

Exploitation of Emerging IT Technologies for MOD Security Requirements

**Position paper for Second Workshop on Distributed object Computing Security
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There is a clear convergence of interests between the military/government and commercial sectors for distributed secure systems and the MoD must seek to assimilate them into its procurement of new IT systems as well as incorporation of legacy systems into distributed networks. A number of considerations lead to this conclusion but the principle reasons are the growing awareness of security issues in the commercial sector and the need for the military sector to assimilate COTS technology, see [1]. As a result DERA has, on behalf of the MoD, been investigating the impact of emerging technologies like Java, Corba, ActiveX etc. Amongst those with which DERA is closely associated:

- the use of secure RMI's (with APM);
- techniques for encapsulation (in conjunction with the PRG Oxford);
- work with Newcastle University on reflective architectures;
- work under the SAIDA agreement with CERT-ONERA;
- the use of CSP and model-checking, in collaboration with Oxford, Formal Systems, Royal Holloway;

Further to this a major new research programme will start April 1998 aimed at drawing these threads together. It will be collaborative with a number of commercial players, including Java Soft and IBM, as well as a number of government agencies, including NRL, MITRE in the States and CERT-ONERA in France. The aim is to enhance the emerging standards and technologies to benefit both the commercial and military sectors.

A major element of this programme is to use a distributed simulation environment as a case study. Such simulations raise some interesting and novel security issues, for example: how to allow a model of a weapon system to interact effectively with the environment without revealing certain sensitive characteristics

References

[1] Ryan P Y A, Computer Security, the last 10 years, the next 10 years. DRA technical note, July 1997, based on presentation to CSFW'97.

