News story: Intelligence technology to keep Joint Force Command one step ahead of adversaries

The ‘predictive cognitive control system’ is being developed by Gloucestershire-based Montvieux and funded by the MOD’s Defence Innovation Fund through the Defence and Security Accelerator’s (DASA) fast track ‘Revolutionise the human information relationship for Defence’ competition.

The system takes a broad range of incredibly complex data, beyond the ability of analysts to simultaneously comprehend, and through the use of Deep Learning based neural networks, is able to make confidence-based predictions of future events and outcomes of direct operational relevance to Defence Users.

As part of Phase 2 development, the system is being refined in the innovation environment at RAF Wyton, and is being deployed into the live operational network (as a Beta service).

This will provide Defence analysts with a Machine Intelligence prediction Joe Hemming, Exploitation Lead said – “This project is a great example of collaboration between DASA, the competition sponsors (Joint Force Command) and the front lines working hard to turn technology into true capability. It’s a clear demonstration of the cultural shift across all organisations to focus on capability integration and exploitation as well as technology development.

Joint Force Commands operational deployment of this technology will allow real users to test the technology in a representative environment which will also demonstrate the real value of the technology to defence. Montvieux received over £600,000 in funding over both phases of the competition. Lt Col Jon Kerr, Head CII said – “The DASA has enabled the Centre for Intelligence Innovation to meaningfully engage with industry to understand their innovations and how they might apply to our work. It has then enabled us to shape the development of and deploy Montvieux’s application onto our operational system.

This ability to engage early and partner with industry to deliver a solution has been invaluable to us. It has allowed us to put the front edge of innovation from UK industry through an accelerated development process and consequently fast-tracked the delivery of an appropriate solution for Defence.”

Peter Webb, Director of Montvieux, said – “The parallel focus of DASA on placing advanced capabilities in the hands of military users and developing wider exploitation opportunities, including commercial opportunities, has given us the space to think differently about how we operationalise our research and innovation within the company. With the help of DASA, we have

been able to plan-back from potential commercial outcomes, and identify the right industry partners to move this forward."

The willingness of Defence, especially CII, to think differently about partnering, rather than conventional contractual relationships, has meant that we've been able to jointly support each other. The result is that Defence analysts are getting an amazing capability that generates real insight from the huge volume of information they hold, but also that we will get critical feedback from the operational use of our service. The reference point of having our services in live use also adds credibility to our commercial discussions with industry partners, this is further enhanced by our associated and support from the DASA.

Overall we have found our engagement with DASA invaluable and would encourage other companies to think differently and get involved. We are also hugely appreciative of the critical role our DASA's Technical Partner has played within the project, especially connecting us with the right people in defence at the right time to help maintain our momentum."

See the video below for more from Peter Webb, Director of Montvieux:

Andrew Wire, Montvieux

Press release: Critical asset for early flood warning in York being built

The channel is being built in the river where it passes under the A59 at Skipbridge, Green Hammerton, between York and Harrogate.

Once the channel has been built an ultrasonic sensor will be attached under the bridge so accurate flow readings can be achieved.

This is important for predicting floods in York because the River Nidd is the last major watercourse flowing into the Ouse.

Project manager Oliver Wilson said:

> This is one of the Environment Agency's critical assets for our flood warning service and for managing water resource available for abstraction.
>
> Having an early warning that the Ouse could overtop in York means we can act early to prevent flooding by closing flood gates in the city.

So that the concrete lined channel can be built a cofferdam has been put in place.

One half of the river is dammed off to create a dry working area to enable construction on that side, before the other side is dammed and the new channel structure can be completed.

There was an existing concrete channel built a number of years ago but due to the design and flow dynamics it created in the river the bed got silted up, causing incorrect flow readings and it not working as an effective gauge station.

The new channel is designed to make sure sediment passes through it and flow readings are accurate.

Mr Wilson added:

> Lower river levels have enabled us to make really good progress and we expect the gauge station to be fully functioning this winter.

North Yorkshire County Council's Highways Department has carried out work on the bridge and road earlier this year and Northern Powergrid also recently installed an electricity line across the bridge.

To view river levels click here

Press release: Critical asset for early flood warning in York being built

The channel is being built in the river where it passes under the A59 at Skipbridge, Green Hammerton, between York and Harrogate.

Once the channel has been built an ultrasonic sensor will be attached under the bridge so accurate flow readings can be achieved.

This is important for predicting floods in York because the River Nidd is the last major watercourse flowing into the Ouse.

Project manager Oliver Wilson said:

> This is one of the Environment Agency's critical assets for our flood warning service and for managing water resource available for

> abstraction.
>
> Having an early warning that the Ouse could overtop in York means we can act early to prevent flooding by closing flood gates in the city.

So that the concrete lined channel can be built a cofferdam has been put in place.

One half of the river is dammed off to create a dry working area to enable construction on that side, before the other side is dammed and the new channel structure can be completed.

There was an existing concrete channel built a number of years ago but due to the design and flow dynamics it created in the river the bed got silted up, causing incorrect flow readings and it not working as an effective gauge station.

The new channel is designed to make sure sediment passes through it and flow readings are accurate.

Mr Wilson added:

> Lower river levels have enabled us to make really good progress and we expect the gauge station to be fully functioning this winter.

North Yorkshire County Council's Highways Department has carried out work on the bridge and road earlier this year and Northern Powergrid also recently installed an electricity line across the bridge.

To view river levels click here

Press release: Critical asset for early flood warning in York being built

The channel is being built in the river where it passes under the A59 at Skipbridge, Green Hammerton, between York and Harrogate.

Once the channel has been built an ultrasonic sensor will be attached under the bridge so accurate flow readings can be achieved.

This is important for predicting floods in York because the River Nidd is the

last major watercourse flowing into the Ouse.

Project manager Oliver Wilson said:

> This is one of the Environment Agency's critical assets for our flood warning service and for managing water resource available for abstraction.
>
> Having an early warning that the Ouse could overtop in York means we can act early to prevent flooding by closing flood gates in the city.

So that the concrete lined channel can be built a cofferdam has been put in place.

One half of the river is dammed off to create a dry working area to enable construction on that side, before the other side is dammed and the new channel structure can be completed.

There was an existing concrete channel built a number of years ago but due to the design and flow dynamics it created in the river the bed got silted up, causing incorrect flow readings and it not working as an effective gauge station.

The new channel is designed to make sure sediment passes through it and flow readings are accurate.

Mr Wilson added:

> Lower river levels have enabled us to make really good progress and we expect the gauge station to be fully functioning this winter.

North Yorkshire County Council's Highways Department has carried out work on the bridge and road earlier this year and Northern Powergrid also recently installed an electricity line across the bridge.

To view river levels click here

Press release: Critical asset for early flood warning in York being

built

The channel is being built in the river where it passes under the A59 at Skipbridge, Green Hammerton, between York and Harrogate.

Once the channel has been built an ultrasonic sensor will be attached under the bridge so accurate flow readings can be achieved.

This is important for predicting floods in York because the River Nidd is the last major watercourse flowing into the Ouse.

Project manager Oliver Wilson said:

> This is one of the Environment Agency's critical assets for our flood warning service and for managing water resource available for abstraction.
>
> Having an early warning that the Ouse could overtop in York means we can act early to prevent flooding by closing flood gates in the city.

So that the concrete lined channel can be built a cofferdam has been put in place.

One half of the river is dammed off to create a dry working area to enable construction on that side, before the other side is dammed and the new channel structure can be completed.

There was an existing concrete channel built a number of years ago but due to the design and flow dynamics it created in the river the bed got silted up, causing incorrect flow readings and it not working as an effective gauge station.

The new channel is designed to make sure sediment passes through it and flow readings are accurate.

Mr Wilson added:

> Lower river levels have enabled us to make really good progress and we expect the gauge station to be fully functioning this winter.

North Yorkshire County Council's Highways Department has carried out work on the bridge and road earlier this year and Northern Powergrid also recently installed an electricity line across the bridge.

To view river levels click here