

# Building Survivable Systems: A Short Course on Live Fire Test & Evaluation (LFT&E)

1-3 December 2009



Sponsored by the SURVICE Engineering Company

[www.survice.com](http://www.survice.com)

and

Southern Maryland Chapter of INCOSE

[www.incose-somd.org](http://www.incose-somd.org)

Presented by Mr. James F. O'Bryon, The O'Bryon Group

## **Course Description**

Taught by a seasoned professional with up-to-date knowledge, this three-day intensive course consists of a multi-faceted look at the legislation, directives, requirements, preparation, and execution of Live Fire Testing, a statutory requirement for most major defense acquisition programs since 1987. Discussions cover the history of LFT&E legislation, the Joint Live Fire Program, LFT&E candidacy, and preparation of Live Fire Test Plans and Detailed Test Plans in the context of the Test and Evaluation Master Plans. Also covered is the role of modeling and simulation in LFT&E, including pretest predictions and test assessment. Congressional and DoD reporting requirements and the role of the LFT&E waiver from full-up system-level testing (including its purpose, implementation, and historical precedents) are discussed, as is the role of Battle Damage and Repair in LFT&E, test article realism, and LFT&E test facilities. Air, Land and Sea system vulnerability and lethality will be addressed and an 800 page book of Live Fire Lessons Learned will be provided as part of the course.

Heavy emphasis is placed on LFT&E lessons learned and common misunderstandings regarding LFT&E program execution. The course includes lectures, photos, video clips of LFT&E events, group discussions, and individual and group exercises. Also included is an actual case study for class groups to practically apply what has been presented. There will also be ample time for addressing student questions, and each student will receive a notebook of presentation material, excerpts from selected publications, and a certificate of completion.

## **Who should attend?**

The course is designed to provide information regarding LFT&E requirements and conduct to military and civilian personnel involved in defense acquisition and program managers and contractors involved in weapon system design. The course will also benefit those conducting and overseeing T&E and funding of acquisition programs, as well as those assessing the vulnerability, lethality, and survivability of defense programs; executives, managers, and analysts responsible for T&E by government agencies; engineering centers, R&D labs; industry; academia; and test facility managers.

## **About the instructor**

Jim O'Bryon has been involved with DoD testing for over 35 years. He has a BS in math from King's College, an MS in OR/SA from George Washington University, and an MS in electrical engineering from MIT. His experience includes aeroballistics and weapons effects at the Ballistic Research Laboratories, the Army Materiel Systems Analysis Activity (where he served as Chief, Survivability Branch), and in the JTCG/ME Office. From 1986 to 2001, Jim served in senior positions at OSD, including Deputy Assistant Secretary of Defense/Live Fire Testing; Director, Live Fire Testing; Director, Weapon Systems Assessment; and Deputy Director, OT&E/Live Fire Testing. He has testified before Congress on several occasions and authored numerous technical publications and over 70 open-literature articles on T&E, survivability, M&S, and related topics. Currently, Jim serves as Chairman, NDIA T&E Division, consultant for several clients and is a Distinguished Lecturer at DAU, ICAF, DSAM, UT, and the Naval Postgraduate School.

**Facilities**

The course will be conducted at SURVICE Engineering's Aberdeen Area Operation, located in the Water's Edge Corporate Campus off of Route 40 in northeastern Maryland (a few miles south of the Aberdeen Proving Ground).



**Directions**

**From the north:** take I-95 south to exit 80 (Route 543) and turn left at the light. Continue on 543 until it ends at Route 40. Turn left on Route 40 and make the left at the first light onto Bata Boulevard. Travel 200 yards and turn right onto Millennium Drive. SURVICE Belcamp is the first brick building on the left (directly across from our five-story corporate building).

**From the south:** take I-95 north to exit 80 (Route 543) and bear right at the end of the ramp. Merge onto 543 and continue until it ends at Route 40. Turn left on Route 40 and make the first left onto Bata Boulevard. Travel 200 yards and turn right onto Millennium Drive. SURVICE Belcamp is the first brick building on the left (directly across from our five-story corporate building).



For a detailed map and interactive directions to The SURVICE Engineering Company, click on [SURVICE Engineering, Belcamp](#)

## LFT&E Course Topics

Introduction & LFT&E Origins	Risk/Benefit of LFT&E
Joint Live Fire Charter & Mission	LFT&E Funding
LFT & JLF Key Events	Management of LFT&E
LFT&E Legislative History	MBO in LFT&E
LFT&E Objectives	Keys to Effective LFT&E
LFT&E System Reports	LFT Best Business Practices
LFT&E Oversight Structure	Acquisition Reform/SBA
DOT&E LFT&E Roles	Lessons Learned: Land
User Casualties	Lessons Learned: Air
Definitions of Terms	Emerging Air Threat
LFT&E Waiver	Aircraft BDAR
Threat Definition	Aircraft User Casualties
LFT Oversight List	Stealth vs. Vulnerability Reduction
COTS / NDI Systems	Lessons Learned: Sea
LFT&E Test Planning	Lessons Learned: Lethality
LFT&E Targets	JTCG/ME, JASPO, SURVIAC
Full-Up System-Level LFT&E	DOT&E Initiatives
Benefits to Military & Civilian Platforms	Live Fire Testing & Training
OSD/Service Interaction	LFT&E Test Facilities
Modeling and Simulation	LFT&E Misperceptions
Improving M&S in LFT&E	Case Study
Systems of Systems/Interoperability	New Technology, New Threats
Special Topic	Wrap-up
Cascading Damage Mechanisms	Awarding of Certificates of Completion

## Registration

**Restrictions:** Unclassified, U.S. Citizens Only

**Class Size:** To encourage discussion and student/instructor interaction, class size will be limited. Register early.

**Fee:** \$1025.00 (discounted to \$975.00 for government, defense contractor, or INCOSE member)

**Payment Terms:** A check or purchase order, payable to **SURVICE Engineering**, is required at the time of registration. Credit card payment (Visa/MasterCard only) is also acceptable.

**Cancellation:** Payment is non-refundable for failure to attend without notification at least 10 work days prior to the start of the course. Substitutions are permitted without loss of fee.

**Confirmation:** Your course registration will be confirmed after receipt or guarantee of payment. Please contact us if you have not received confirmation within 10 working days following payment of course tuition.

**To Register:** Complete the attached registration form and mail or fax (410-272-6763) with Visa/MasterCard information, check, or purchase order payable to **SURVICE Engineering** to:

The O'Bryon Group (Attn: Jim O'Bryon)  
1608 South Tollgate Road  
Bel Air, MD 21015-5825

## Course Materials

Attendees will receive notebooks containing briefing charts. Videos, hardware demonstrations and a case study will also included. A copy of an 800-page book on Lessons Learned from LFT&E will also be provided to each student and is included in the course fee.

## Certificates of Completion

Attendees will receive a certificate of completion at the conclusion of the training.



**Registration Form**  
**Building Survivable Systems: A Short Course on LFT&E**  
**1-3 December 2009**

NAME: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
COMPANY: \_\_\_\_\_  
STREET ADDRESS (Line 1): \_\_\_\_\_  
STREET ADDRESS (Line 2): \_\_\_\_\_  
CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_  
PHONE/EXT. \_\_\_\_\_ EMAIL: \_\_\_\_\_

Form of Payment (circle one): VISA, MasterCard, check, or purchase order made payable to **SURVICE Engineering:**

MasterCard/Visa Card (circle one) Number \_\_\_\_\_ Expiration \_\_\_\_\_  
3-Digit Security Number (on back of card): \_\_\_ \_\_ \_\_  
Name on Card \_\_\_\_\_  
Billing Address \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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Fax: 410-272-6763 (J. O'Bryon)