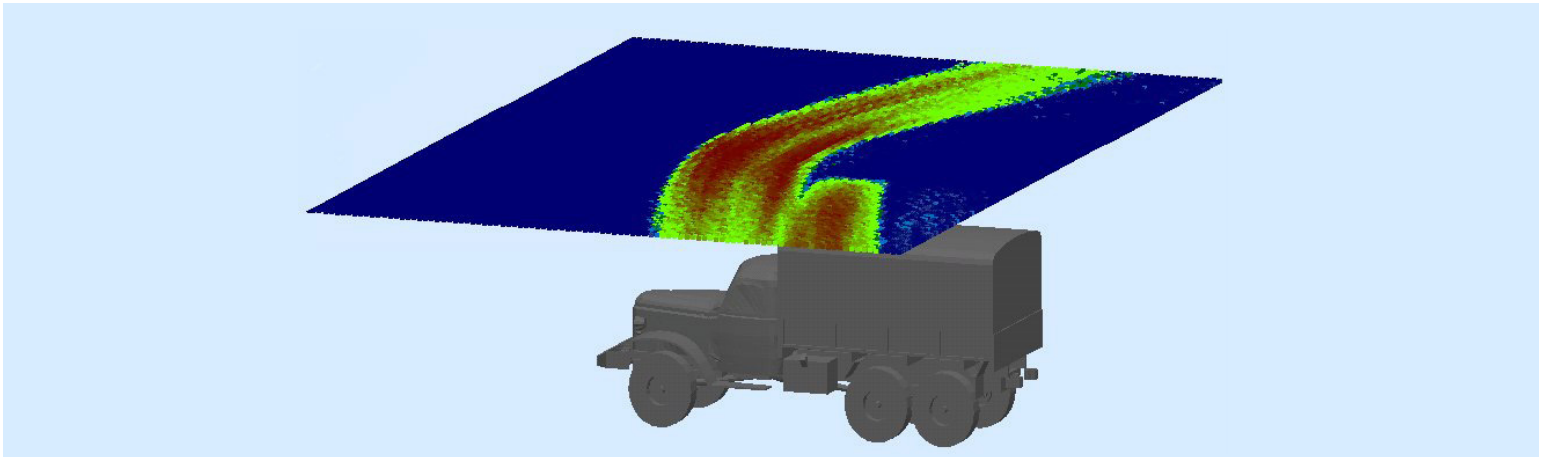
EXAMPLES OF WORK

LaserFX

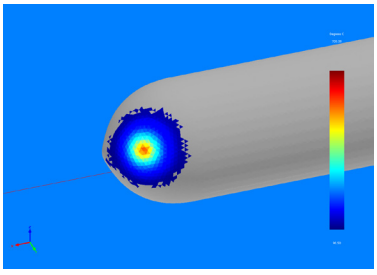


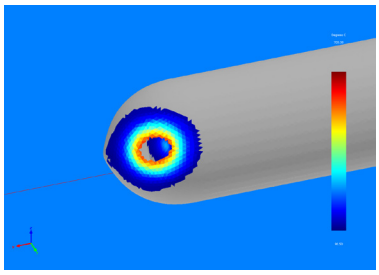


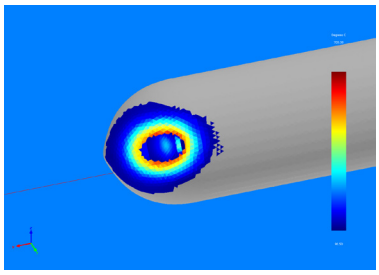
TurboPK

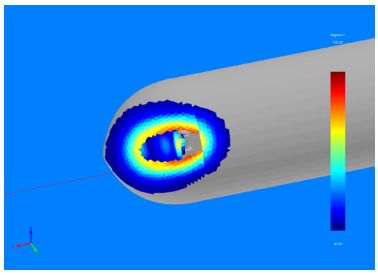


LaserFX with 3D Laser Model









All the images featured on these pages are based on software written at SURVICE. SURVICE's PMC Operation is always looking for scientists, engineers, and mathematicians who have a talent for computer programming. Visit www.survice.com for career information.