NEXT GENERATION CB HAZARD PREDICTION AND CONSEQUENCE ASSESSMENT WITH MULTI-ECHELON DECISION SUPPORT APPLICATIONS

Integrated Urban: Vision And Results For The Urban Hazard Assessment Capability

Michael Sohn Lawrence Berkeley National Laboratory   **David Lorenzetti** Lawrence Berkeley National Laboratory   **Paul Bieringer** Aeris, LLC   **Scott Kreyenhagen** Aeris, LLC   **Jonathan Hurst** Aeris, LLC   **Scott Runyon** Aeris, LLC   **Samuel Cregan** Aeris, LLC   **W. Stuart Dols** National Institute of Science and Technology   **Brian Polidoro** National Institute of Science and Technology

The Integrated Urban project was a multi-year effort to update the urban capabilities in DTRA's modeling portfolio. The research and development team, building on the Hazard Estimation and Assessment Toolkit (HEAT), undertook both scientific and practical improvements to urban airborne prediction capabilities. These ranged from new methods of coupling transport and dispersion (T&D) models across the outdoor and building domains, to predicting exposure across urban domains due to both indoor and outdoor releases, to interface improvements that adapt the underlying tools for both expert analysts and warfighters. Thus, the resulting software combines ideas and advances from across a range of technical and operational perspectives.

This presentation will describe the program goals and milestones, and point to successor projects that carry on the Integrated Urban legacy. We will discuss the scientific decisions and software development made to enable both "analyst" and "warfighter" modes of operation. Finally, we will discuss the recent field demonstrations of the tool, highlighting how the capability may serve a wide range of users.