

Experience Report

Architecture-based Software Development on the Crusader Program

Scott Edgerton (United Defense, L.P.)

Large software projects require the intense and cooperative intellectual effort of focused teams of developers. These teams are often quite diverse, with some teams located at geographically remote sites. For such a development, software architecture plays a key role in establishing a design infrastructure that promotes consistency through the use of guidelines and patterns. The success or failure of the project depends on these architectural practices. The focus of this report is on describing our experience using the architectural framework of design patterns and guidelines that have been applied to the Crusader program. Crusader is a large, distributed, real-time, embedded weapon system with many mission and safety critical aspects. Architecture based software development has done much to help define and apply the architecture-level framework and infrastructure needed to meet this challenge

Scott Edgerton has been at United Defense L.P. for the last three years and is currently the Lead Software Architect for the Crusader Advanced Field Artillery System. Prior to this, Scott worked at Raytheon for 14 years with experience in analysis, development and integration of object-oriented real-time embedded weapon systems.

