Wave Sciences Selected for NATO DIANA's 2026 Innovation Cohort

GLIMPSE® introduces a new sensing modality - spatial acoustics - with the potential to give NATO a way to "see in 3D sound" where traditional sensors fall short

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> GLIMPSE can effectively hear the unhearable. It's a transformational technology that extends capabilities beyond what was previously thought possible."
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> *J. Keith McElveen, Founder of Wave Sciences.*

Wave Sciences today announced that it has been selected as one of 150 innovators worldwide to join the NATO DIANA 2026 Challenge Programme Cohort. The programme will accelerate the development of its spatial acoustics engine for detecting drones using sound, at longer distances - where radar, cameras and radio-based systems struggle and are susceptible to counter-measures. A key criteria for winning the challenge is the technology's ability to be adapted for use in civilian settings, unlocking the potential of spatial acoustics in sectors from critical infrastructure to robotics, healthcare and education.

DIANA is NATO's accelerator for dual-use emerging technologies, giving selected companies funding, expert support, and access to more than 200 test centres across the Alliance.

Wave Sciences was chosen for GLIMPSE®, its patented physics-based AI engine for passive 3D spatial audio. The company will now advance and apply GLIMPSE to drone detection in cluttered and contested environments as part of the DIANA programme. Originally developed for forensic audio – the technology is used to isolate a single clear voice from the background of chaotic, real-world recordings and has been proven previously in murder trials. GLIMPSE has since demonstrated its ability to extract and clarify sound in other challenging environments such as underground and underwater. Now, DIANA will partner with Wave Sciences to develop this technology for distance drone detection in battlefield environments, some of the harshest in the world.

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Acoustic drone detection is not new, but today's systems face the same limitations that GLIMPSE overcomes in murder investigations: the 'cocktail party problem,' where critical signals are lost in noise, reflections and competing sounds. GLIMPSE is designed to plug into and strengthen

current systems, solving acoustic challenges they cannot, and drawing on a physics-based AI method to isolate a single sound in environments - and from distances - once considered impossible to overcome.

Instead of relying on sight or radio signals, GLIMPSE is a way to detect what other sensors can't - using sound. Like the Portrait Mode effect on your digital camera, it isolates a subject, but through audio. This mode creates a 3D focus effect regardless of the sound, distance, or chaotic environment, enhancing the subject while suppressing background noise.

"GLIMPSE can effectively hear the unhearable. It's a transformational technology that extends capabilities beyond what was previously thought possible," said J. Keith McElveen, Founder of Wave Sciences. "Through DIANA, we can now extend and validate this innovation in the most difficult, noisy, and unpredictable airspace environments where current systems struggle."
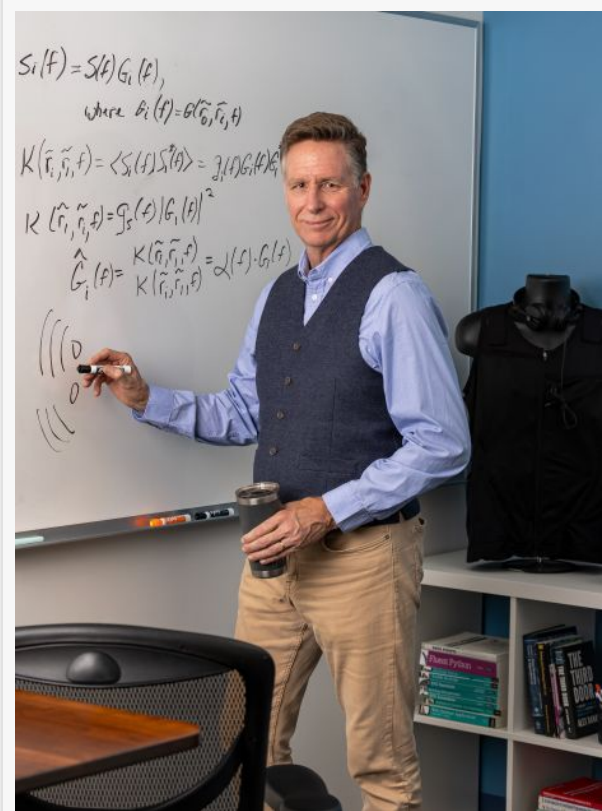
J. Keith McElveen, Founder of Wave Sciences.

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As part of the six-month accelerator, Wave Sciences will extend and test GLIMPSE at long distances at NATO-aligned sites and receive:
- €100,000 in funding
- Access to 200+ test centres in Europe and North America
- Expert support on defence and dual-use applications
- Pathways to scale across NATO's 32-nation market

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Wave Sciences was selected because its capability impact spans multiple civilian and commercial markets, offering the potential for many new applications. This includes sectors such as:

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Airports, power stations, transport hubs, prisons, and water systems could use GLIMPSE as a passive, low-cost protection innovation that works regardless of visibility or interference. It could also support smart CCTV cameras and acoustic anomaly detection in busy urban environments without relying on cameras or line-of-sight sensors.

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Autonomous robots often struggle in crowded environments. GLIMPSE could help machines to hear with precision and reliably interpret voice ID and industrial sounds amidst heavy environmental clutter in warehouses and on factory floors.

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In medical disability settings, GLIMPSE could enhance next generation hearing aids and other assistive devices by enabling them to isolate a single voice from far away in a noisy space. For everyday life, the technology also shows promise in wearables enabling the creation of "focal zones" - private "bubbles" where two people can converse clearly in loud rooms.

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Classrooms are among the noisiest and chaotic settings. GLIMPSE could power the creation of agentic AI assistants to help students hear, and be heard, clearly, reduce cognitive load and support learners with attention or auditory-processing challenges.

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From film sets to music studios, GLIMPSE could isolate dialogue, instruments, improve speech audibility and enable new creative possibilities.

"Sound has always held more information than we've been able to use," added McElveen. "NATO DIANA's support allows us to turn a proven scientific-breakthrough into a practical capability for wider dual-uses – one that has the potential to strengthen NATO's resilience, and also power advances in fields like robotics, healthcare, and media."

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Wave Sciences is a leader in physics-based acoustics and advanced signal processing. Founded in 2008, the company has developed a physics-based AI engine for 3D spatial audio that can detect, isolate, and enhance sound in real-world environments whether nearby or far away - from forensic audio to underwater sensing to drone detection. Wave Sciences' GLIMPSE® technology is protected by more than 10 patents granted and pending and is already in use by government agencies in the U.S., Canada, Europe, and Australia.

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NATO DIANA finds and accelerates cutting-edge technologies to deliver battle-winning defence and security solutions for the Alliance, while fostering deep-tech innovation. As a cornerstone of NATO's innovation and technology strategy, DIANA brings together world-class talent and the latest advancements to maintain the Alliance's technological edge. Leveraging a network of leading accelerator sites, test centres, expert mentors, and Allied expertise across 32 nations, DIANA empowers innovators working at the intersection of defence readiness, commercial potential, and technology breakthroughs.

G Wisniewski
Catchfire PR Ltd
+44 7875 264534
gerrywiz@catchfire.co

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