Nigel Jones,

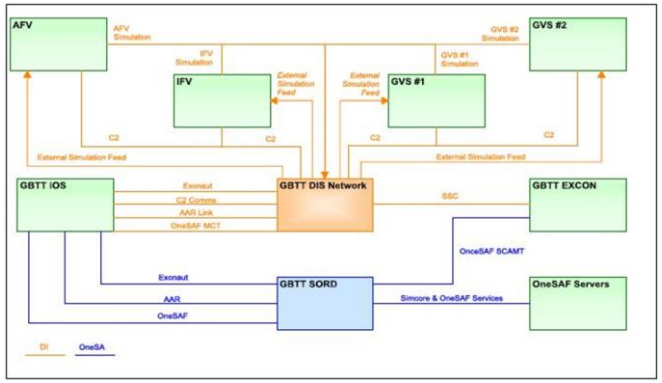
Chief Training System Architect, Lockheed Martin

nigel.jones@lmco.com

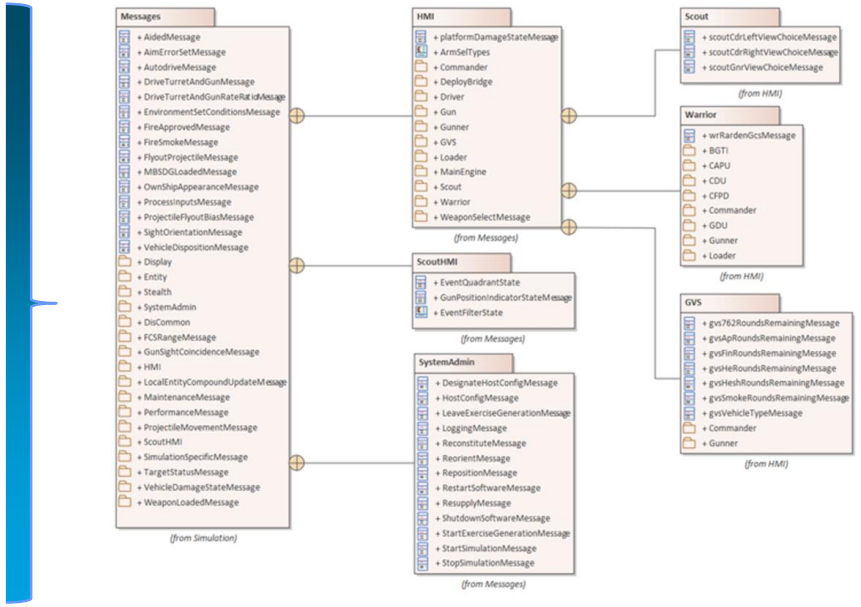
Company Overview

- Lockheed Martin a global defence based company with a long and proud history of building aeroplanes!
- I sit within the Rotary and Mission Systems group, based in the UK working directly with the Training and Logistics Solutions team working out of Orlando, Florida
- My role is primarily focused on the use of simulation for training across land sea and air
- Currently I am focused on a journey that is developing and delivering a training system architecture. The journey is what I am going to talk about today.
- Before moving on I am not a deep technical expert in how RTI DDS works and my description of the journey will focus on the system not the tools used to make the system work

The Challenge



Stage 1 - A New complex vehicle & a new conceptual architecture

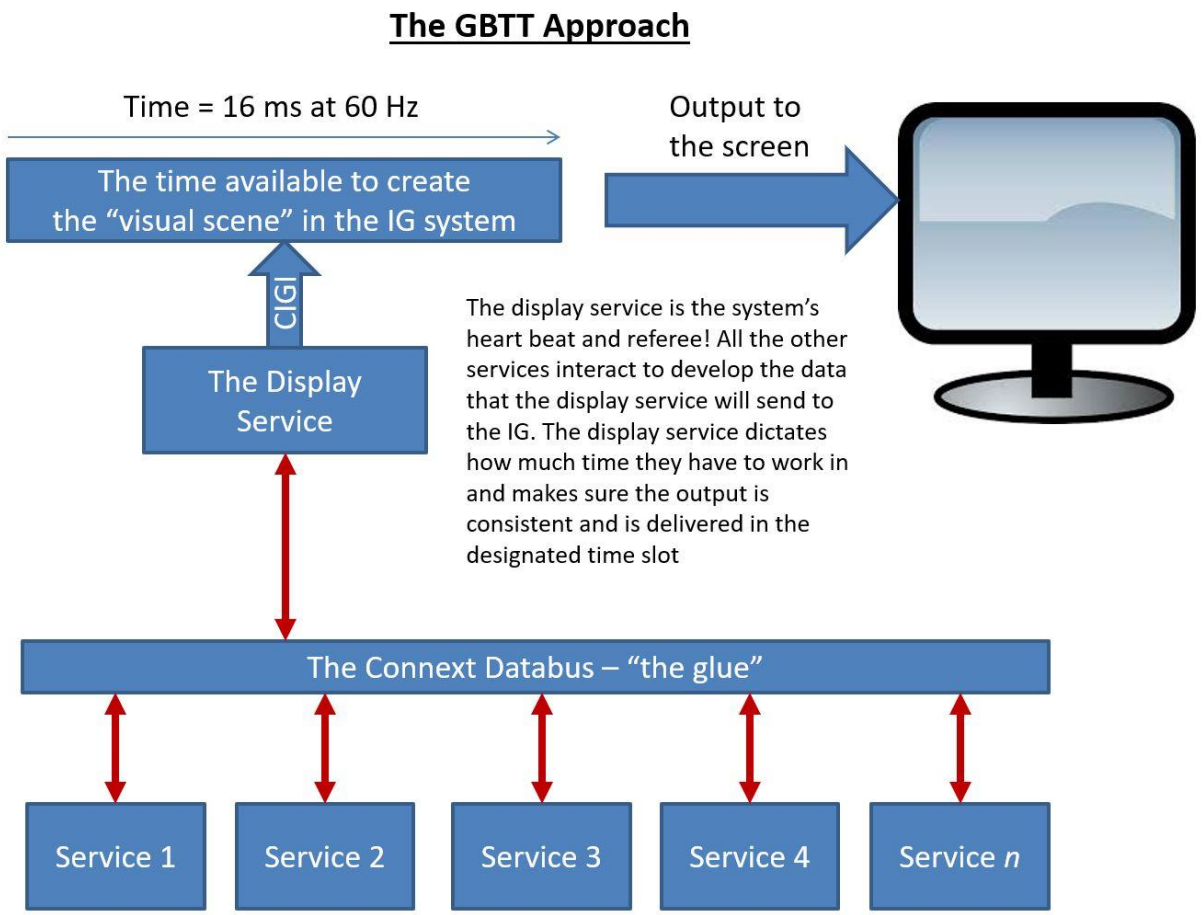


Stage 2 - A working architecture

Stage 3 - A training system built on that architecture

The Solution

- Use Case Overview:
  - A core service orientated architecture (SOA) with a series of services publishing and subscribing to -
  - A data distribution service (DDS) messaging layer
  - With the computational process needing to complete within a very precise time slot
  - We needed to consider requirements relating to the use of open source standards in developing our architecture
- Having defined our use case as an organisation we built a prototype and as novice DDS we choose Connext DDS as our tool of choice for the following reasons:
  - Availability and the licencing model
  - Reliability and reputation
  - The range of tools available to support the development process – voyage of discovery!



Results

- The internal porotype work morphed into and architecture that was used to deliver a complex SOA / DDS training system solution in support of ground training. Essentially we did something entirely new in the simulation domain space and demonstrated that it worked
- What benefits did we achieve from using Connext DDS within our architecture:
  - An architecture that was built on open standards, consistent with our customers approach to both vehicle development and simulation
  - A methodology to impose engineering discipline
  - An architecture designed to manage whole life costs by facilitating reuse, reconfigurability and interoperability

Questions

BACK UP