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Project Title:	High Speed Data Networks for Future Integrated Modular Avionic Systems
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Funding Source:	EPSRC/BAE
Department:	Computer Science

Project Description:

The project will address the definition, demonstration and evaluation (including performance modelling) of a multi-layered high speed data communication network concept for future IMS based on existing open communication standards, specifically (but not exclusively) IP and AFDX. The role of IP will be to provide system-of-system-wide network transparency, supporting wide-spread interoperability between future military air/ground systems. The role of AFDX will be to provide time deterministic data network operation within an individual air platform – AFDX is an open standard that is already being investigated by Airbus and Boeing for flight critical applications in next generation commercial aircraft. The overall network concept developed by the project will look to support:

- Real-time performance under bounded network load conditions (the known issue of packet loss in AFDX networks under medium loading conditions will be a particular focus of attention here);
- Network reconfigurability at run-time;
- Interchangeability of AFDX with other packet-switched network protocols in order to promote a more technology transparent network solution;
- Potential deployment in future non-IMS platforms.