

13. UK MoD Generic Vehicle Architecture



Since 1997 the UK MOD have employed QinetiQ to lead the VSI Group, a consortium of UK based defence contractors, towards the introduction of open standards based electronic architectures for land based platforms. Through the VSI Groups activities, UK MOD aim to benefit by reducing the time, cost & associated risk through the introduction of open architecture based electronic systems.

A recent activity for this group has been to address the interface between application software and the architecture, for which we surveyed suitable technologies against UK MOD requirements. The OMG DDS family of standards were easily the most appropriate for military land vehicle application due their openness, the OMGs heritage, the commitment by the vendors to address full interoperability, and technical features of DDS. Most important of the technical features considered were the opportunity to simplify application development through adoption of the data centric nature of DDS and the low coupling achieved by using a publish and subscribe communication model.

In order to fully benefit from the use of DDS and to encourage adoption by its contractors, UK MOD has funded the construction of the UK MOD Land Data Model. This data model will encompass data type definitions, quality of service patterns and vehicle type profiles, it will allow the defence community to generate a set of products that interact over DDS based data network in a number of platforms. The Data Model has been endorsed by the VSI Group and a recommendation to the MOD for standardisation through the GVA Office has enabled the data model to undergo its initial deployment in two procurement activities.

By making the model openly available and mandating its use in future programmes UK MOD will benefit by reducing bespoke interfaces and Industry will benefit by increasing the diversity of platforms targeted by their products. Most importantly the armed services will benefit through the increase in frequency of fully integrated vehicle upgrades.

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