Hard-Learned Lessons: Systems Engineering Issues and Their Program Impacts

This talk is one engineer and program manager's retrospective analysis of systems engineering issues and their programmatic impacts. The goal is to show a holistic view of the role of systems engineering failures all along the "Systems Engineering V" and their consequences during program planning, execution, and operations. The programs in question span more than 40 years and cover small to large avionics, command and control, space, and major weapons systems, such as the B-1B bomber and the F-22, F-15, and Joint Strike Fighters. Personal vignettes on each system's technical issues, most of which are systems engineering related, show linkages to program outcomes, and summarize the lessons that would have been good to have been learned more than 40 years ago.