

NATEP

Software Embedded projects



Software – Embedded

Project	Supply chain partnership	Contact
Helicopter Auto Regime Recognition and Continuous RTB	<ul style="list-style-type: none"> • Helitune • University of Bristol • Prosig • Castle Air (customer) 	Dominic Southgate - Project Manager dominic.southgate@helitune.com
<p>This project will use novel algorithms that automatically detect helicopter flight regimes to enable continuous recording of rotor track and balance data. The outcome will be a reduced number of dedicated maintenance flights, increased helicopter availability and reduced overall costs to aircraft operators.</p> <p>NATEP Grant £150,000</p>		

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Airborne Software Capacity (ASC)	<ul style="list-style-type: none"> • Rapita Systems Ltd • Altran UK Ltd • Rolls-Royce plc • GE Aviation Systems • BAE Systems 	Ian Broster General Manager ianb@rapitasystems.com
<p>“Airborne software capacity” will allow more functionality to be used in embedded aerospace systems such as jet engines by using advanced analysis for the capacity calculations of safety-critical software on single and multi-core hardware.</p> <p>NATEP Grant £150,000</p>		

Project	Supply chain partnership	Contact
SafePilot Weather Watch	<ul style="list-style-type: none"> • Blue Bear • Met Office • Hybrid Air Vehicles (customer) • e-Go (customer) 	Andrew Berry andrew.berry@bbsr.co.uk
<p>SafePilot Weather Watch is an electronic decision aid for manned aircraft (and an automated planning tool for unmanned aircraft) that enhances tactical and strategic route planning to make operations safer and more fuel efficient</p> <p>NATEP Grant £95,000</p>		

Project	Supply chain partnership	Contact
Optical Brake Temperature Sensor	<ul style="list-style-type: none"> • Oxsensis • Meggitt Sensing Systems • Airbus Operations SAS (customer) 	Conrad Langton – Engineering Director Conrad.langton@oxsensis.com
<p>Oxsensis is working with Airbus and Meggitt Sensing Systems to demonstrate that a novel fibre optic temperature sensor can monitor the temperature of aircraft braking systems. This is a truly harsh environment in which the aircraft mounted sensors will be exposed to temperatures in range of -55°C to 1300°C.</p> <p>NATEP Grant £150,000</p>		

Project	Supply chain partnership	Contact
Secure Authentication & Flight Evidence Recorder (SAFER)	<ul style="list-style-type: none"> • The Great Circle Ltd • Distributed Management Systems Ltd • University of Central Lancashire • ProFlight UAV Suppliers (customer) 	Adam Berrington – Director adam@thegreatcircle.co.uk
<p>Project SAFER (Secure Authentication & Flight Evidence Recorder) exploits a number of recent innovations in encryption and authentication technology, together with the power of the 'cloud' to create a novel UAV pilot authentication system, which logs and communicates flight hours and flight data.</p> <p>NATEP Grant £ 146,780</p>		

Project	Supply chain partnership	Contact
GOCOM - Ground Operations Control Monitoring	<ul style="list-style-type: none"> • HW Communications Ltd • NEDEAS Ltd • Rinicom Ltd • Airbus Operations Ltd (customer) • Ultra Electronics Controls (customer) 	Michael Szczygiel - Research Projects Manager mszczygiel@hwcomms.com
<p>GO-COM is a collaborative R&D project to identify airport impact incidents between aircraft and external ground objects (aircraft, equipment and structures) using wireless sensor networks on board the aircraft. Its aim is to immediately alert airline maintenance and airport ground services that an impact has occurred: where, when and with what force. It will also provide visual evidence via airside cameras.</p> <p>NATEP Grant £149,790</p>		

Project	Supply chain partnership	Contact
SkyBike	<ul style="list-style-type: none"> • Skybike International Ltd • Bit Parallel Ltd • Embedded Logic Ltd • BASF plc 	Gilo Cardozo – Chief Technical Officer gilo@giloindustriesgroup.com
<p>This project will work to develop a UAV platform with crop spraying capabilities. It will explore flight control systems and location integration with an experimental VTOL design.</p> <p>NATEP Grant £150,000</p>		

Project	Supply chain partnership	Contact
Enhanced Safety for Small to Medium-Size Helicopters	<ul style="list-style-type: none"> • Helitune • Prosig • University of Bristol • Castle Air (customer) • Leonardo MW Ltd (customer) • MD Helicopters (customer) 	Peter Morrish – Technology Manager peter.morrish@helitune.com
<p>The goals of this project bring the safety and cost-saving benefits of Health & Usage Monitoring (HUMS) to the small and medium-sized helicopter market. New hardware and data processing technologies will be combined and applied, resulting in a cost-effective 'Mini-HUMS' prototype for exploitation through the UK aerospace supply chain.</p> <p>NATEP Grant £150,000</p>		

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Digital High Performance Servo Valve	<ul style="list-style-type: none"> • Moog Controls • 4C Electronics • Moog Inc. (customer) • Embraer Commercial Aviation(customer) 	Dr Phil Elliott – R&D Manager pelliott2@moog.com
<p>The execution of electronic closed loop control within a small flight control servo valve has many benefits at the system level including: digital interface, reduced internal leakage, faster dynamic response, higher accuracy and smaller size.</p>		

Project	Supply chain partnership	Contact
Machine Connectivity & Manufacturing Intelligence	<ul style="list-style-type: none"> • ATS UK • Hitex Ltd • Arrowsmith Engineering (Coventry) Ltd (customer) 	Martin Kelman – Senior MES Consultant martin.kelman@ats-global.com
<p>The project will create a highly cost effective Machine Connectivity Module (MCM) which connects and monitors manufacturing processes using the latest technology in the fields of; embedded sensors, wi-fi communications and android based data processing & display platforms</p> <p>NATEP Grant £150,000</p>		

Project	Supply chain partnership	Contact
Proof of Systems Assurance & Certification	<ul style="list-style-type: none"> • D-RisQ Ltd • Abstract Solutions Ltd • GE Aerospace (customer) 	Nick Tudor – Business Director njt@drisq.com
<p>This project seeks to provide an automated, highly assured, systems design analysis capability tool which will enable faster and more cost effective development of constantly evolving complex systems for aerospace and other associated markets.</p> <p>NATEP Grant £75,000</p>		

Project	Supply chain partnership	Contact
Hybrid Aircraft Thrust-Vectoring Propulsion System	<ul style="list-style-type: none"> • V-TOL Technologies • Flow HD • Beagle Technology Group Ltd • Scotia Gas Networks (customer) 	Ashley Bryant Managing & Technical Director ashley.bryant@vtol-technologies.com
This project will directly support the development of an optimised thrust-vectoring propulsion system targeted at delivering Beyond Visual Line Of Sight capabilities for the inspection of network industry based assets and infrastructure using a breakthrough Remotely Piloted Aerial System [RPAS] VTOL aircraft concept. NATEP Grant £150,000		

Project	Supply chain partnership	Contact
Hoversafe	<ul style="list-style-type: none"> • Autonomous Technologies Limited • Snelflight Limited • Newcastle University School of Agriculture, Food and Rural Development (customer) • West Midlands Fire Service (customer) 	Nick Gillett nick.gillett@hoversafe.co.uk
Hoversafe is a reliable, inexpensive UAS that anyone can fly safely. It's being designed and built in the North East and is a Great British product. NATEP Grant £150,000		

Project	Supply chain partnership	Contact
Hot spot heat detection system	<ul style="list-style-type: none"> • Photon Fire Limited • Leigh Speciality Cables • Meggitt plc (customer) 	Bill Shepherd Managing Director Bill.Shepherd@PhotonFire.com
Development of an in-flight temperature monitoring system for aircraft - that localises hot-spots before an emergency incident occurs. NATEP Grant £85,480		

Project	Supply chain partnership	Contact
Advanced UAV Thermal Imaging and Video Analytics for Search and Rescue Missions (TIVA)	<ul style="list-style-type: none"> • Remvox Limited • RNC-Avionics Ltd • Lancashire Fire & Rescue (customer) 	Steve Pearson CEO Remvox Ltd steve@remvox.co
The overall objective of the project is to develop and implement an all-encompassing system to aid search and rescue missions by automatically detecting body heat through the video analytics of thermal imaging and the incorporation of the analytics results in conjunction with the on-board navigation system to deploy resources directly to area of high potential for rescue/retrieval of personnel. NATEP Grant £150,000		

Project	Supply chain partnership	Contact
Precision Back-up Navigation for UAVs	<ul style="list-style-type: none"> • Forsberg Services Ltd • V-TOL Technologies Ltd • Rockwell Collins (customer) • Locanis (customer) 	Charles Forsberg Director charles.forsberg@forsbergservices.co.uk
Forsberg Services Ltd propose an enhanced air navigation system for safe operation of UAVs during critical parts of the flight envelop, in particular landing and take-off. These phases of low-level flight are subject to object avoidance and safe navigation. NATEP Grant £150,000		

Project	Supply chain partnership	Contact
New Photonic Architectures using GaAs Modulators	<ul style="list-style-type: none"> • aXenic Limited • University of Bedfordshire • Selex ES (customer) 	Steve Clements Managing Director steve.clements@axenic.co.uk
The project will develop a novel photonic architecture to allow hi fidelity, high bandwidth, remoting of microwave sensing in harsh avionics environment. Photonic signal pre-processing will also be used to produce a better performance than from pure electronics. NATEP Grant £143,000		

Project	Supply chain partnership	Contact
Triaging through NDT	<ul style="list-style-type: none"> • Theta Technologies • Manufacturing Technology Centre • Rolls-Royce plc 	Julian Wright Managing Director j.wright@thetatech.co.uk
This project will investigate a novel non-linear acoustic non-destructive testing (NDT) method for instant triaging of defective metal components in automated real-time go/no-go decision making. The state-of-the-art is too slow and too expensive for commercial applications but without NATEP funding this will remain an academic technology curiosity and industry will not benefit from the anticipated reduction in inspection times. NATEP Grant £145,100		

Project	Supply chain partnership	Contact
Software Defined Telemetry	<ul style="list-style-type: none"> • TBG Solutions Ltd • G2 Communications • Rolls-Royce plc (customer) 	Neil Roddis R&D Manager neil.roddis@tbg-solutions.com
Software controlled wireless communications system for reliable wide bandwidth remote monitoring of sensor data, initially aimed at improving efficiency and cost-effectiveness of aero engine development test NATEP Grant £150,000		

Project	Supply chain partnership	Contact
HP1 Impact Classification System (HP1ICS)	<ul style="list-style-type: none"> • HP1 Technologies Limited • University of Central Lancashire • Centre for Process Innovation (CPI) • BAE Systems • GKN Aerospace 	Andrew Howes – Director Andrew@hp1t.com
This project will develop a printable intelligent flexible, thin and durable sensor array that will collect and analyse data relating to impact events on aircraft. NATEP Grant £149,926		

Project	Supply chain partnership	Contact
Intelligent Diversion Assistant (IDA)	<ul style="list-style-type: none"> • The Great Circle Ltd • University of Central Lancashire • Pooleys Flight Equipment Ltd 	Adam Berrington – Director adam@thegreatcircle.co.uk
The Intelligent Diversion Assistant (IDA) improves aircraft safety in emergencies, using data obtained from real-time digital aircraft and weather feeds, coupled with a detailed airfield navigation database, to provide real-time optimum re-routing and emergency landing decision support to pilots. NATEP Grant £143,767		