IDLSoc NEWSLETTER

One Network, One Team

2. IDLSoc Virtual Event Announcement
4. IDLSoc Virtual Event Demonstration
6. TIMBER Express Report

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Many thanks to all those who took part in our recent poll asking if you would be interested in attending an IDLSoc Virtual Event. We had a high turnout of around 20% of the membership. Statistically, the usual response of a survey is 5%, so 20% is a fantastic result.

We're pleased to say that 83% of those responses stated that they would like to attend a virtual event. So, we are pleased to say that the IDLSoc Virtual Event will be going ahead.

IDLSoc VIRTUAL EVENT 2020
26TH OCTOBER – FRIDAY 30TH OCTOBER

“THE PROGRAMME”

The plan is to hold a series of two hour sessions over the course of the five days. The number of sessions to be run will depend on the level of confirmed content. Apart from the Training Session, the plan is that all the sessions will be recorded and members who are unable to join a session when it is taking place will be able to view the recorded presentation.

We have a nice mix of content. Several of the companies who were offering full day training courses will be providing 2 hour training sessions on Monday 26th.

Most of the confirmed presenters for IDLS2020, will also be delivering their presentations. This technical content will be given by members from both the Military and Industry.

The demo is taking on a completely different look – more details to follow.

Lastly, the companies who had committed to exhibit at IDLS2020 will be given a time slot for a marketing presentation.

All the timings are based on GMT.

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<th>Start Time</th>
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The sessions will be presented live, but a pre-recorded version (except in the training session) will be made available afterwards for those who were unable to attend and will be a useful back up in the unlikely event of the technology failing us.
**“THE SPONSOR SHOWCASE”**

All of the companies who had secured an exhibition package at IDLS2020 have been offered the chance to showcase their products in a section of the IDLSoc Virtual Event environment. It is a small way of the Society thanking them for their support.

The showcase area will look something like this.

Any companies who had not secured an exhibition package for IDLS2020 and would like to secure a Sponsor Package for this event can do so.

<table>
<thead>
<tr>
<th>IDLSoc Virtual Event Benefits</th>
<th>Platinum</th>
<th>Gold</th>
<th>Silver</th>
<th>Bronze</th>
<th>Entry</th>
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<td>Recognition on Symposium Virtual Signage</td>
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<td>Recognition in the IDLSoc Symposium Virtual Programme</td>
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If you are interested in taking out a sponsorship package please contact events@idlsocweb.org.

**“WHO CAN ATTEND?”**

The event is open to members.

- If your membership is up to date, you just need to register for the event once the registration is turned on.
- If you are in your grace period or a lapsed member you need to renew your membership before registering.
- Non-members will be required to become a member of IDLSoc before being able to attend.

If you have never attended an IDLSoc event before, the IDLSoc Virtual Event is an ideal way to get a taster of what the usual symposium is like, and has the added benefit of becoming a year long society member with all the access to technical information, newsletters, publications and a network of individuals.
"LOOKING FOR MORE INFORMATION?"

The Technical Committee and the Events Team are working hard to get the systems in place and provide more information. Members will be contacted with more information as it becomes available.

In addition we would recommend keeping an eye on the IDLS2020 website, which will become the IDLSoc 2020 Virtual Event website and, of course, on Social Media.

The planning for this year’s demonstration is progressing and the next teleconference will be held on 3 September 2020 at 08.30 PST.

Although the demonstration participants are still working closely together (with appropriate social distancing), the demonstration itself has evolved to adapt to current events.

Together, the participants have created a singular scenario and, throughout the event, you will be able to see how each individual vendor solves various unique problems in their own ways with a combination of Link 16 and Link 22 Planning, Link 16 and Link 22 management, Link 16 and Link 22 network simulation, Gateway operations, as well as compatibility with data exchanges such as VMF, JREP, and SADL.

We look forward to seeing you online!
Sponsors of the IDLSoc Virtual Event

We would like to thank the following companies for sponsoring the IDLSoc Virtual Event.

Platinum

Gold

Silver

GENERAL DYNAMICS
United Kingdom Limited
The Bundeswehr (German Armed Forces) are fully aware of these technological changes and recognise the need to network and exchange information between different systems is increasing. Be it flying platforms, ships at sea, or armour and infantry on land, they all must communicate with each other and be able to transfer information between airborne, sea-based and land-based systems without interruption. Link 16 and 22 TDLs make this possible.

The instant realisation of such communication networks is not a matter of course and must be practised regularly. TIMBER EXPRESS is an annual German Air Force exercise that has been taking place since 2017. The focus is on data exchange in a multi-link environment while maintaining different levels of confidentiality.

Host of this year's exercise (8th – 19th June 2020) was the Tactical Air Force Wing 51 "Immelmann" in Northern Germany. From here, the exercise was monitored and coordinated.

The numerous exercise participants showed that TDLs are used by both the German and multinational armed forces. In addition to Air Force platforms, national forces of the Navy, the Army and the Cyber Command participated. Multinational participation included the Dutch Navy in the multi-link network with a Link 22-capable ground station in Den Helder, and, at times, the Finnish Navy with a Link 22-capable ground station in Turku and a sea-going unit in the Gulf of Finland.

In addition, the exercise was supported by different threat systems to generate ground targets. A civilian Learjet represented targets in the air.

**Data Exchange in Real Time**

The core of the training network was the secure exchange of information between the various weapon systems and platforms via a multi-link network. In accordance with the respective data link capabilities of the systems used, different information domains and management cells were set up and the information of the different data links was merged by a "Joint Interface Control & Coordination Cell (JICCCC)" to create a common operational picture.

**Architecture**

To translate the information of the different data links formats into a common "language" that is understandable for all systems, data link forwarder was used. The common denominator was the Joint Range Extension Application Protocol (JREAP-C).

**Mission Rehearsal**

The exercise was also used to verify procedures in an operational environment for a German Electronic Warfare battalion in preparation for its supporting the German Air Force's deployment as part of the Enhanced Baltic Air Policing.

**Link 22 - Demonstration of Interoperability**

Link 22 was developed as a maritime data link with the aim of replacing the technologically outdated Link 11 standard. Since 2017, the German Navy has been participating in TIMBER EXPRESS to test and verify interoperability with national and international users. This year's exercise was a milestone for Link 22. Thanks to RF connections, a multinational Link 22 network was successfully established and operated in a stable manner despite ranges beyond 1,000 km.
Support of ground forces by airborne platforms is an important scenario in today's operational reality. The exchange of target data between the Joint Terminal Attack Controller and the aircrew is increasingly based on the use of VMF (Variable Message Format). While this is the best method for the TORNADO, TIMBER EXPRESS also demonstrated the ability to exchange information via the multi-link environment for the EUROFIGHTER in its air-to-ground role.

In addition, TIMBER EXPRESS also offers the opportunity to test new capabilities. This year, tests were carried out on a H145M helicopter (provided by Airbus Helicopters) with Link 16 and DaCAS. These tests showed that helicopters with these capabilities are greatly enhanced in their role as a means of transport for special forces.

Another pioneering test was carried out in collaboration with Airbus Defence and Space. It found that two simulated remote carriers could be connected to air force weapon systems via the Compact Airborne Networking Data Link (CANDL) to exchange data. With regard to a Manned/Unmanned–Teaming (MUM-T), this was a clear step forward.

The visit of the Air Chief of the German Air Force and his Deputy highlighted the importance of the exercise for the Luftwaffe (German Air Force).

The two Generals were briefed in detail on the exercise and then given the opportunity also to be instructed in the different work positions (including the TORNADO cockpit).

For the Air Chief, TIMBER EXPRESS is an important exercise. He said, “Being connected with each other nowadays in a modern air war decides whether you win or lose. Therefore, it is very important in this exercise to connect the different data link systems with each other.”

His deputy is also responsible for digitisation in the Air Force. Therefore, the exercise is also of particular importance for him. He said, “The linking of our weapon systems creates a network, which makes the whole more than the sum of its parts. TIMBER EXPRESS showed how this is possible. There were also completely new approaches. I was impressed by the ability to connect so many different players of the land, air and maritime forces, both nationally and internationally, with their link and communication systems.”
Viasat has announced it added significant data storage and increased the processing power of its Link 16 expeditionary tactical gateway products. These technology improvements will help keep today's warfighter reliably connected to real-time air/ground geospatial intelligence and critical network functions when on the frontline of battle.

The enhancements were made as part of Viasat’s Non-Developmental Item (NDI) business model, which delivers advanced capabilities significantly faster, at lower lifecycle costs and with lower risk to the customer when compared to traditional defense acquisition programs and timelines. By leveraging the NDI approach coupled with the gateways' open architecture, Viasat will keep pace with commercial technology advancements and ensure warfighters are equipped with the latest technology advancements.

Technical enhancements include:

- An eight-fold increase in data storage: Expanding storage from 512 gigabytes to 4 terabytes will help provide battlefield units in adverse conditions with more accurate situational awareness and targeting data to help fight near-peer adversaries that deploy sophisticated techniques that attempt to disable military forces’ ability to communicate and collaborate.
- Greater processing power: By increasing gateway processing power it will be capable of delivering higher speeds and better performance with lower-power consumption for key application hosting and advanced network services on the battlespace. The additional processing power will be ideal for capabilities such as Viasat's Assured Resilient Integrated Network (ARIN), a solution delivering robust, secure communications for deployed tactical networks. Today, the processing power leverages PacStar's family of small form factor, modular router and server communications solutions.

"The technology enhancements to Viasat's expeditionary tactical gateway products are critical as we shift our focus to large-scale combat operations where we expect to fight more sophisticated threats in austere, denied, degraded and disrupted communications environments," said Andy Kessler, vice president and business area director, Next Generation Tactical Data Links, Viasat. "Our NDI approach enables our defense products to keep pace with the rapidly accelerating technology trajectories in the private sector. This model enables us to quickly and cost-effectively integrate significant technology enhancements into our products, keeping warfighters safer and more reliably-connected during tactical mission engagements."

10% Discount for Active Duty Military and IDLSoc Members

NCS has moved all Link 16 training to our online training platform. We offer two training options, Live Training Webinars and Pre-recorded Webinars. In both formats, students can log in from multiple locations, which supports social distancing and the work from home environment. All training includes one-year of instructor support for training related questions after course completion.

We offer a 10% discount for Active Duty Military and IDLSoc Members.

Available Courses

- Link 16 Executive
- Link 16 Intermediate
- Link 16 Advanced
- Link 16 Network Enabled Weapons
- Link 16 for Engineers (with System Integration)
- Link 16 Advanced with BU2, JTRS, and Network Enabled Weapons
- Joint Range Extension Applications Protocol

Live Training Webinars

Live Webinars are pre-scheduled training events for any course in our catalog. Training can be delivered as full training days, or divided into half-day training events, which offers greater flexibility.

Pre-Recorded Webinars

Pre-recorded training courses allow students to log in anytime from anywhere and complete the course in their own time. Students don’t need to log on or attend the training at the same time, so it is perfect for an individual student and the working from home.

Training Platform Capabilities

- No download or software required
- User-friendly interface
- High quality two-way video
- Student-to-instructor chat
- Up to 500 Participants
- VOIP, Phone & Toll Free
- Easy Registration

For more information, please email Patrick Pierson at director@network-centric.com.
Curtiss-Wright Successfully Demonstrates TCG-HUNTR During Timber Express 2020

Curtiss-Wright (CW) successfully participated in the German Air Force’s fourth annual Timber Express TDL exercise held at Jagel Airbase, Schleswig-Holstein in June 2020. Over the course of 16 days, CW showcased TCG-HUNTR’s capabilities for Link 16, CESMO, VMF, and JREAP operations while simultaneously conducting VMF to Link 16 digitally-aided close-air-support missions with German SOF JTACS.

In addition, during the week prior to Timber Express 2020, Curtiss-Wright participated in the CESMO “Code Fest” exercise in support of the new protocols implemented in the newest version of CESMO, AEDP-13 vB.1.

For more on CW during TE, click here for the full press release.

IDLSoc Newsletter - Content Request

We are looking at publishing more technical articles in the IDLSoc newsletter.

There is a rich seam of topics within the data links field that we have not yet covered and would make for interesting and enlightening articles.

We would be interested in articles of around 500 to 1500 words and based on current issues of interest, including relevant aspects of research, practice and application.

The IDLSoc newsletter readership includes industry, government, academia and individuals within the data links community, so please bear this in mind when submitting your proposal.

If you have a topic you would to submit, please email your proposal to editor@idlsocweb.org.