Hundreds of the world's top minds debate ethics at Dstl's AI Fest

Dstl – the science inside UK defence and security – is playing a critical role in helping the UK Ministry of Defence understand how it can responsibly and ethically adopt AI in order to deter and de-escalate conflict, save lives and reduce harm.

Harnessing the power of AI and unlocking the strategic potential of data is one of the great challenges of the early part of the 21st century. Organisations that understand and embrace this have been able to fundamentally alter how they operate and have delivered remarkable changes within their sector, for example in retail, finance, healthcare and transportation.

As part of this Dstl's AI Lab held a hugely successful virtual event called "AI Fest" which shared experience and practical approaches on a range of challenges including the importance of curating and exploiting data for UK Armed Forces, how to ensure that AI systems are safe, robust and trustworthy enough for military use, and creating ethical guidelines for military adoption of AI.

Other topics covered how to design data centric systems that are effective, fair and safe; working with data sets that are scarce, poor quality or biased; building a defence "data architecture" that enables the data to get to where it needs to be and the "AI Building Blocks" – the wider technical, system and organisational components required for an effective AI capability.

The event included more than 1700 attendees who represented over 300 different organisations and 35 partner nations. Attendees were able to attend 23 sessions consisting of 76 technical talks which included a number of talks from world leading AI scientists who delivered keynote speeches. The event also included a large online exhibition consisting of virtual booths from leading AI companies.

Professor Steven Meers, the Head of Dstl's AI Lab, said:

> Collaboration between government, industry, academia and international partners is particularly vital in this rapidly developing area. AI Fest was an extremely successful event that brought the community together to share insights and best practice regarding the how to responsibly harness the power of AI for defence and security.

Keynote speakers included Dame Angela McLean, the Chief Scientific Adviser for the MOD, who has been at the heart of using data to help the UK government manage its Covid response and Professor Chris Bishop, the Laboratory Director of the Microsoft Research Lab in Cambridge, said:

> There is a real AI revolution taking place right now that is truly transformational. For the last forty years we have programmed computers, but for the next forty years we will train them.

Read AI Labs latest biscuit book here

UK Government funds cutting edge Scottish biotech scientists

Pioneering researchers at the University of Edinburgh will benefit from a £477,015 cash boost of UK Government funding to use cutting edge biotechnology to produce high-value chemicals.

The projects seek to use ingenious scientific methods to bring chemical products to market, many with sustainable manufacturing practices. This could result in lower carbon emissions and meet consumer demand for more sustainable products, moving away from using fossil-based carbon.

Academic institutions have teamed with commercial partners in this programme, to propose new ways of producing products for the vital UK chemical industry. Partners are offering financial support, or in-kind contributions such as materials, facilities and equipment.

This sector of the economy generates £9bn gross value added (GVA) per year and employs 105,000 people.

The funding has been awarded by the Biotechnology and Biological Sciences Research Council (BBSRC) under its Industrial Biotechnology for Improving Production of Higher Value Chemicals programme.

Across the UK, up to £2m was available for grants to support short collaborative projects of between 12 to 24 months with a value up to £250,000.

UK Government Minister for Scotland, Iain Stewart, said:

> The UK Government is investing heavily in research and development at Scottish universities to level up all parts of the country through science and innovation.
>
> Academics at the University of Edinburgh are looking for new ways of producing products for the UK’s chemical industry, finding potential solutions for it to become more sustainable and environmentally friendly.

> This research is vital, reflecting the government's UK-wide commitment to tackling climate change. We must keep striving to save our environment and I urge others to join us in this year of climate action ahead of COP26 in Glasgow.

The project led by Professor Louise Horsfall, with commercial partners Unilever, Ingenza and Diageo, is focusing on using biocatalysts in industrial processes, which is expected to boost the sustainable production of chemicals, materials and fuels from renewable resources.

Bio-based processes will make a major contribution to the development of unique and sustainable new products, derived from waste and by-products.

Professor Louise Horsfall, Chair of Sustainable Biotechnology, School of Biological Sciences at the University of Edinburgh, said:

> I'm delighted to be working with three fantastic companies, Unilever, Ingenza and Diageo, who are embracing sustainable-thinking for their sectors.
>
> We're excited to show that synthetic biology and biotechnology can be used to help transition the UK to a more circular and bio-based economy.

Jonathan Hague, VP Science & Technology, Unilever Home Care, said:

> Unilever is committed to removing all fossil-based ingredients from our cleaning and laundry products by 2030 as part of our Clean Future strategy.
>
> Together with the University of Edinburgh, Unilever will research naturally derived enzymes that are ideal replacements for fossil carbon-derived cleaning chemicals. The new enzymes will also perform at low temperatures, further reducing the environmental footprint of cleaning.
>
> Unilever is grateful to the BBSRC for supporting efforts to innovate for a more sustainable future.

The project led by Professor Gary Loake, with industrial partner Green Bioactives, will establish a sustainable, biomanufacturing platform for World Health Organisation (WHO) essential medicine that is currently produced largely by unsustainable manufacturing practices which also generate toxic by-products.

Professor Gary Loake, of the Institute for Molecular Plant Sciences at the University of Edinburgh and founder of Green Bioactives, said:

> We are excited to have this opportunity to undertake cutting-edge research and development with our industrial partner, Green Bioactives, located at the nearby Roslin Innovation Centre, Edinburgh.
>
> We anticipate this work will help the UK high value chemical sector move towards a more sustainable future, driving job creation and associated prosperity.

WIPO Conversation on Intellectual Property and Artificial Intelligence: UK statement

New technologies have always thrown up new questions about Intellectual Property.

Whether that's the printing press revolution, the invention of recorded music, or the advent of the internet.

Artificial Intelligence is no different.

Over the past ten years AI technologies have accelerated.

I've seen for myself the incredible impact they're having across a huge range of sectors – from medicine to manufacturing.

While companies like Cervest [Sir-vest] are helping to solve some of the major challenges we're facing, like climate change.

And AI technologies are increasingly becoming a part of everyday life – from social media, to personal assistants like Siri and Alexa.

The fact that there's been a 400% increase in AI patent applications around the world in the past decade, shows you how fast things are moving.

And this pace of change is throwing up some really thorny questions.

Can a machine be a rights holder under law? For example.

And does it infringe copyright when it learns to paint like Rembrandt or sing like the Beatles?

As policy makers, it's our job to address these questions.

So that law keeps up with advances in technology.

The fact that AI has such amazing potential to transform the way we live, work and create, makes this all the more important.

Because a strong intellectual property system is critical to releasing that potential.

IP is designed to drive innovation and enterprise, culture and creativity.

So, in the UK, for example, in September this year we launched a Call for Views. A consultation to gather information and ideas about AI and IP.

That's because we value our AI industry and want to help it grow.

Because we know a strong AI sector needs a strong IP framework.

And because we realise that depends on understanding its commercial, economic, legal and social implications.

That's what the consultation is looking at, as well as how the IP framework can incentivise people to develop and adopt those technologies.

We're encouraging a wide range of people to reply – from industry to academia, and IP specialists.

And we would love to hear from any of you here today.

But as well as exploring these issues at home. To release the potential of AI technologies, we need to look for answers internationally. Across borders.

As we are doing today.

Because, as we all know, we are living in a global world.

Where Bollywood is as accessible to us Brits as the BBC.

Where I could speak to someone in Dubai just as easily as I can ring my family in Derby.

And so it's absolutely essential that we work together.

To find common ground.

To develop common standards, definitions and approaches.

This will enable our AI industries to collaborate.

It will allow our institutions to share ideas. Applying these technologies to the common challenges we face.

And it will ensure consistency. Which is absolutely key.

Consistency leads to confidence. Which can unlock the huge global investment needed to bring AI technologies to market.

Whereas unclear definitions, and variable standards, create uncertainty.

Making it more difficult for business to operate across different systems. And threatening the ability of these technologies to benefit people across the world.

Businesses, investors and researchers need predictability, not difference, in the international system.

So, our approaches to the legal questions that have emerged need to align.

There's no better forum for these international discussions on IP than WIPO.

The only international organisation focussed solely on intellectual property.

The guardian of international IP.

And home to the energy and expertise we need to help us to find the right answers.

So, I'm really pleased that WIPO's been doing such fantastic work to help move this conversation forward.

And I'm proud of the UK's role in making that happen.

Encouraging those initial discussions in 2018, for instance.

And supporting them to evolve into the policy-related questions we're addressing today.

We want to work with WIPO to find common answers and tangible solutions to these questions.

Ones that take our different perspectives into account.

Because the issues we've been looking at in this and previous sessions are really important to getting to the common understanding we need.

And enabling IP to help AI fulfil its potential.

Getting to a shared definition of AI has to be the starting point.

We'll never find common standards if we don't know that we're talking about the same thing.

We need these definitions to be technologically neutral and future proof.

And to be agreed and used globally, providing businesses with clarity and confidence.

At previous sessions, we've had some fantastic conversations about patents and copyright.

And we've got a couple of remaining important chapters to address at today's

third conversation. One of them being trade marks.

Before we move on to the WIPO paper, I want to touch on some work the UK is doing on trade marks and AI.

We're in the final stages of developing an online AI tool to improve the chances of successfully registering a trade mark.

Helping applicants to select the correct trade mark classification.

So making it easier for businesses and entrepreneurs to protect themselves.

Particularly the large number of individuals applying, and all those smaller businesses that don't have their own legal departments.

We're looking at trade mark more broadly too.

The Call for Views which I've spoken about – the UK's consultation on AI and IP – has touched on some similar trade mark issues to the ones we're discussing today.

How AI might impact established principles such as human perception within trade mark law, for example. And authorship, and ownership of designs in light of AI.

So I'll be really interested to hear the outcome of today's discussion.

Finally, there's capacity building. And accountability for IP Administrative decisions.

Because, as well as the thorny legal questions that AI raises, it also has huge potential to assist with the protection and enforcement of intellectual property rights.

Particularly, protecting businesses and consumers online.

As e-commerce continues to grow, the challenge of enforcing rights is increasing. How can AI help us in this fight against fakes?

We need to address questions like these together.

As I've said, the UK is committed to working internationally on AI and IP.

And that doesn't end with our search for common global standards.

We want to cooperate on capacity building too.

Helping to even out the technological capacity in this area, so that everyone can make the most of AI technology

We also need to establish a shared framework on administrative decisions. So that we have comparable protections across different countries.

This helps to establish that confidence and predictability that I've spoken

about.

If AI is to help to identify and prosecute rights infringements. Stakeholders need to know how to challenge decisions, and the role humans will play.

So, I really welcome the discussions we're having today on these important issues.

If they're anything like the conversations that we've had so far, they'll be informative and constructive.

And looking ahead, we want to keep the momentum going.

I hope that WIPO will develop a priority list of the areas we need to focus on in the next couple of months.

Things like inventorship in patents, authorship in copyright, and liability for infringement

I hope too that this prioritisation will be followed by a WIPO White Paper next year. Setting out proposals for a common framework, based on the discussions between us all.

We also want to use the power of the WIPO extraordinary General Assembly in 2021. To enable buy-in by Member States and decide future direction for this work.

Because, as I've said, AI technologies have such amazing potential for the world.

And it's critical that we keep up the momentum on the ground breaking work we've started together.

To develop an IP system that supports AI technologies to thrive. Releasing their potential for us all.

Thank you.

PCA approves Declaration by POBs to preserve Pubs Code rights for tied tenants

News story

Subject to Parliamentary approval on lockdown measures the PCA has approved a

Declaration by all of the regulated pub-owning businesses (POBs) to be in force from 05 November to 02 December 2020.

This Declaration is on identical terms to and has the same effect as that agreed by POBs and was in place between March and June 2020 during the first period of pub closures. The Declaration period will run from 05 November 2020 to 02 December 2020 inclusive, subject to review.

Tenants can access a summary for what it means for them in practice here.

The POBs have advised that they are urgently considering the impact on of the lockdown and extension of furlough arrangements on their businesses and that they either cannot or may not be able to comply with all of their Pubs Code duties. The Declaration, signed by Directors of all the regulated POBs, again serves to protect certain tenant rights during this latest closure without burdening them with the need to initiate arbitration proceedings themselves.

It effectively stops the clock from 05 November 2020 on some significant Code deadlines that apply to tenants making arbitration referrals during this emergency period, and provides safeguards relating to specific MRO rights. This does not however prevent a tenant from taking Code steps during this period if they so wish.

These arrangements provide additional protections and expressly do not prevent any tenant from taking any available Code step to access their rights should they choose to do so.

As in March, we have given advance notice to tied pub tenant representative groups about these measures. We will continue to engage with the POBs to ensure that they return to usual processes as soon as possible, and that tenants can continue to benefit from their Code rights. As regulator all the PCA's statutory enforcement powers continue to exist. The PCA will be working tirelessly to promote and protect the Code rights of tenants and will take further measures if these prove necessary.

The previous Declaration which ran between 16 March and 30 June 2020 can be accessed here.

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Safe repatriation of High Level Waste from the UK to Germany

News story

A consignment of high level waste (HLW) has been safely delivered to its destination in Germany.

High level waste flasks loaded for transfer to storage site in Germany

Six flasks, each containing 28 containers of HLW in the form of vitrified residues, arrived at the Federal interim storage facility in Germany on 04/11/2020.

This was the first of three planned shipments of HLW from the UK to Germany.

The waste results from the reprocessing and recycling of spent nuclear fuel at the Sellafield site in West Cumbria, which had previously been used to produce electricity by utilities in Germany.

The Vitrified Residue Returns (VRR) programme, a partnership between Sellafield Ltd and International Nuclear Services (INS), is a key component of the UK's Nuclear Decommissioning Authority (NDA) strategy to repatriate highly active waste from the UK, fulfil overseas contracts and deliver UK Government policy.

Sellafield team prepare flasks for return to Germany

INS, a subsidiary of the NDA, performed the shipment, in full compliance with all national and international regulations, drawing on more than 40 years' experience of transporting nuclear materials safely and securely around the world.

The waste was transported by rail from Sellafield to the port of Barrow-in-Furness then by specialist vessel Pacific Grebe to a German port, then by rail to Biblis. INS contracted with its specialist German partner Daher Nuclear Technologies GmbH (DNT) to safely manage the overland transport in Germany.

Sellafield Ltd’s VRR programme manager Jonathan Clingan said:

> Thanks to the excellent joint work of various teams at Sellafield, INS and other partners in the UK and overseas, we have safely delivered another key milestone in the UK government strategy to return high level waste to customers.

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