

Taking the Concept of the Gaming Engine into Safety Critical Software Systems

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Abstract

The concept of developing a game engine and then one or more games from that engine has been around for a long period of time. This concept however has not ventured outside of the Gaming industry to any great levels, and has definitely not been incorporated in a safety critical software development environment. In 2008 Thales started a new project to develop its next generation HMI display. We looked around for some of the best practice software engineering concepts and processes to bring into software development. One of those was the concept of developing an Engine and then one of more products from this engine. Over the course of the next 5 years, Thales developed firstly an HMI engine and subsequently three HMIs for its safety critical air traffic control products. Through this period we have not only proved the benefits from a cost point of view but also shown benefits from a quality and safety point of view. During this talk we will cover the history and reasons why this approach was taken, an overview of what the approach is and some of the benefits that have been realised from this approach.

(Abstract Only)