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Space Systems and Architectures Featuring Cross-Platform Compatibility (7)

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EURO IOD - A JOINT BRITISH-GERMAN INITIATIVE FOR IN-ORBIT DEMONSTRATION

**Abstract**

A bi-lateral initiative between the United Kingdom (UK) and Germany is proposed, that shall fulfill the need for regular access to space for In-orbit Demonstration (IOD) or verification (IOV) of new and innovative technologies. This will provide regular and affordable opportunities for companies, institutes, universities and space agencies wanting to demonstrate or verify new technologies, services or systems. This proposed program (known as “Euro IOD”) shall be implemented as a partnership between Surrey Satellite Technology Ltd. and OHb System AG, and shall continue the success of the recent IOD small satellite missions by both companies.

In Germany and the UK, national space agencies and other national funding bodies have recently implemented and financed IOD missions (TET-1 and TDS-1). The German IOD mission TET-1 was launched in 2012 and successfully completed a primary one year mission time in 2013. TET-1 now is used within the FireBird mission for fire detection from space. The TDS-1 satellite from UK was launched in 2014, carrying a suite of experimental payloads from different UK providers, and is currently providing exploitation data to the payload principle investigators.

A German follow-on mission (TET-2) has been studied as a Phase B project, ESA have defined a Technology Flight Opportunity (TFO) program, and there is continued UK and German interest in IOD and acknowledgement of the need for further IOD activities.

OHb and SSTL propose an “IOD Service” that can be used by European – and worldwide – partners wishing to demonstrate new technology. The service will provide a regular ‘ticket’ to space (the envisaged program schedule is one mission every two years), under the terms of a service agreement, and with a common set of technical interfaces to allow maximum program flexibility and interchangeability for IOD customers. The paper describes the objectives of the Euro-IOD program, the preliminary roadmap, and the role of other partners or participants within the program.