THE FUTURE DIGITAL BATTLESPACE

INNOVATION AND TECHNOLOGY POWERING JOINT CAPABILITIES

WIRED | Microsoft

Programme

December 9, 2020

–

A Virtual Conference

Welcome to The Future Digital Battlespace

We're delighted to welcome you to The Future Digital Battlespace. Across two episodes, you'll hear compelling discussions from exciting disruptors in military, defence and technology. Together, we'll explore the innovation powering joint capabilities and shaping the way we plan and implement large-scale military operations.

WIRED and Microsoft are proud to present this special event with speakers including former **Chief of Defence Intelligence Air Marshal (Rtd) Phil Osborn**, who will provide a unique perspective on Defence and National Security in the UK; **Lt. Gen. (Rtd) John NT "Jack" Shanahan**, the inaugural Director of the US Department of Defense (DoD) Joint Artificial Intelligence Center (JAIC), who will share lessons in scaling from small pilots in AI implementation to large-scale missions; and **Major General TR Copinger-Symes CBE**, Director Strategy and Military Digitisation, UK Strategic Command, who will discuss the development of the military's digital backbone.

With the announcement of the Integrated Operating Concept 25 this year, it is both a critical and exciting time for military leaders to embrace – and engage with – the technology accelerating the transformation of modern warfare. We thank you for joining us and hope you enjoy your experience.

Introduction

wiredevents@condenast.co.uk

Useful information

Read these pages for key information about The Future Digital Battlespace

Internet and quality

Although WIRED has invested in a stable and well-produced live broadcast platform, as with all virtual conferences, your internet speed impacts the quality of the broadcast. We advise shutting down all other applications that are using your home internet – especially streaming and any heavy downloads.

Log in early

Registered attendees will be sent their login details at least the day prior to the event – we recommend that you log in and familiarise yourself with the portal in order to ensure a smooth experience. If you haven't received your details, email *wiredevents@ condenast.co.uk*.

Live broadcast

WIRED and Microsoft are delighted to broadcast the show live from London. Most of the speakers are logging in and presenting live – as we would at all WIRED events. Log in live with us, to get the full experience of "being in the same room together".

Viewing directions

Log into the CrowdComms platform using the email you used at purchase. Upon creation of your password, click on "Watch the Broadcast". Submit your questions for the speakers on the Q&A box and introduce yourself on the chat. Use the picture-in-picture feature for viewing ease.

Agenda

Episode One:

The first episode begins with a candid fireside chat on Defence and National Security with **Air Marshal (Rtd) Phil Osborn CBE FRAeS**, and **Clare Barclay**, the CEO of Microsoft UK. Following sessions will offer top-level views of synthetic environments and cloud innovation, and end with a Startup Showcase featuring DEFEND3D, SATAVIA and Preligens, plus keynotes from **Major General TR Copinger–Symes CBE**, Director Strategy and Military Digitisation, UK Strategic Command and **Christian Brose**, the author of *The Kill Chain,* and Chief Strategy Officer, Anduril. Featuring **Richard Warner**, **Simon Luck**, **Matt Telling**, **Adam Durant**, **Daniel Baker**, **Nick Bray**, **Philip Lear** and **Anisha Singh**.

Episode Two:

We continue the programme with a deep dive into AI adoption and the building blocks required to move from pilot to large-scale implementation, featuring **Lt. Gen. (Rtd) John NT. "Jack" Shanahan**, the inaugural Director of the US Department of Defense (DoD) Joint Artificial Intelligence Center (JAIC)and **Steven Meers**, Head of AI Lab, DSTL.

We'll close the event with a Capabilities Showcase from the Microsoft team, investigating 5G, artificial intelligence, wargaming and space capabilities. Featuring **Rashmi Misra**, **Amanda Mercier**, **Jeremy Poulter**, **Kate Robertson**, **Andy Hickl**, **Paul Tilghman**, **Mujtaba Hamid**, **Steve Kitay**, **Chirag Parikh**, **Dylan Browne** and **Matt Telling**.

Agenda

December 9, 2020

> December 9, 2020 <

Episode one

10.00 GMT

Morning Welcome Remarks

Greg Williams, Editor-in-Chief, WIRED

10.02 GMT

Fireside Chat: Technology and Innovation in Defence in the UK

Air Marshal (Rtd) Phil Osborn CBE FRAeS

Clare Barclay, CEO, Microsoft UK

Air Marshal (Rtd) Phil Osborn CBE FRAeS and Clare Barclay, CEO, Microsoft UK explore the current role of technology and innovation in the UK, examining the specific opportunities and challenges, discussing exciting frontiers of military operations.

10.20 GMT

The Future of High-tech Warfare

Christian Brose, Author of *The Kill Chain* and Chief Strategy Officer, Anduril

10.35 GMT

The Future of Simulation Modelling and Synthetic Environments

Richard Warner, Director of Partnerships, Improbable

Innovation Showcase

10.50 GMT

Microsoft Keynote: Supporting FVEYs Innovation in the Cloud

Simon Luck, UK Mission Engineering Lead, Microsoft

11.10 GMT

Startup Showcase Making Aviation Smarter

Adam Durant, CEO, SATAVIA

Dan Baker, CTO, SATAVIA

Nick Bray CBE, CSO, SATAVIA

AI for Geospatial Intelligence

Philip Lear, Head of Sales, UK, Preligens

3D Printing for Defence

Anisha Singh, CPO, DEFEND3D

11.35 GMT

Delivering the Digital Backbone and Unleashing the Power in Defence's Data

Major General TR Copinger-Symes CBE,

Director Strategy and Military Digitisation, UK Strategic Command

11.55 GMT

A Look Ahead

Matt Telling, Sr Director, UK Defence and National Security

12.00 GMT

Closing Remarks

Greg Williams, Editor-in-Chief, WIRED

Agenda

> **December 9, 2020** <

Episode two

14.30 GMT
Afternoon Welcome Remarks
Victoria Turk, Features Editor, WIRED

14.35 GMT
Panel: Adopting Artificial Intelligence – From Pilot to Large-Scale Applications
Lt. Gen. (Rtd) John NT. "Jack" Shanahan, Former Director, Joint Artificial Intelligence Center, Office of the Department of Defense Chief Information Officer, the Pentagon, Arlington, Virginia

Steven Meers, Head of AI Lab, DSTL

Rashmi Misra, GM AI Platforms, Microsoft

Amanda Mercier, Lead Data Scientist, Azure Global

Moderated session by Victoria Turk, Features Editor, WIRED

15.10 GMT
Microsoft Capabilities Showcase
Hosted by Jeremy Poulter, Sr Industry Executive, UK Public Safety & National Security, Microsoft

Kate Robertson, Digital Advisor, Microsoft

Azure Space
Steve Kitay, Senior Director, Azure Space, Microsoft

Chirag Parikh, Senior Director, Azure Space, Microsoft

5G Edge Enabled
Paul Tilghman, Principal Program Manager, Microsoft

Rapidly Deployable AI for Mission
Andy Hickl, Data and AI Lead at Azure Global Mission Systems

Cloud, AI and Gaming-Powered Advanced Wargaming
Mujtaba Hamid, Head of Silicon & Electronics Industry, and Studio Alpha, Microsoft Azure

16.10 GMT
The Future of Space
Dylan Browne, Head of Government Sales, OneWeb

16.25 GMT
Next Steps: Vision into Action
Matt Telling, Sr Director, UK Defence and National Security

16.30 GMT
Closing Remarks
Greg Williams, Editor-in-Chief, WIRED

Agenda

wired.uk/events

wiredevents@condenast.co.uk

Meet the 2020

WIRED is honoured to present a specially
curated speaker faculty comprising innovative
leaders, founders and disruptors
who are paving the way for change in military
and defence missions.

Speaker Faculty

Industry Experts and Leaders

**Air Marshal (Rtd)
Phil Osborn CBE FRAeS**

After nearly four decades in UK Defence, Air Marshal (Rtd) Phil Osborn has a unique perspective on Defence and National Security. As the Chief of Defence Intelligence until the end of 2018, he was at the heart of national security decision making, strategic intelligence provision, and digital and cyber capabilities. Previously, he served as an operational Tornado navigator, commanded one of the two operational RAF Groups, and led the extensive Joint Forces (now Strategic Command) capability portfolio. Today, within a number of Board-level roles, he is a Director at Universal Defence and Security Solutions.

**Lt. Gen. (Rtd) John NT
"Jack" Shanahan**

John (Jack) Shanahan, Lieutenant General (Rtd), United States Air Force, retired after a 36-year military career. His final assignment was as the inaugural Director of the US Department of Defense (DoD) Joint Artificial Intelligence Center (JAIC). Jack served in various fields including flying, intelligence, policy, and command and control, and commanded at the squadron, group, wing, Agency, and Numbered Air Force levels. As the first Director of the Algorithmic Warfare Cross-Functional Team (Project Maven), he established and led the DoD's pathfinder AI fielding programme charged with bringing AI capabilities to intelligence collection and analysis.

**Major General TR
Copinger-Symes CBE
Director Strategy and
Military Digitisation,
UK Strategic Command**

In 2019, Tom took up his current post, newly created to accelerate Defence's Digital Transformation and increase its exploitation of data and digital technology. He spent his early career with The Rifles on operations in Northern Ireland, Bosnia, Kosovo, Iraq and Afghanistan, and in operations and strategy posts in the MOD & PJHQ. Tom pioneered "Information Manoeuvre" – the Army's response to digital disruption in a new era of great power competition, culminating in the formation of 6th (UK) Division.

**Clare Barclay
CEO,
Microsoft UK**

Clare was appointed Chief Executive Officer of Microsoft UK, where she is responsible for all of Microsoft's product and service offerings in the UK for its commercial customers and partners. Previously, Clare was Microsoft UK's Chief Operating Officer for four years, where she orchestrated the direction and success of the sales, marketing and services resources in each of Microsoft UK's business groups. With nearly three decades in the IT industry, most of them in diverse roles across Microsoft, Clare was previously General Manager of the Small, Medium Enterprise & Partner Group at Microsoft UK.

Speaker Faculty

Christian Brose

Author of *The Kill Chain* and Chief Strategy Officer, Anduril

Christian Brose is the Chief Strategy Officer of Anduril Industries, a venture-backed defence technology company. He is responsible for business strategy, development and growth, and for positioning the company to build technologies that solve the most important defence problems. He is also a Senior Fellow at the Carnegie Endowment for International Peace, a member of the Aspen Strategy Group, and the author of *The Kill Chain: Defending America in the Future of High-Tech Warfare*.

Richard Warner

Director of Partnerships, Improbable

Richard Warner is responsible for developing Improbable's industry and research partnerships, as well as driving the expansion of Improbable's partner content ecosystem. From 2017-2019, he was General Manager of Improbable's US Government Business, which he established. Before joining Improbable, Richard served in the UK's diplomatic service for 10 years in a range of political and policy roles with a national security focus. In his last assignment, he served as Principal Private Secretary to the UK's National Security Adviser.

Steven Meers

Head of AI Labs, DSTL

Professor Meers is a Fellow at the Defence Science and Technology Laboratory (DSTL) specialising in application of artificial intelligence, machine learning and data science to defence and security challenges. He is the Head of DSTL's AI Lab and provides advice at the highest levels within the Ministry of Defence regarding the opportunities and threats presented by artificial intelligence and machine learning, and how the UK can responsibly and safely adopt these technologies to strengthen defence and security.

Dylan Browne

Head of Government Sales, OneWeb

OneWeb is building a global communications network with a constellation of Low Earth Orbit satellites that will provide robust secure connectivity solutions for US Government customers. Prior to OneWeb, Dylan was COO at COMSAT Inc, and previously at Airbus Defense and Space CIS. Dylan oversees a global team responsible for developing service propositions for global connectivity in the Government sector and leveraging OneWeb's unique satellite production and operations capabilities for third-party missions.

Speaker Faculty

Amanda Mercier

Lead Data Scientist, Azure Global

Amanda leads a team of data scientists solving the most challenging, mission-sensitive problems at Microsoft using artificial intelligence. She spent over 13 years as a data scientist for the US government working on a wide variety of missions, including weapons systems effectiveness, ballistics, counterterrorism and counterproliferation. She left the government as the chief data scientist for a global mission-space. Whilst working at Microsoft, she spearheaded efforts including synthetic data generation supporting computer vision, information exploitation, and predictive analytics for government customers.

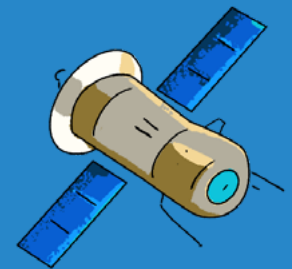**Rashmi Misra**

GM AI Platforms, Microsoft

Rashmi has been at the forefront of intelligent systems for over 20 years, managing network applications, cloud, media, IoT and M2M businesses for HPE where, most recently, she was the Head of AI Solutions for High Performance Compute solutions. Rashmi previously led Motorola's worldwide System Integration portfolio and was instrumental in deploying some of the first expert and AI systems on mobile networks. She owns six international patents for intelligent optimisation, automated network health and monetisation of traffic on telecom networks.

Matt Telling

Sr Director, UK Defence and National Security, Microsoft

Matt leads Microsoft's Public Safety and National Security business, which is focused on supporting customers in safeguarding the UK and its citizens. In this role, Matt leads a team that works with customers across Defence, National Security, the Home & Foreign Offices, Justice and Policing to find new and unique ways to use technology to empower those organisations and their users. Matt has held several roles in his 20-year Microsoft career within many parts of the organisation including Consumer, Partner, Enterprise Services, Xbox and Telecoms business units.

Speaker Faculty

Capabilities Showcase Speakers

Jeremy Poulter

**Sr Industry Executive,
UK Public Safety & National
Security, Microsoft**

As Industry lead for UK Defence
and National Security, Jeremy
Poulter works with government
departments to better understand
future digital capability needs
and with a range of partners
from startups to defence industry
primes to craft solutions.
Jeremy spent 17 years as a front-
line RAF aviator, which included
two secondments to the
US military in support of major
acquisition programmes.

Kate Robertson

**Digital Advisor,
Microsoft**

Kate is a Digital Advisor across
Microsoft's Defence and Intelligence
business, encouraging customers to
move beyond the technology and
focus on creating real value from
their Digital Transformation Journey.
She has worked within the industry
for over 20 years, starting as an Air
Engineering Officer in the Fleet Air
Arm, where she worked across the
domains while supporting TLBs, then
moving to PA Consulting where
she led the Defence Innovation team
before moving to Microsoft.

Simon Luck

**UK Mission Engineering Lead,
Microsoft**

Simon is Microsoft's Mission
Engineering Lead in the UK. Prior
to joining Microsoft, Simon spent
16 years with an engineering
consultancy which included
a DSTL programme that used
Machine Learning to teach a drone
to carry out a perched landing
– the first of its kind in the UK.
Simon is a Fellow of the Institute
for Technology and Engineering and
is an enthusiastic and passionate
advocate of exploiting technology
to enable our front-line personnel
and support the mission.

Andy Hickl

**Data and AI Lead at Azure Global
Mission Systems**

Andy Hickl is an innovator in artificial
intelligence, machine learning and
natural language processing. He
currently serves as Principal Program
Manager in the Azure Special
Capabilities team, where he leads
investments into novel AI capabilities
across the verticals most important
to Azure customers. He has held
leadership roles in AI at Microsoft,
Intel, Rewired Ventures, Vulcan Inc.,
and Language Computer Corporation.
A serial entrepreneur, Andy has
co-founded three startups:
A.R.O. Inc., Swingly, and Extractiv.

Speaker Faculty

Paul Tilghman

**Principal Program Manager,
Microsoft**

Paul Tilghman leads the Spectrum
& Connectivity team in the Azure
Global CTO organisation at
Microsoft, where he focuses on
the intersection of wireless,
communications and AI
technologies with the cloud.
Prior to joining Microsoft in 2019,
Paul was a Program Manager
at the Defense Advanced Research
Projects Agency (DARPA) where
he defined and led cornerstone
programs of the US wireless and
AI research portfolio.

Mujtaba Hamid

**Head of Silicon & Electronics
Industry, and Studio Alpha,
Microsoft Azure**

Mujtaba leads Studio Alpha for
Microsoft Azure, with a vision of
empowering organisations to solve
complex planet-scale massive data
problems using simulations and
artificial intelligence run in the
Cloud and visualised using Gaming
Technology. Previously, Mujtaba had
held technology policy, corporate
strategy, product management
and engineering roles in Microsoft's
Windows, Office, Strategy and
Research organisations.

Stephen Kitay

**Senior Director, Azure Space,
Microsoft**

Stephen Kitay co-leads Microsoft's
efforts to connect Azure with the
space sector. Prior to Microsoft,
Stephen served in the US
Government, most recently as
the Deputy Assistant Secretary
of Defense for Space Policy,
where he had a key leadership role
in the establishment of the US
Space Force. He was also an active
duty Air Force military officer, and
held civilian positions in the
Intelligence Community and on
Capitol Hill. Kitay has an Electrical
Engineering degree and a Masters
in Business Administration.

Chirag Parikh

**Senior Director, Azure Space,
Microsoft**

Chirag Parikh co-leads Microsoft
Azure Space, which is responsible
for developing capabilities and
services to extend connectivity
across the world, simulate digital
space environments, discover
new insights, and drive innovation
both on the ground and in orbit.
The rapid international advances
in commercial and government
space capabilities provide a
unique opportunity to both
enable the space industry through
the power of the Azure cloud,
and to leverage these space
services for Azure customers.

Speaker Faculty

THE FUTURE
DIGITAL
BATTLESPACE

THE FUTURE
DIGITAL
BATTLESPACE

Startup Showcase Speakers

Adam Durant
CEO, SATAVIA

Dr. Adam Durant is Founder and CEO of SATAVIA – making aviation smarter and greener. Prior to founding SATAVIA, Dr. Durant worked as a professional scientist at the University of Cambridge and the Norwegian Institute for Air Research (NILU). Dr. Durant has authored more than 35 scientific papers in the field of atmospheric science, including a landmark paper on carbon emissions in 2009.

Daniel Baker
CTO, SATAVIA

Daniel Baker is the Chief Technology Officer for SATAVIA, with responsibility for managing innovation, development and delivery. His portfolio ranges across a wide spectrum of cutting-edge technology, from four-dimensional atmospheric datasets to cloud engineering with Kubernetes, and from Python parallelisation with Dask to managing SATAVIA's customised numerical weather prediction model (WPM) on high-performance-compute in the cloud.

Nick Bray CBE
CSO, SATAVIA

Nick is responsible for the general strategy and business development in the Defence and Security sector at SATAVIA. He previously served for 33 years in the Royal Air Force, occupying a wide range of roles including Chief of International Policy and Plans for the Ministry of Defence, and Commandant-General of the RAF Regiment. He retains a commission in the Royal Auxiliary Air Force, in the rank of Air Commodore.

Anisha Singh
CPO, DEFEND3D

Anisha Singh has spent several years working with X-rays, imaging and robotics. She has spearheaded working on bespoke mechatronic systems for industrial, medical and laboratory use, providing services for design, rapid prototyping and manufacturing. Her experience has led to the role of CPO at Wippit Ltd, where she aims to bring disruption to digital manufacturing with the DEFEND3D secure transmission solution.

Philip Lear
Head of Sales, UK, Preligens

Philip joined Preligens (formerly Earthcube) to lead sales growth into the UK market. Philip brings significant experience in supporting international defence programmes (such as Acquisition, IT Infrastructure and Geospatial Intelligence Solutions) and throughout his career has sought to put pioneering technologies in the hands of the user, and to ensure that data can be fully exploited to the best effect.
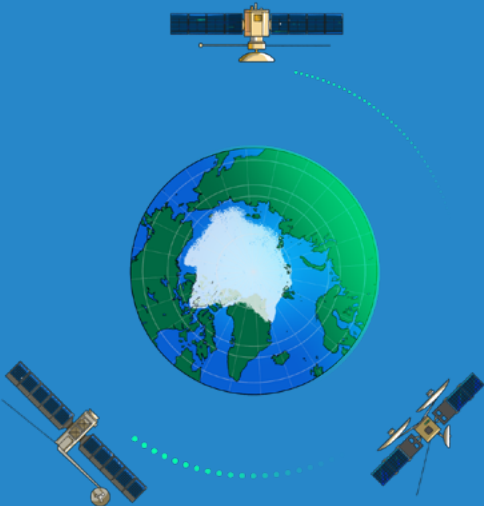
Speaker Faculty

Presented by:

Microsoft helps defence and intelligence agencies advance their missions to promote stability and security for citizens, nations and multinational alliances. We do this by focusing on trust, innovation, security and compliance, all powered by our extensive global partner ecosystem.

WIRED events reinvigorate how business professionals define their strategies in rapidly evolving industries. By introducing attendees to the most compelling innovators, inventors and entrepreneurs who are changing the status quo, WIRED events challenge even the most innovative professional to think like a disruptor, and empowers them in future-proofing their businesses.

WIRED is recognised as the multimedia authority on the future, delivering smart, intellectually curious readers the latest thinking and developments in science, technology, culture and business with ground-breaking photography and design.

Supporting Partners