

Embedded Databases in Defence

Tamworth, Staffs. October 1st 2009. McObject, whose eXtremeDB embedded database systems are distributed in the UK by Phaedrus Systems, has announced two major design wins in the military and aerospace area. BAE Systems is using McObject's *eXtremeDB™* as part of an avionics upgrade for the Panavia Tornado GR4 multi-role combat jet and leading Turkish defence contractor STM Defense Technologies Engineering and Trade is using the *eXtremeDB* High Availability (HA) embedded database within a new Tank Command and Control Information System (TCCIS).

Tornado

Global defence contractor BAE Systems has chosen McObject's *eXtremeDB™* in-memory embedded database running on Wind River's VxWorks real-time operating system (RTOS) as part of an avionics upgrade for the Panavia Tornado GR4 multi-role combat jet. *eXtremeDB* is part of a new embedded software system that adds Tactical Data Link capability to the Tornado Advanced Radar/Map Display Information System (TARDIS). The TARDIS displays a moving digital map overlaid with radar and tactical data. The *eXtremeDB* embedded database manages tactical information such as aircraft/ship/vehicle positions, and is updated in real-time from multiple sources, including GPS receivers.

BAE Systems chose to use McObject's *eXtremeDB* commercial, off-the-shelf (COTS) database rather than developing data management code from scratch in order to reduce costs and shorten time-to-completion. Selecting the *eXtremeDB* database proved to be more cost-effective and "allowed us to develop the application for the customer within a shorter timeframe," said Alex Payne, Engineering Project Manager, BAE Systems.

Battlefield Management

Leading Turkish defence contractor STM Defense Technologies Engineering and Trade is using the *eXtremeDB* High Availability (HA) embedded database from McObject running on Wind River Systems VxWorks real-time operating system for real-time, fault-tolerant embedded software within a new Tank Command and Control Information System (TCCIS). This will provide combat vehicles with a comprehensive battle management system (BMS).

STM also chose McObject's hybrid database technology, *eXtremeDB* Fusion. With this product, the developer specifies, with a simple database schema notation, which record types are to be stored on permanent media and which will be managed in memory. This lets STM tailor the storage to achieve desired persistence and performance for each task.

"During our lengthy evaluation, McObject responded quickly to every technical question. The support has been excellent. In addition, we were able to arrange for a McObject engineer to come to our premises for training, and the instruction was both professional and very clear," said Mrs. Özlem Dengizek, STM project manager.

Chris Hills, founder and CTO of Phaedrus Systems, commented, "These wins graphically demonstrate the advantages of McObject's embedded database technology for military and other high reliability systems."

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About Phaedrus Systems

Phaedrus Systems Limited is the UK's leading specialist in the support of engineers at all stages of embedded safety-critical and high-integrity projects. Tools available include requirements capture for IEC 26262, IEC 61508, EN 50128 and nuclear applications; requirements tracking and competency tools; estimation software; a SIL3 RTOS; a hi-rel embedded database; compiler validation reports and reliability/failure software. Consultants have experience working on automotive, rail and aerospace applications, meeting standards such as IEC 61508 SIL4, and D0178B. Backing these is a wide range of other relevant embedded tools.,

Independent advice is strengthened by the company's founder being an active participant in several standards bodies, including ISO C, C++ and IEC 61508-3, and a principal author of MISRA-C:2004.

Phaedrus Systems is based in Tamworth, Staffordshire. More information is available on the website www.phaedsys.com

About McObject

Founded by embedded database and real-time systems experts, McObject offers proven data management technology that makes applications and devices smarter, more reliable and more cost-effective to develop and maintain. McObject counts among its customers industry leaders such as Chrysler, Maximizer Software, Siemens, Phillips, EADS, JVC, Tyco Thermal Controls, F5 Networks, DIRECTV, CA, Motorola and Boeing. McObject, based in Issaquah, WA, is committed to providing innovative technology and first-rate services to customers and partners. The company can be reached at +1-425-888-8505, or visit www.mcobject.com.

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