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# METANTE

# **POST CONFERENCE ISSUE**

Welcome to the final 2018 issue of the TDW magazine and a full and packed Q4 we have had! I know the majority of you will be receiving this in January - so a Happy New Year and I hope 2019 brings you all the success and happiness you desire.

#### So what did we do in Q4 of 2018?

In November we held our TDW-Live event and really enjoyed meeting all of you who managed to attend. In terms of the quality of debate, discussion and presentations, TDW-Live#8 was easily our best event. Inside Claire has written a review 'from behind the scenes' and a different perspective on the show.

# What else has happened since our last issue?

I was lucky enough to be invited to Switzerland to support a clients technical documentation workshop, whist I can't disclose too much, it was a great week with like minded professionals all with an aim of delivering world-class technical publications to support their products and customers.

If you have not seen the announcements, we were super excited to launch our brand new TDW app for both Apple iOS and Android platforms. We released the app just in time for the TDW-Live event and delegates were able to access event information from their devices and read all about the speakers and sponsors.

Our plan is to use the app to centralise all of the content we release here at TDW, the first release pulls in all of our vLogs, Blogs, Podcasts as well as our YouTube channel content. In the next release we are introducing much more in terms of features and are working on some resources we feel will add some benefit to our network. For TDW vendor members we will be announcing new opportunities via the app. So please make sure to download the app and install as well as sending us your feedback on what you would like to see in there that could help your technical information day!

#### Your feedback has been amazing!

I know it has taken us time, but this magazine is now really starting to resonate with our network in a big way, the excellent feedback we have had from many corners of the globe are truly humbling. I knew when I wanted to start the TDW-Magazine where I wanted it to go and

# #TECHDATAWORLD

slowly we are achieving the vision.

Over the next quarter you will see us roll-out a new logo as well as some major updates to our websites and importantly content that we make available to our network. Thank you to everyone who has given us your constructive feedback on the items we shared with you



As you will all know, I have plenty of ideas in the back of my mind that we will begin to introduce during 2019 and beyond, so make sure you are subscribed to all our channels and of course have the app on your smart device.

It leaves me to say that to all of our network, customers, members, contributors a huge and heartfelt thank you from Me, Claire and the TDW Team – your support means we can do what we love and that is delivering a neutral and independent platform for like minded professionals world-wide.

Where ever you are in the world I wish you all the very best of success for 2019.

Mike & the TDW Team















**WELCOME FROM MIKE** 

- **IN-BRIEF A QUICK TDW ROUND-UP**
- TDW-LIVE#8 A REVIEW
- A2Z OF S1000D WHAT HAVE YOU MISSED?
- THE BIG QUESTION IS YOUR SUPPLIER LETTING YOU DOWN?
- A TALE OF TWO PLATFORMS
- STE DO YOU NEED SOFTWARE?
- **SHIPDEX VIEWER AN INTRODUCTION**
- **DR GRUMPY A LETTER OF COMPLAINT**
- **TECH TALK ARTIFICIAL INTELLIGENCE AND TP**
- **XML FOR ENGINEERS**
- **ASK MIKE**
- **TDW MEMBERS DIRECTORY FIND YOUR PERFECT PARTNER**

# INSIDE THIS ISSUE







What have we been up to in the final quarter of 2018 - another fantastic, jam-packed quarter - here it is in brief for you busy bees out there

**Background image** taken from the stunning city of Friborg during our technical publications workshop in Switzerland

01

TDW-Live was hosted again in Congresbury - attracting like minded technical support professionals from around the globe 07

XML for engineers - TDW ran our first full course for twenty engineers all keen to understand XML and ASD S1000D - 2019 dates set

02

TDW-Live 9 dates were set in December - more details inside

03

TDW supported a technical publications workdshop in Switzerland helping strategise the way ahead for a global aerospace company

04

The full version 1.0 of the TDW app was released - showcasing at the TDW-Live event

New members only ability to announce jobs or resourcing requirements to the TDW

network

TDW helped a major global software company fill two key positions within their EMEA division

10

TDW attended the CTDWG in Abbey Wood Filton

05

We released multiple new videos, blogs and articles to our channels.

06

Supported a client who was looking for an interactive PDF demonstrator.

12

TDW develops a new look logo ready for 2019 lauch and release for some exciting new developments planned 11

The next lessons of the Technical Communication Training course were released



# TDW-LIVE#8 - REVIEW

A different perspective on our TDW-Live event - Claire Ingledew writes about what she learned from the 2018 event.

**CLAIRE INGLEDEW** 

# **TDW-LIVE #8**

it seemed like it was only
yesterday we said farewell to our delegates
and vendors back in November 17. This
year's event blew our record number of
delegates from the previous year. We had a
wider audience on Day one and our famous
Day 2 reached nearly a hundred delegates
present but looking over our live stream
figures, we smashed these numbers.

We attracted new speakers and new vendors again this year with a lot of new faces in our audience over the course of the three days. The mix between industry technical information professionals and UK Ministry of Defence worked really well with a lot of discussion over break and lunch as well as during our famous Pie 'n' Pint evening.

DAY 1 WORKSHOP day was opened by our own Managing Director Michael Ingledew from TDW. This year the challenge was to look at why you need to think about technical information differently, he challenged the old world verses the new information age and why how you currently think may be holding your information back.

After a coffee break Peter Stuttard from Aspire spoke about Principles not Prescription Applying ISO 15288 The International Standard for systems and software Engineering and to close Day One was the fabulous Wendy Farrell from

TDW A GREAT OPPORTUNITY FOR THOSE FROM ALL WALKS OF SUPPORT LIFE TO MEET AND

Lionbridge talking about the Process for the Adoption of Augmented Reality.

DISCUSS REAL WORLD SUPPORTABILITY ISSUES

Day 2 was an early start with close to hundred delegates in the main room with a quick good morning and a few notes the delegates broke off into two different streams, tech docs in the main hall and supportability hosted by Peter Stuttard from Aspire in the room upstairs.

I only attended the technical publications track, so will report mainly on what I learned during these presentations.

The first topic on the agenda had a split of attendees, Mike from TDW spoke about technical publications market updates, reviews, challenges and predictions, whilst in the second track upstairs Colonel Paul





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intenance

supplier was

solutions

KAS PATEL - SPOKE ABOUT THE BRITISH AIRWAYS
ADOPTION OF TABLET DEVICES

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# TDW-LIVE#8

Johnson REME Chief engineer (Army) spoke about Equipment support and the strike concept.

Having noticed how many delegates Col Paul Johnson spoke with during the reminder of the day, his presentation had certainly generated some debate.

The next presentation was from Kas Patel, British Airways with support from Robin Bates (Flatirons Solutions) talking about the successful adoption of mobile devices in British Airways. This generated a lot of questions and debate well into the coffee break.

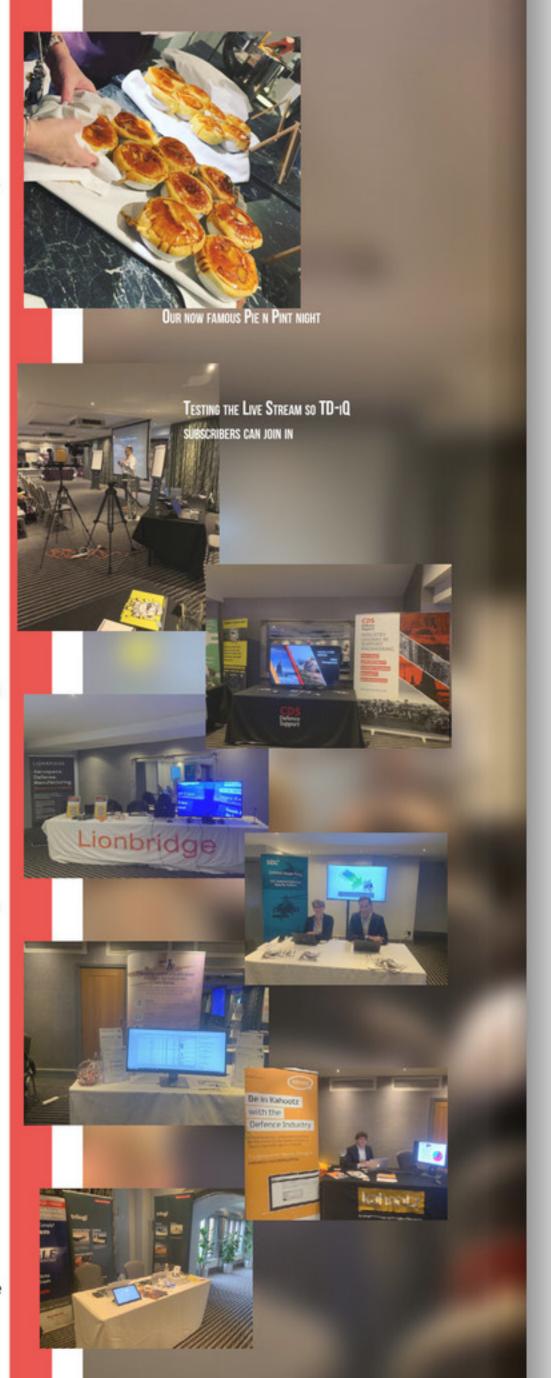
With a last minute change to the agenda, due to speaker ill health, Mike from TDW spoke about **bringing a technical manual to life**. I have to say I found this very interesting as for someone who is not from a technical publications background seeing things presented in ways that are easier for people to understand who are new to this role really engaged me. I have suggested to Mike that he does this presentation as a webinar (watch this space).

Berry Braster from Etterplan was next talking about Simplified Technical English with Fernando Alvarez from Raytheon finishing the morning session with a presentation on Gap analysis and functional requirement to backfill logistics product data from existing technical documentation. A bit of a mouthful, but it seemed to prick the interest of the audience.

Lunch break saw a lot of discussions continue on from delegates talking about presentations they had seen and what they were keen to see in the afternoon.

Wendy Farrell opened the afternoon session with adoption of augmented reality Type 26 case study. A story for another day is the last minute mass panic on redacting some of the slides to meet with corporate compliance needs.

With the agenda being changed earlier in the day we brought down the ILS track for their



remaining two presentations, first was from John Spottiswood (Wilson James) talking about the logistic support implication in Heathrow third runway and then Vic Steadman from Aspire talking about XML for supportability engineers.

To close Day 2 we had a brief Q&A session with the delegates before closing for the day.

A quick change for the delegates who had booked on the well known Pie 'n' Pint that started with a few quiet drinks, it was a great turn out and was lovely to be able to have some delegates partners join us to enjoy the superb selection of pies on offer.

To listen to vendors and delegate who had got a lot from that day's presentation I was very happy to see the planning into the event had worked and had covered what our vendors and delegates had wanted to hear.

# DAY 3 A CHANGE TO THE NORMAL MOD DAY

Day three was opened by Dr John Ahmet Erkoyuncu from Cranfield University. Talking about Augmented Reality & Artificial Intelligence in maintenance practices, this presentation had the delegates engaged asking question after question and John was asked to stay around until lunch as we had to carry on with the remaining presentations. We were in danger of the morning session being consumed with questions just for Dr John - is this a sign that AR is generating interest?

Neil Rae from Boeing Defence (UK) was next talking about Block Chain and other related technologies. A fantastic presentation explaining in a clear and easy to understand way how these technologies will affect us in technical information production and deployment.

Ian Milward was next on stage with updates on DE&S Policy for technical publications then Andy Fawkes talking about simulation-based acquisition – has its time come?

We then had a shorter lunch as the morning session had ran over with lots of discussion and debate.

Zadee Chambers from BAE Systems (Trilogi) opened the afternoon session with Analytics Driven Data Creation. Phaedra Gibson and Dr Leanne Simpson from CDS Defence Support spoke about how we make training and education delivery efficient and effective with some excellent insight into the psychology of learning.

Ciaran Dodd was the last presentation on day three, a leading expert in the adoption of ASD Simplified Technical English. Presenting on the process for adopting Simplified Technical English – don't forget the people.

Mike closed the conference with a final thank you to all our vendors for their support and to the delegates for attending, making 2018 a truly special event.

For me TDW-Live#8 was the most engaging and thought provoking event we have hosted, the level of debate and delegate engagement was like none I have seen previously. The quality of presentations and domain expertise on display was truly exceptional.

It leaves me to say thank you to everyone who made me feel welcome over the three days in this strange world you call supportability, I am rapidly learning this subject and loving the journey we are on with TDW - I look forward to seeing you all again next year if not before - Claire.



# **A2Z OF S1000D®** A FUN LOOK AT THE S1000D® SPECIFICATION AND SOME THINGS YOU SHOULD CONSIDER

A FUN JOURNEY THROUGH THE ALPHABET LOOKING AT AN S1000D JOURNEY.



s we skip through our journey of the A2Zs of S1000D - this quarter we released a number of new videos looking at this obviously polarising topic of S1000D - it seems I never really manage to speak to anyone who is in the 'middle' on this subject - it really does polarise people. Those that absolutely hate \$1000D right up to those who think everything in the world should be written to the S1000D specification.

So let's continue our journey through the alphabet starting our next leg at 'H' and pulling into the N station.

# WHAT WOULD MAKE YOUR A2Z?

I am interested in hearing what would make your list of A2Z of S1000D - send your comments to: michael@s1000dworld.com and see if yours makes the next list!

I am really enjoying doing this series of A2Z and it seems that you are also enjoying watching it! I do have ideas for other A2Z series, some around S1000D and some around 'other topics', but of course Tech Pubs related.

Kick back, grab a coffee or your favourite tipple and join me as we continue our journey through A2Z of S1000D.

I HAVE TRIED TO MAKE THIS LIST FUN, THOUGHT PROVOKING AND SOMETIMES THROWING IN A LITTLE CONTROVERSY TO LIVEN UP THE DEBATE! WHERE POSSIBLE, WE HAVE TAKEN THE CAMERAS **OUT WITH US AND FILMED FROM** INTERESTING LOCATIONS, ENJOY





A2Z Series

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# WHAT HAVE YOU MISSED?



This quarter we have released seven videos to kick off this series - but what did we cover? Here are some highlights, watch the full videos for each letter.

A2Z - H

A2Z - K

A2Z - N

HELP | HONESTY | HARMONISE | HOW KPI's | KNOW-HOW

NORMAL I NUMBERING

A2Z - I

A2Z - L

ILLUSTRATIONS | IMAGINATION

LEGACY | LIFE-CYCLE | LANGUAGES

A2Z - J

A2Z - M

JUDGE & JURY I JUSTIFICATION

MOTIVATIONS | MULTI-MEDIA | MODULAF







# QUESTION

n an age where information is now seen as a business asset and those that know how are truly using technology and structured content to leverage a business advantage immersing end users in content that they want to be engaged with. This can be anything from simple mobile apps to capturing full-on metrics on content use, accuracy, usability and much more!

I was in a meeting recently where the question of using S1000D on small products was questioned (and rightly so) the debate was short and sharp - 'you would not use \$1000D on a pair of binoculars, it's not worth the effort' - end of conversation.

Now this statement is true, you would not normally go through the effort and investment in using something like S1000D to produce content for such a small and short-life product, and let's be honest S1000D was never really conceived to do this, it is all about the larger platforms. This does not mean you can't do it, you can, but is it

However, this is not the end of the discussion. It is not a binary decision between 'Traditional' v 'S1000D' - this is not a reasonable comparison and in my mind anyone who is making this comparison is not fully understanding the options that are available to content creators and ultimate delivery options and are either ignorantly or deliberately closing their minds to a world of information opportunity.

The sensible discussion could be 'what can we achieve if we use XML?' - of which there are hundreds of different, scalable and cost-effective ways you can deliver highly engaging content at the fraction of the cost of S1000D, DITA or any other effort heavy implementations for content creation, use and deployment.

The problem that I am seeing is that more and more with the outsourcing of content creation we are becoming reliant on our suppliers to become the experts and we are losing the ability to understand and be aware of the options that are available to us in modern technical content production and deployment - further more if we have a supplier who is also ignorant to these options (a polite way of saying not really the experts they believe they are) - are we [deliberately or through ignorance] being held back in releasing the full power of our content and immersing our end-users in ways that they want to be?

Simply comparing \$1000D to traditional is not sensible, accurate or helpful - the discussion and debate is much wider and never more so on smaller, short-life, products and platforms.

Do you rely on an external supplier to be your expert? We would love to hear from you! Send in your thoughts and comments to memberservices@ techdataworld.com

Do you have a BIG question? Send it in to us and we will do our best to answer for you!



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# SUPPORT ENGINEERING & IMPERATIVE INTANGIBLES..!

# FEEDBACK & THE INTELLIGENT CUSTOMER

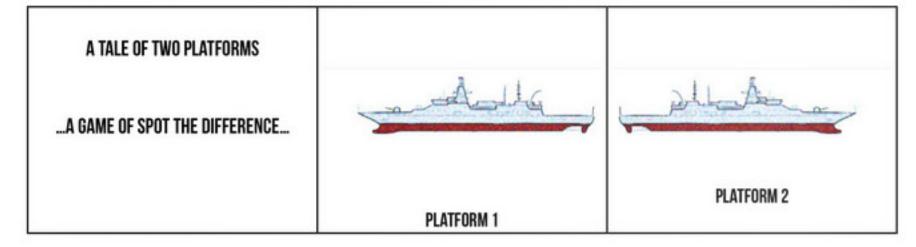
THERE ARE TWO CATEGORIES OF SUPPORT ENGINEERING ACTIVITY, THE TANGIBLE AND THE INTANGIBLE...

TANGIBLE ACTIVITIES LEAD DIRECTLY TO THE PRODUCTION OR THE PROCUREMENT OF A SUPPORT RESOURCE, THEIR ABSENCE WOULD BE INSTANTLY APPARENT — SOMETHING, SPARES MAYBE, WOULD BE ABSENT.

INTANGIBLE ACTIVITIES ARE ANALYSES WHOSE ABSENCE WOULD NOT BE IMMEDIATELY APPARENT, SPARES OPTIMISATION FOR EXAMPLE.

BUT WHO CARES ABOUT THIS DISTINCTION....AND WHAT HAS THIS GOT TO DO WITH FEEDBACK AND THE INTELLIGENT CUSTOMER?

#### PETER STUTTARD



Consider the two platforms above, ships in this illustration, but the argument applies to any platform. In terms of their support arrangements the platforms appear to be very similar. Both platforms have:

- Suites of spares
- Technical publications
- Tools and test equipment
- Trained manpower
- Supporting facilities stores, workshops etc, on board and ashore
- Packaging and handling equipment
- Contracted support from industry.

But these two platforms are far from being equal.

**Platform 1's** support is the result of a heavily tailored, low cost, support engineering programme; a support programme comprised in the main of 'tangible' support activities.

**Platform 2's** support is the result of a systems engineering based support engineering programme, a support programme comprised of 'tangible' and 'intangible' support activities.

Platform 2 is infinitely superior to Platform 1. Why should this be the case? Let us consider these 'tangible' and 'intangible' activities and their effects, let's compare the hypothetical support programmes of our two hypothetical platforms...

# REQUIREMENTS GENERATION

# Platform 1

The technical requirements for Platform 1 were derived from those developed for an earlier, similar system, there are availability, reliability and maintainability targets set at the platform level. The strategy was to develop an 'output' based contract, the focus was on the final deliverables, the support resources; for example electronic technical publications, training materials, spares, maintenance plans etc.

There were some 'process' requirements defined in the statement of work [SOW], for example the programme called for tailored; reliability and maintainability [R&M], training needs analysis [TNA],

reliability centred maintenance and Logistic Support Analysis [LSA] programmes.

# Platform 2

The technical requirements for Platform 2 were derived via a systems engineering based programme. The 'problem space' and then the 'solution space' were defined for the platform and the associated support solution.

Whilst this may sound rather esoteric, it means that the end user had the opportunity to define what they required from the support solution. For example, the nature of future conflicts and the role of Platform 2 in such was defined; any proposed support solution would have to function effectively during such conflicts.

Innovative approaches could be considered, in a structured manner. During the earliest phases of Platform 2's life cycle a series of assessments were conducted, a range of alternative support technologies were evaluated, including; additive manufacturing, augmented reality, automation, alternative forms of electronic publications, the Internet of Things, sensor RFID's, NFCs, virtual sensors, data science, mobile devices, social media technologies, etc, etc. Some of these concepts were rejected, others were assessed as being potentially beneficial and included in the 'solution space'.

Use was made of historic data garnered from extant fleets, this enabled robust baselines to be established for both the platform design and for the support system. This information included quantitative data, for reliability and maintainability etc, and qualitative data, for example "Lessons Identified" (both positive and negative).

The baselines facilitated the modelling and hence the analysis of the data, the models in their turn facilitated the assessment of innovative technologies and alternative support strategies, and hence informed the development of SMART (specific, measurable, achievable, relevant, time-bound) technical and process (SOW) requirements.

Specific requirements included:

- Durability and robustness, important to a system that would be operating 'up threat'.
- The concept of 'designing' an optimal support solution was central to the requirements.
- A mandatory systems engineering approach to support engineering.
- All support decisions to be justified, an audit trail of the decision process to be provided in the form of a support case which would be developed on a rolling basis throughout the design and development process.
- A standardisation programme, to be applied to the platform design and to the associated support system, with aim of achieving coherence with other platforms, existing and planned.

# SYSTEM DESIGN

#### Platform 1

The equipment to be fitted onboard Platform 1 was selected by the prime contractor from their established and trusted supply chain, in the main original equipment manufacturers [OEMs]. They made extensive use of off the shelf equipment and systems. The programme relies on OEM manuals, and on the OEM for the recommended maintenance regime, spares holdings, and the tools and test equipment held on board etc.

Platform 1 has been designed so as to be survivable in the event of a strike by an anti-ship missile or warship artillery rounds. Battle damage control systems, resources, and training have been established accordingly. The effects of enemy action on individual systems was not taken into account however, Platform 1 relies on redundant systems and backup modes of operation to provide resilience, to enable it to reach a safe location where repairs can be conducted.

The support strategy for Platform 1 is founded on that for extant platforms, it is assumed that the platform

will have ready access to the port facilities of friendly nations; to date this has never been an issue. Some analyses were conducted, the majority by the OEMs. TNAs, RCM and some LSA for example, was carried out on key systems, albeit in a disparate manner having been conducted in isolation from each other.

There are several hundred OEMs supporting the programme so collecting and collating the associated data was a major task, but an Logistic Support Analysis Record [LSAR] was created and handed over to the customer.

An FMECA was conducted and recorded in the LSAR, this informed the RCM analysis, also recorded in the LSAR. The corrective and preventive tasking identified via these processes was loaded into Platform 1's maintenance management system [MMS]. Conflicts between this data and that contained in the OEM maintenance manuals were resolved by a team of support engineers post the delivery of the contracted support outputs by the prime contractor. The OEM manuals taking precedence over the FMECA/RCM analysis results.

Recognising that the client no longer has the skills to conduct complex maintenance tasks the support strategy is to repair by replacement of major components on board and to utilise contractor support. Contractors being flown out to meet the platforms, as required, in suitable friendly ports. The electronic publications provided on board and the training programme reflect this philosophy. The publications are in the form of PDF documents that can be read on any device with suitable PDF reader, other forms of electronic publications being deemed to be high risk, unnecessary and too expensive. Basic technical training is provided by the client, but much of the equipment training is provided on an as required basis by the OEMs.

This approach has significantly reduced the volume of tools and test equipment carried on board, on board spares holdings are also reduced, albeit at the expense of increased holdings ashore. Training time has been reduced but at the expense of increased OEM training and increased travel and sustenance costs.

#### Platform 2

New technologies (in the 'solution space') were evaluated and some were adopted, adapted and fielded. Platform 2's makes use of IoT and mobile technologies and these interface with the electronic technical publications and the onboard MMS. This has resulted in a marginal increase in the effectiveness of the on-board maintenance activities, and a significant increase in the quality and the quantity of the technical feedback data.

Platform 2 makes extensive use of off the shelf equipment and systems, analytical techniques were employed to ensure that the best balance was achieved between initial cost, through life cost (TLC) and operational effectiveness when selecting options. A model based systems engineering [MBSE] approach was deployed to facilitate the design process, this enabled TLC and system operational performance to be monitored more-or-less continuously throughout the development programme. This facilitated a range of investment appraisal techniques, including; trade-offs, sensitivity analysis and breakeven analysis.

"Simple solutions seldom are. It requires a very unusual mind to undertake the analysis of the obvious."

> Alfred North Whitehead -Mathematician

The Prime contractor undertook the majority of the analyses in house, limiting, as far as was practicable, the input of the OEMs to the supply of data and information. An on line, facility was established to facilitate this process.

The nature of future conflicts was taken into account when designing the platform and the associated support. spares optimisation, level of repair analysis [LoRA], training needs analysis [TNA] and maintenance task analysis [MTA], amongst others, were all applied and all took cognisance of the planning assumptions.

"Decisions are made in peace that create unacceptable costs in war."

> David Beaumont 'Logistics in War' blog

A damage modes and effects analysis [DMEA], taking into account the effects of enemy action, was performed along with an FMECA, as integral elements of a support engineering programme that focussed on durability and robustness in addition to reliability, maintainability and testability.

Platform 2 has onboard a range of stock materials, steel, aluminium etc, and the automated machine tools (milling machines, pillar drills, lathes etc) with which to work them. Similarly, metal powders and polymers and a selection

of machines provide a limited additive manufacturing capability. In both instances the data and the skills required to operate such 'digital' machines are made available via support contracts and the training programme. These onboard capabilities greatly enhance the crew's ability to carry out battle damage repairs as well as 'normal' corrective and preventive maintenance.

The arising rate for both corrective and preventive maintenance is lower than the norm for a ship of this class and complexity. The preventive maintenance burden has been further reduced because the need to conduct preventive maintenance, in particular condition based maintenance, was considered during the design process.

The outfit of spares held on board Platform 2 is optimised for specific operations. For combat operations the scaling will sustain the platform during an extended period of austere conditions, when resupply may be difficult or impossible.

"Everything is very simple in war, but the simplest thing is difficult. These difficulties accumulate and produce a friction..."

The platform design facilitates the ability of the crew to conduct repairs at sea, this is in addition to the provision of redundant systems and reversionary modes of operation. The crew are cross trained, to mitigate the impact of crew attrition.

Carl von Clausewitz

the intangible idea, the creative impulse, manifest and live in our reality"

Mark Ryan - Actor

"The real magic is in making The maintenance plan for Platform 2 takes account of conflict conditions. It was developed (and is maintained) via the application of a robust reliabilitycentred maintenance programme. The RCM programme took account of alternative operating environments (e.g. warm, shallow water, cold blue water operations) and the wide range of innovative, affordable, technologies that are now commercially available for monitoring the condition of engineered assets.

Platform 2 carries a range of monitoring equipment, ranging from simple RFID scanners, thermal imaging cameras, vibration sensors and endoscopes etc, designed to connect to mobile devices, through to more sophisticated technologies e.g. those designed to detect systemic, latent, defects in electrical and electronic circuits.

All of which has contributed to a notable increase in system availability and a considerable reduction in no fault found [NFF] rates.

An integrated training and technical documentation programme, utilising a consolidated set of analyses, incorporating elements of TNA, MTA and LoRA, has delivered an integrated electronic training and technical documentation system. This system runs in freely available internet browsers.

Industry support is available alongside and whilst as sea, bandwidth and operational constraints allowing. A maintainer on board can seek support from their peer network, or from industry, via a mobile device, utilising basic augmented reality, as well as more conventional means, such as fault data, voice, video, photographs and the written word.

# IN SERVICE

#### Platform 1

Platform 1 is seen as a capable, but expensive asset. Being difficult to support; deploying the platform has

# FEEDBACK & THE INTELLIGENT CUSTOMER

become a strategic decision.

Platform 1 is expensive to operate, in part, because manpower costs are very high, and due to the high costs of industry support. There is a backlog of maintenance building up due to the extended onboard maintenance times coupled with a shortage of spares. Maintenance actions beyond the capabilities of the crew are prevalent due to the lack of training on some complex systems and the absence of the requisite tools, test equipment or technical publications. Delays are therefore experienced, and high costs incurred, as representatives of the OEMs are flown out to meet the ship, in the nearest friendly port, in order to carry out repairs.

There is a backlog of line replaceable units [LRUs] on board which are awaiting return to a variety of OEM facilities. The NFF rate for such items is running at circa 67% resulting in higher than expected support costs.

Morale amongst the engineering trades is poor. Their workload is high but job satisfaction is low and retention is becoming a serious issue. Recruitment and training costs are escalating.

# Platform 2

Should Platform 2 have to operate 'up threat' the front line command are very confident that they will be able to sustain this critical capability even when operating under austere and challenging conditions.

Maintenance technicians are able to carry out the majority of maintenance tasks, on board, efficiently, with limited recourse to external industry support. i.e. they can now do more with less.

The end users developed a high level of confidence in the support solution as a result of the highly integrated support programme and the visibility provided by the evolving 'Support Case'.

Cumulative marginal gains, achieved over a wide range of equipment selection, design and support options, have had a dramatic impact on both the TLC and the operational effectiveness of Platform 2; it is an effective and affordable platform.

# IN SUMMARY

Platform 2 is superior because a wide range of 'intangible' analyses were applied, analyses specifically designed to ensure that the platform would satisfy the operational need, that it would be sustainable in wartime, and that the optimum, the most cost effective, solution, was developed and fielded.

Platform 1 relied on long established "custom and practice", on doing the 'obvious' to deliver support. It relied heavily on activities conducted, and the data provided, by the OEMs in the supply chain. The belief being that such inputs can be collated into a support solution. Such un-integrated programmes incur significant costs when the time comes to manage this incoherent data, to deal with the inevitable inconsistencies etc.

Platform 2 however relied on a rigorous, highly integrated, systems engineering programme in order to achieve the outcomes described above. Such programmes also eliminate nugatory effort and ensure that the remaining effort is expended efficiently. Rework is greatly reduced, whilst the quality of the output increases; such a programme delivers a lot more for a lot less effort.

"I never guess. It is a before one has data.

capital mistake to theorise The result is that the cost of the support engineering programme for Platform 1 could cost more than that for Platform 2.

facts."

Sir Arthur Conan Doyle

Insensibly one begins to The approach adopted for Platform 2 also delivers a robust audit trail, twist facts to suit theories, providing visibility to both the developer and the end user, and thus it builds instead of theories to suit confidence in the programme and in its outcomes.

> Platform 2's support engineering programme did rely on garnering performance data from extant systems in their present operating environments

in order to understand the strengths and the weakness of present technologies and modes of employment.

This allowed the developers to capitalise on their strengths and to address the weaknesses; it also provided data, and effective support engineering is dependent on the availability of historical data.

Developing new defence systems is not, as it may first appear, a process of step change, it is an evolutionary process, we evolve new systems and new approaches based on our experience in the past.

# EFFECTIVE FEEDBACK IS THEREFORE ESSENTIAL TO EFFECTIVE SUPPORT ENGINEERING.

It is disturbing, but there are a lot more examples of "Platform 1s" available than "Platform 2s" and yet the solution lies easily within our grasp. There is no downside to this, so the present situation is something of an enigma; particularly so given that this situation is widely recognised. The author has discussed this issue with many individuals; in military HQ's, in procurement agencies and in industry, in companies both very large and very small, in the UK and abroad, and there is a general consensus with the scenario presented above.

So why does this situation exist? The answer is complex. In part, it is because the key analyses are intangible, the effects of their absence only manifest themselves over time, when a platform is in-service, when the TLC soars and the availability is poor. The effect of their absence is much less evident during development.

It is therefore relatively easy for such apparently esoteric activities to be overlooked or for them to be cut in order to save money. Intangible analyses may be absent from a programme simply because the stakeholders are not aware that they exist or that they are an integral element of support engineering. Some stakeholders are aware of such activities but they are excluded, because they don't understand

And this is where the intelligent customer makes their bow. Intelligence is derived from an understanding of what has gone before, an understanding of what is possible today (everything described above is eminently possible today) and from an understanding of what is possible in the near future - and it is inconceivable that we couldn't improve significantly on the Platform 2 scenario outlined above in the very near future.

ASPIRE - TRAINING DATES:

ILS AND LSA 5 DAYS - 14TH - 20TH JANUARY	TNA 3 DAYS - 8TH - 10TH APRIL
RCM 4 DAYS - 21ST - 25TH JANUARY	RCM 4 DAYS - 15TH - 18TH APRIL
TNA 3 DAYS - 18TH - 20TH FEBRUARY	TNA 3 DAYS — 3RD - 5TH JUNE
ILS AND LSA 5 DAYS - 1ST - 5TH APRIL	ILS AND LSA 5 DAYS — 17TH — 21ST JUNE



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# DO YOU NEED SOFTWARE TO WRITE IN ASD-STE100 SIMPLIFIED TECHNICAL ENGLISH® (STE)?

# INTRODUCTION

In the previous article (22, TDW 2018) on implementing STE, I suggested that during the phase where authors have had training in STE and are developing their proficiency, it might be helpful to have software to help embed the

CIARAN DODD

principles of STE. In this article I discuss the question of software and STE, in particular:

- the need for software;
- the different types of software;
- the STE Maintenance Group's (STEMG) guidance on software; and
- my experience of using software for the first time.

Here, the term software refers to checking software, like the spelling and grammar checking tool in Microsoft WORD. Also, although I have been training people in STE since 2001, I have never actually used any software. At TDW-Live last month, I met with Berry Braster of Etteplan, supplier of the checker tool HyperSTE. He has kindly given me a trial copy of HyperSTE to use, which I will discuss later.

# DO YOU NEED SOFTWARE TO WRITE IN STE?

No, is the short answer. Or, as the STEMG states:

"NO. Software will not think in your place. Software does not replace the STE specification." (STEMG, 2017)

This is because success in STE begins with the skill of the author who knows the STE specification and produces text that follows the rules. No software can convert non-STE text into STE for you. Software can only be an aid. If you do not understand the rules of the STE specification or can't apply the rules in your text, then software will not help.

However, once you've had your STE training and depending on your role (author, editor, quality assurance, translator), software could be useful to you. The STEMG recognises this and has put some useful guidance on the web page just referenced. The STEMG does not endorse any software product because the STEMG needs to remain objective.

# WHAT SOFTWARE IS AVAILABLE?

The STEMG defines three types of software:

- Word and rule checkers that highlight text that breaks the STE rules or contains terms that
  are unapproved or unknown in STE or your company dictionary.
- Word checkers that only highlight unapproved or unknown words by checking the STE dictionary and your company dictionary.
- Look-up tools that are like an electronic version of the STE specification that you can use for reference.

Besides these three types of software, there are some checkers for controlled languages that are different from STE. So, if you want to be compliant with STE, you need software that fully incorporates the STE specification and does not contain elements that conflict with STE.

# WHAT IS THE STEMG'S GUIDANCE ON SOFTWARE?

The STEMG provides very useful guidance to help you choose software (STEMG, 2017), which I have summarised under four broad categories.

- 1. Who will be affected by the software? Authors, editors, translators and quality assurance people will all have slightly different requirements. When you are making the business case for software, you need to accurately record and analyse these different requirements so that you can choose the appropriate software. Another consideration is authors' knowledge of both STE and English grammar. Authors must have had training in STE and a good knowledge of English grammar to be able to respond to software suggestions. If they do not have this knowledge, they can produce text that is compliant with STE but does not make any sense at all. And finally, for both word and rule checking software, you will need to create and then maintain your company dictionary of terms. You will need to determine who will maintain and manage the software to keep terms up-to-date and controlled.
- 2. How user-friendly is the software? From the software users' perspective, this will be a critical consideration. What are the features of the checker and is the interface easy to use? What rules does the software check? Some rules such as sentence length and verbs in the passive voice are easier to check than other rules such as whether the first sentence of a paragraph is a topic sentence. What is the degree of accuracy of the software? What is the rate of 'silence' (missed errors)? What is the rate of 'noise' (errors that appear but that are inappropriate)? Does the software produce reports for quality assurance purposes?
- How will the software fit into your current production system? There will be practical
  implications about which tools you choose because of your existing workflow and production
  software. Make sure that you are clear what your needs are, test several products carefully
  and then review your needs again before you invest.
- 4. How does the supplier support the software after installation? The STEMG recommends that you find out:
- what supporting documentation comes with the software;
- if the supplier provides training on the software;
- if the supplier updates the software when the STE specification is updated;
- what support the supplier provides and how reliable the support is; and
- what the cost is for the supply, installation and maintenance of the software.



# HOW EASY IS IT TO USE CHECKING SOFTWARE? MY EXPERIENCE OF HYPERSTE...

I have an evaluation copy of HyperSTE that plugs into Microsoft WORD. Accessing and installing HyperSTE was quick and easy with a few instructions from the support team. The only difference that you notice in WORD is an addition to the ribbon. (See figure 1.)

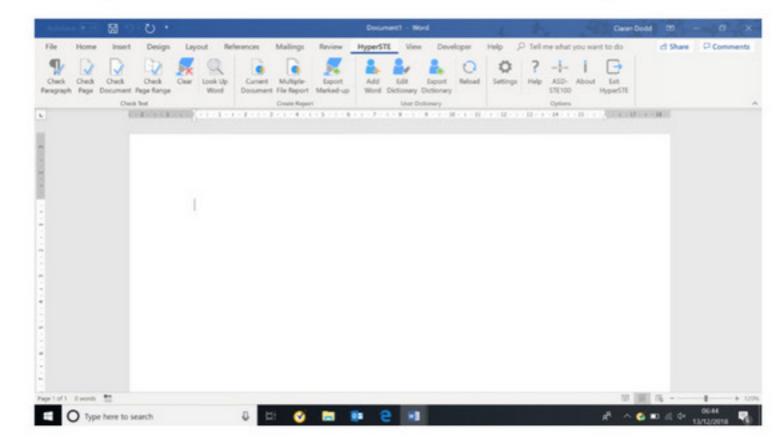


Figure 1

I have not had formal training in HyperSTE, but I had a brief demonstration at TDW-Live. To test HyperSTE, I selected some text from the manual for the Hurricane aircraft (Sarkar, 2013) and typed it into WORD. From experience, I could identify many of the non-compliant aspects of the text, but I was keen to see what HyperSTE would find. I clicked 'Check Document' and the text became a riot of colour (see figure 2).

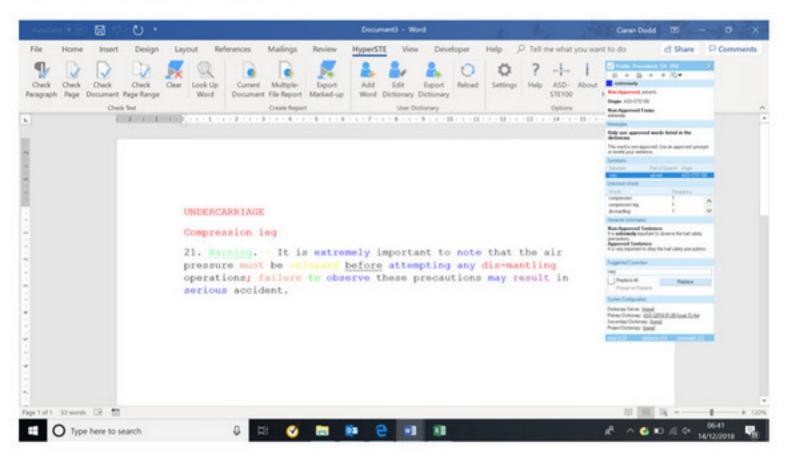
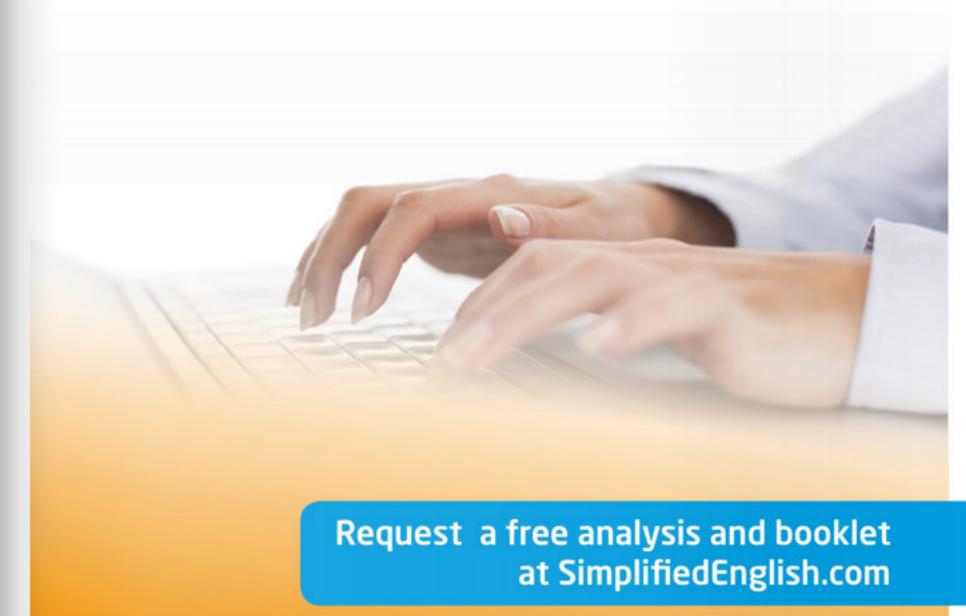


Figure 2



Services & Solutions for Technical Documentation, Engineering, Embedded Systems & IoT



The easy way to comply with Simplified Technical English

# HyperSTE

Engineering with a difference

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To find out more, I clicked on a word to reveal a box full of information about the selected word. I learnt if the word was approved or not and if there was an alternative, which I could automatically select. (See figure 2.) The technical names are red because I do not have a separate dictionary of approved technical names.

I could also create a report to show all the issues that I needed to improve, and I could publish it in XML or Excel. Figure 3 shows part of the XML report.

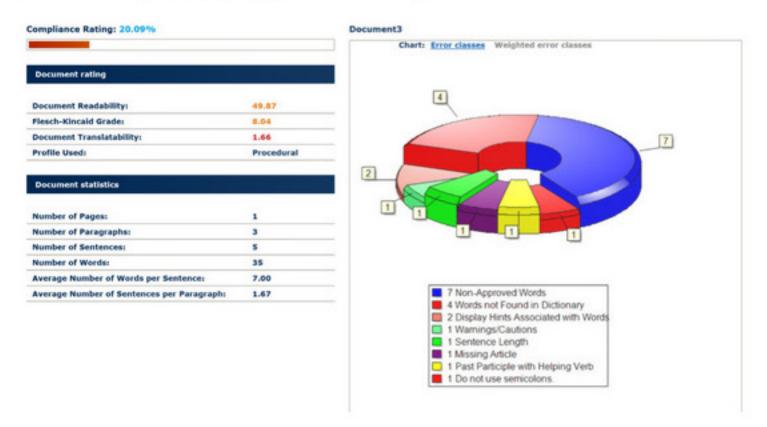


Figure 3

Here is an example of some of the text that I used (see figure 4):

BEFORE:	AFTER:
UNDERCARRIAGE	UNDERCARRIAGE
Compression leg	Compression leg
21. Warning It is extremely	21. Warning Before you
important to note that the air	disassemble the compression
pressure must be released before	leg, release the air pressure
attempting any dis-mantling	to prevent injury.
operations; failure to observe these	392 3923
precautions may result in serious	
accident.	
(104, SARKAR, 2013)	

# Problems:

- Does not start with a simple and clear command.
- 2. The sentence is 28 words instead of 20 words maximum.
- The warning contains the passive voice.
- The command should use the command form of the verb.
- The sentence contains a semi-colon.
- 6. There could be an article missing before 'serious accident' (the rule is 'when appropriate, use an article in front of a noun').
- 7. There are 'ing' forms of the non-approved verbs 'attempt' and 'dis-mantle'.
- 8. There are words that are not approved in STE like: 'extremely', and 'note'.

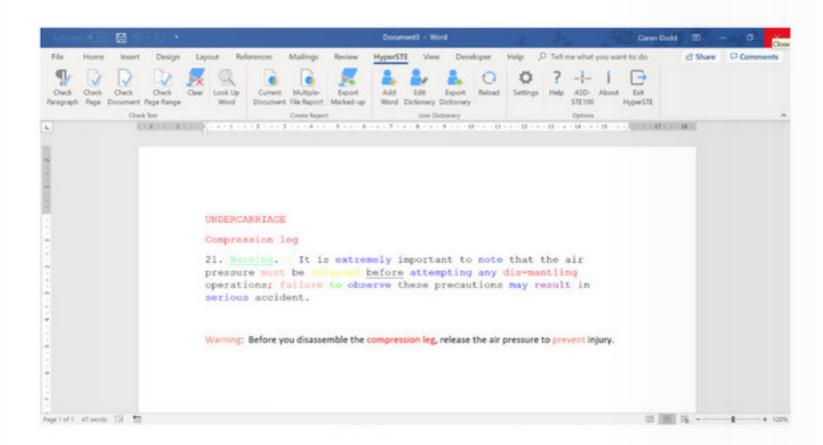


Figure 4

In this screen shot, there are three highlighted items in the revised version of the warning. 'Warning' and 'prevent' are highlighted because there are hints to make sure that I have used the words correctly, which I have done. 'Compression leg' is highlighted because it is not in the dictionary, but I would have it in my company dictionary of technical names.



"The task you would like me to fulfil is so difficult that I do not dare to refuse."

Ernest Starling

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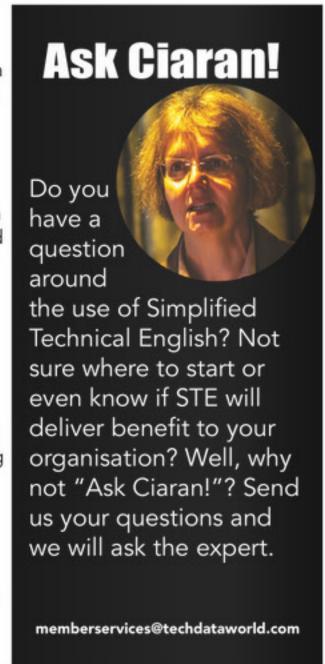
www.asn-gmbh.com

I have had HyperSTE for only a short time, but I can see the benefits of having a checker for people writing or checking large quantities of text in STE. However, I would need training to get the most out of HyperSTE and it would take a short period of regular use to become proficient. Ordinarily, the supplier delivers training in both the STE specification and the software as part of the implementation.

In this example, I have had to completely re-write the warning to make it clear and in STE. To do this, I have drawn on my detailed knowledge of both the STE specification and English grammar. This shows that training is always needed to write well in STE and that the checker is an aid and not a replacement for an author's knowledge and experience.

# CONCLUSION

You do not need any software to be able to write well in STE. In fact, software is not a solution in itself. It is only part of a process that involves building a business case, analysing requirements, building a company dictionary, training and proper implementation. That said, a well-considered software product could help you to write and edit STE texts more efficiently and the reports allow you to measure the quality of your documentation. The STEMG Software (STEMG, 2017) page gives a detailed summary of the issues to consider and is a good place to start. You can also go to individual suppliers to find out if their software meets your needs.



# ACKNOWLEDGEMENTS AND REFERENCES:

Thank you to Berry Braster, Technology Director, Etteplan for his comments and experience of HyperSTE implementations. https://www.simplifiedenglish.net/hyperste/

ASD Simplified Technical English ASD-STE100 Issue 7 available to request at http://www.asd-ste100.org/request.html.

Sarkar, D. (ed) (2013) Hurricane Manual 1940. Amberley Publishing. Stroud, Gloucestershire.

STEMG (2017) http://asd-ste100.org/software.html (Accessed 18 December 2018).

TDW (2018) TDW Magazine, Autumn Issue





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# Common Logistics Product Data shared between all EAGLE tools:

- EAGLE Logistics Toolkit Integrated Logistics, Product Support Analysis
- EAGLE Publishing System Technical Data and Publications Generation
- EAGLE Maintenance Management Information System Through Life Support and Analysis
- EAGLE Web Distributed Data Review and Comment Management
- EAGLE Codification Tool NATO Codification Tool



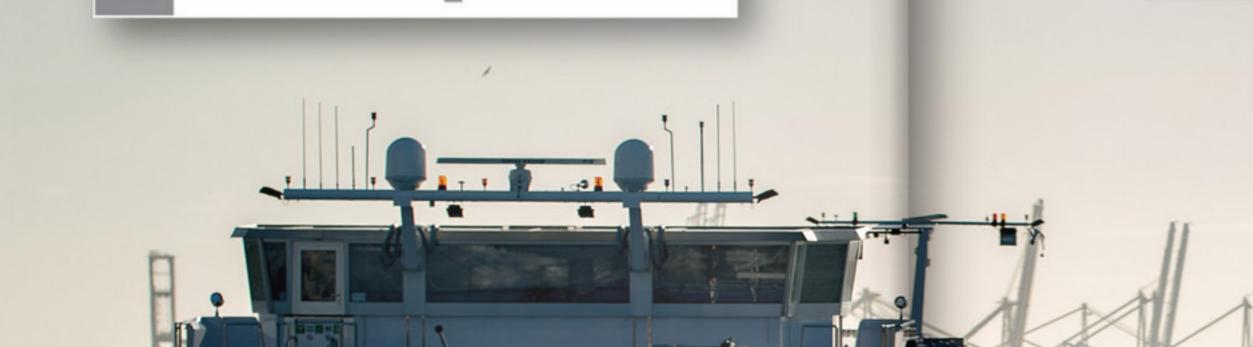


# THE SHIPDEX PROTOCOL

THE NEW SHIPDEX VIEWER 3.0

Marco Vatteroni





FRGONON

ZWIJNDRECHT



SHIPPING

1 - THE SHIPDEX PROTOCOL

Shipping community is facing the big challenges of Internet of Things and Big Data management. These challenges introduce the need to produce and manage a huge amount of data on-board and ashore.

Taking advantage of this huge amount of data requires a different way of thinking: how data is built and used, how much of it we can handle, how fast we can process and analyse it, and where and how decisions are made.

The Shipdex protocol (www.shipdex.org) is the perfect solution to dramatically simplify how to produce, manage, exchange and use huge amount of equipment's technical data that are currently coming from different sources, in different formats and often with a different quality.

Shipdex is a customization of the S1000D specification and must be considered as "the S1000D Business Rules" for the whole shipping community, to be used for every shipping project/product.

Shipdex implements the following typologies of information that are to be contained into Shipdex datasets (a Shipdex dataset contains all the information related to a given product at a given configuration):

- Description
- Operation
- Maintenance task
- Maintenance planning
- Illustrated Parts data (IPD)
- Trouble Shooting
- Learning (SCORM compliant)
- Comments
- Publication module
- Service Bulletin

The information produced in accordance with Shipdex protocol is gathered into several xml files (called data modules) in accordance with a specific Shipdex business rule.

# 2 THE SHIPDEX VIEWER 3.0

# 2.1 THE SCOPE

The Shipdex organization has developed a powerful and free-of-charge "Shipdex Viewer" to give end-users, as shipyard and ship-owners, a tool to "navigate" through technical manuals provided in Shipdex format. The aim was to give end-users a



powerful tool to retrieve technical information in a simpler and faster way compared with the traditional researches on pdf or paper manuals.

The first and simpler two versions were created to give end-users the possibility to navigate and view in html format, or print in pdf format, all the manuals produced in Shipdex format.

The download (from www.shipdex.org) of the first 2 Shipdex Viewer versions was allowed to Shipdex Registered Members only and manufacturers were allowed to distribute it together with their manuals in Shipdex format.

The Shipdex Viewer was a great success and the Shipdex organization decided that it was time to:

- Allow a free download (from www.shipdex.org home page) to every company/organization
- Develop a more powerful version of the Viewer, The "Shipdex Viewer 3.0"

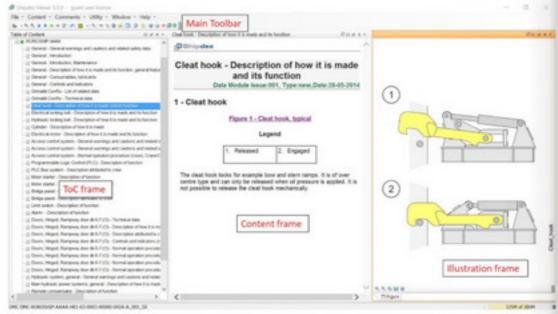
# 2.2 Introduction to the Shipdex Viewer 3.0

The Shipdex Viewer 3.0 is a stand-alone application for Windows XP, Vista, 7 and 10. It doesn't require any installation as it can be run directly from its folder. It works like a portable application that can be on CD or USB flash-pen.

Shipdex datasets can be stored into the Viewer default folder (called "Series") or into any other folder over the LAN. The Viewer allows to select the target dataset wherever it is stored.

The Viewer layout is composed of the following frames:

- 1. Main toolbar
- 2. Table of Content (ToC) frame
- 3. Content frame
- 4. Illustration frame



# 3 THE MOST IMPORTANT SHIPDEX VIEWER 3.0 FEATURES

#### 3.1 GENERAL

The Shipdex Viewer 3.0 is fully compliant with the latest Shipdex 3.2.1 version, published on 22nd October 2018.

Among a number of powerful features the Shipdex Viewer 3.0 allows to:

- 1. Have three different "Tables of Content":
  - a. By information set
  - b. By physical component
  - c. By technical manual
- 2. Manage comments on data modules
- 3. Convert a single data module or a selection of data modules to pdf format
- 4. Publish a whole Shipdex dataset in pdf format
- 5. View illustrations in-line with the text or in a separate window

# 3.2 THREE DIFFERENT TABLES OF CONTENT (TOC)

Shipdex Viewer 3.0 allows to select three different ToC typologies:

- 1. by Shipdex dataset structure. The data modules are presented grouped by "information Sets":
  - a. Description and Operation

- b. Illustrated Catalogues (IPD)
- Maintenance tasks
- d. Maintenance Planning
- e. Learning (CBT)
- f. Service Bulletin
- g. Trouble shooting
- by physical component. The data modules are presented in order of physical component (identified by his own data module code)
- by Publication Module (PM). If the PM is contained into the dataset, the data modules are presented in the order defined by the author inside the PM.

#### 3.3 COMMENTS MANAGEMENT

Shipdex Viewer 3.0 allows to:

- Write comments related to single data modules
- Store all the comments into the Shipdex Viewer comment database
- Retrieve comments from the comment database:
  - By selecting a data module
  - By selecting the comment from the list
- Import/export comments from/to other Shipdex Viewer 3.0 installations

When a comment is "attached" to a data module, the ToC shows a yellow icon on the data module icon. Clicking on the ToC, the selected data module is open together with its comment(s).

3.4 Conversion of a single data module or a selection of data modules to pdf format

Shipdex Viewer 3.0 allows to select from the current ToC:

- a single data module
- a selection of data modules

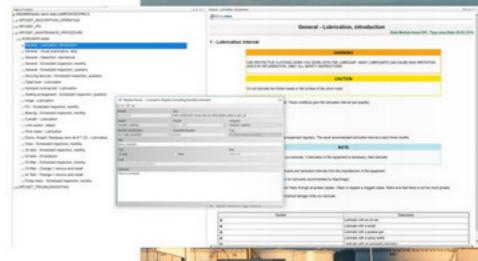
These features convert the selected data module(s) into pdf format using the Shipdex standard style sheet.

# 3.5 A WHOLE SHIPDEX DATASET PUBLISHED IN PDF FORMAT

This feature converts the whole dataset in a pdf manual (using the Shipdex standard style sheet) and automatically generates:

- Table of content
- List of illustrations
- List of tables

Hyperlinks to go directly to the selected chapter/paragraph or



33

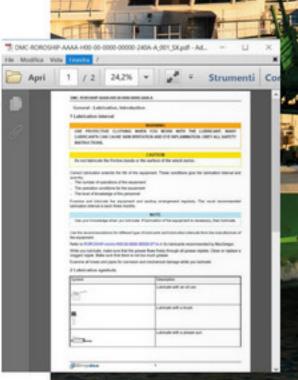
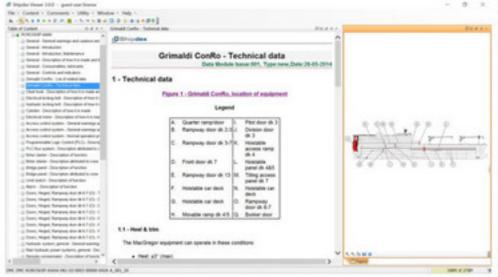




illustration or table are also automatically generated.

# 3.6 VIEW ILLUSTRATIONS IN-LINE WITH THE TEXT OR IN A SEPARATE WINDOW

The Shipdex Viewer 3.0 allows to show every illustration:



- inside the data module text
- in a separate window.

When the in-line option is enabled, every illustration is merged with the text

When the in-line option is not enabled, every illustration is open in a separate Illustration frame that appears automatically.

# 3.6 CONCLUSIONS

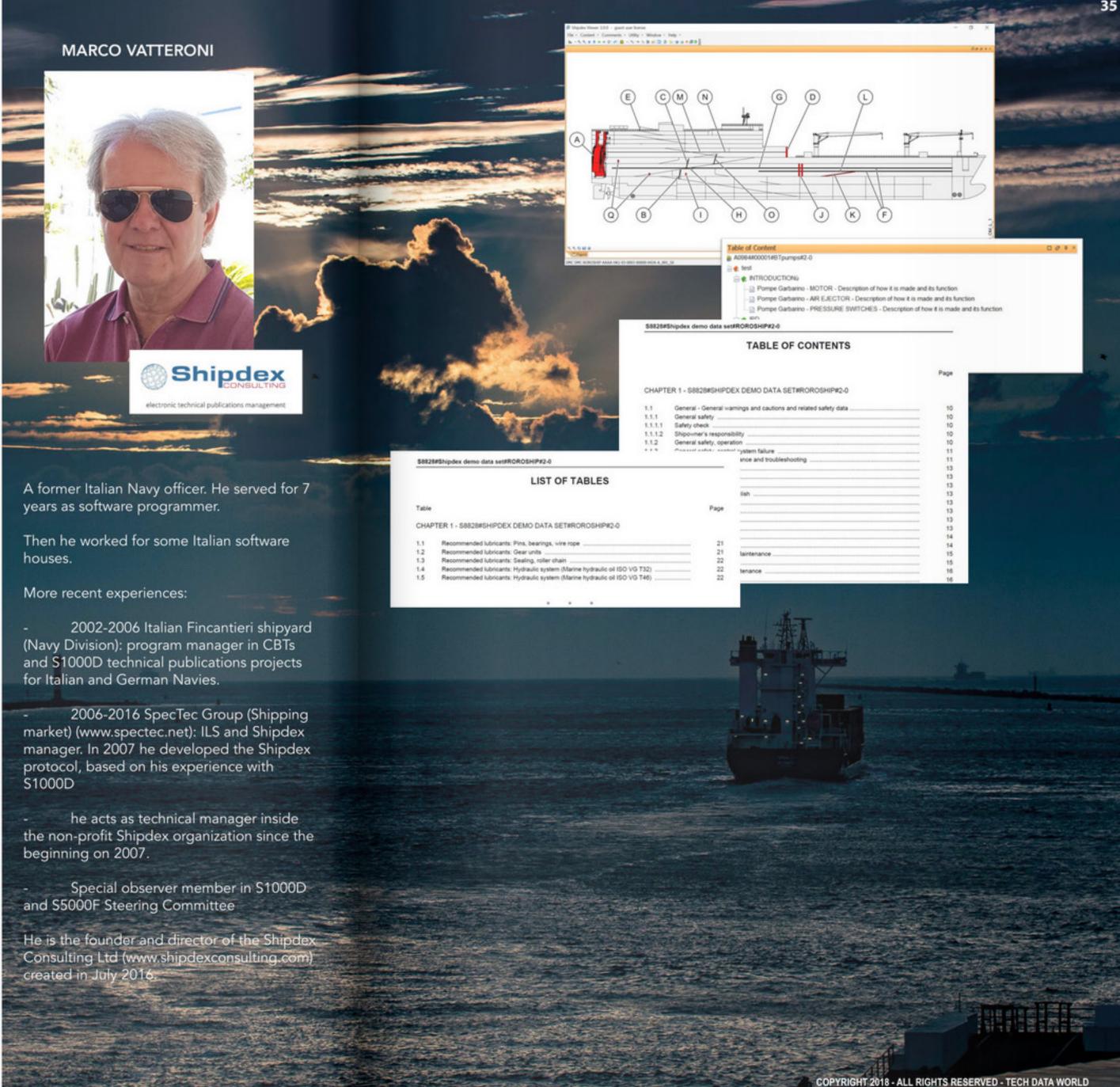
The Shipdex organization built and continuously maintain and improve the powerful and free-of-charge Viewer to allow any kind of user to access, navigate, display and print technical information/technical manuals supplied in Shipdex format.

The layout is standardized and based on Shipdex style sheets (for html and pdf) and allows to show every dataset with the same layout and structure (regardless the manufacturer or the product).

Manufacturers are allowed to provide their customers with the Shipdex Viewer together with their Shipdex datasets.

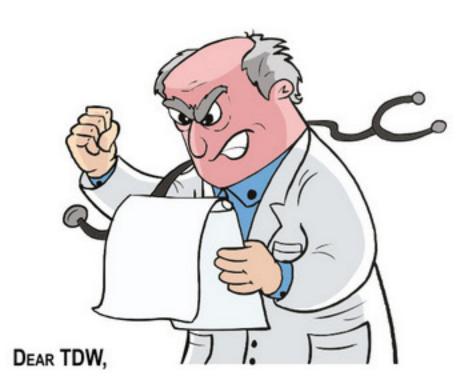
Shipyards and ship-owners (in office and on-board) can use the Viewer to retrieve, view and (if necessary) print the technical information without the need to open several and different paper/pdf manuals.











I'm writing to complain about the article you ran in the last mag from Peter Perfect – absolute drivel! What is that guy on? When I read the article my blood boiled and my blood pressure went through the roof! Top Ten Advantages? My foot!! Flamin' top ten codswallops I think! Put the spanners in his hands I say, and then he will realise what's needed. Let him use what he has developed and see what he thinks of it then!!

What did I find wrong in the Perfect article? Well, I'll tell you!. Let's go through Peter's so-called "advantages of S1000D" one by one – I'll try to keep my calm.

# AT NUMBER 10 - S1000D USES XML

Peter says "The eXtensible Markup Language (XML) is a joy to work with." For flips sake, I wonder why we are using it at all! I mean, I could understand it if we used the tagged documents for searching for information - but we don't. We just flaming PDF it! I could do that with Word for cripes sake. And in Word I'd have all the review and comment functions that are sadly missing in Arbor flaming Text or Frame bleedin' Maker plus SGML!

# AT NUMBER 9 - IT'S AN INTERNATIONALLY RECOGNISED AND A NEUTRAL STANDARD

I agree with the Perfect creature here as even bleedin' I could see all those years ago the advantage when each partner or supplier had a different word processing system – SGML meant that the data was system neutral, but now every Tom, Dick and 'Arry's using Office for crying out loud. If you ain't gonna use those tags use Microsoft beedin' Word! If you are

gonna use those tags, I take my hat off to you – mark up means you data's in a database and is queryable, if all you are gonna issue is PDF, forget it, it's not worth it use what Mr Gates is providing!

Data exchange? Gordon Bennett! Why not just create a decent word template and a set of business rules in Word then exchange Word files?

# NUMBER 8 - NICE MEANINGFUL MARK-UP

Peter says "semantic mark-up in S1000D is magic!

And that you can query the CSDB as a logistic database" and he certainly is spot on there! But who ever does that? I'd be flummoxed if you found someone using S1000D's full power. Yes we all should do it and merge it with data from the other S-Series specs (don't even get me started on them) – but we don't! Like I said in my article, at best we use stylesheets to churn the data modules into HTML so <spare> becomes a useless <TD> in a flaming <TR> table row!!

I get really really peeved off with that as we could use the stylesheet and leave the XML as it is and only display in HTML. Hey IETP developers! I know all that is needed is a processing instruction at the top of the XML data module!! I'm not that silly. Why deliver HTML when you know that you can keep it in XML?

Are you worried about giving all the power in the XML away? if we deliver the XML then our customers can turn it into a logistic database and realise the power of S1000D for themselves. Gawd Old bloomin Riley, they're the ones paying for it, give it to them and tell them what they can do with it!!! As for worrying about keeping your stylesheets – delivering powerful data as S1000D intended is far more important – if only the information buyers knew!

# AT NUMBER 7 - IT'S BRILLIANT FOR DISPLAYING IN AN IETP

I hate to say it but Peter is right here too and S1000D is great for displaying in an Interactive Electronic Technical Publication (IETP) – but there simply ain't enough customers who get that delivered! It makes my blood boil and my stomach churn when the end users can't use the IETP.

They say "won't install on my system!", "I'm not allowed plug-ins", "It won't work on Android!", "Can you deliver PDF?", "Would you mind sending paper publications like we're used to?" "I can't see the

graphics at the same time as the text!, Send me PDF and I can open two files and read them side by side." Grrr! I need my pills!

Two big issues here, first the IETP developer has not even flaming bothered to speak to the guys who use the data on the shop floor – they give 'em a table of contents based on the SN flaming S and guess what? It takes the maintainer ten wasted clicks to get the data module! Why ohh flamin' why can't I scan a barcode or dot matrix etched onto my part and go straight to the procedures I need for that part at its current mod state – I'd even be happy typing in a part number or serial number - it's not rocket science chaps! And why do I need ten clicks and even then

is it a communication problem!?! They all go to those S1000D forums but are still happy to accept something little better than paper!!! Gordon Bennett!!

# NUMBER 6 - ALWAYS UP WITH THE LATEST TECHNOLOGY

Peter says "I have to hand it to those S1000D guys – they certainly keep up with the times". Yes they do – but why? They do stuff because it's sexy and because it's there. Sometimes the community just isn't ready to use it!!

This brings me to another issue that makes my blood boil – S1000D updates are issued too often. We just get used to one issue, and guess what? - here comes



find out that I am in the wrong flamin' place. God it infuriates me! Why click once when you can click ten times! I mean really are you trying to give me R S bleedin' I?

The people asking for S1000D aren't helping themselves. They've been told it's the latest and greatest so they ask for it. Then guess what? They demand a silly dumbed down PD flamin' F! If those guys only knew what they could do with S1000D then they'd be dangerous. Bloody 'ell,

a' flamin' 'nother! I was happy with Issue 2.3!

My customer wants it straight away but my software supplier can't keep up with the changes! And I can't get support for it for 6 months. I get it, then guess what? There's only a flamin' patch to fix what I haven't even implemented yet! Bloody Nora! Get a grip lads and lasses!!

And forget JASON or whatever that Perfect fellow was rabbiting on about! Next week it'll be Rubie or

# DRGRUMPY COMPLAINS

something else – those anoraked geeks always want to use the latest programming language!!

#### NUMBER 5 - CONFIGURATION CONTROL AND APPLICABILITY

I can't argue with this one, and that's rare for me! S1000D has certainly helped with this. But we could have used the CSDB to configuration control Word docs too! There you go, I had a gripe!!

#### Number 4 - Information Repositories

Perfect says "Brill! I can store a whole database in a repository data module actually in XML— amazing - the way to go!". Codswallop! Why take all that data from PLM and replicate it? Haven't you heard of master friggin' data flamin' management and one bleedin' version of the friggin' truth? For crying out loud!! As soon as you copy it into your CSDB as a bloody great data module, it's out of date!! It doesn't take Einstein to see that what you need to do is link into PLM, link into your spares configuration system and get the data from the master?

The fact that you need very high issue numbers should tell you that this thing is NOT a data module – it's a friggin' database. Every time I add a new spare I have to up-issue the data module – heck you will need a fifteen digit issue number by the time your product enters into service!!!

And another thing, if you deliver the information repository to the end users for building into their IETP, aren't you in danger that they will not display a vital piece of information – eg a Warning or Caution? Or link to the wrong data item – say wrong spare? If you have to use the repositories then bloody pull the data out from them and deliver self-bleeding-standing data modules!!

# NUMBER 3 - THE BUSINESS RULES CAN BE CHECKED AUTOMATICALLY

Perfect says "Those nice S1000D guys have provided the Business Rules Exchange (BREX) and I have written code that implements it using XSL and Schematron"

Yes he's right, business rules are bloody good when they're in the right hands; but I have two gripes here and am in danger of repeating myself! But it may help get my message over!

My first gripe is that S1000D systems stop stuff gettin' loaded if there's a broken business rule. So if the rules say that a <levelledPara> must have a <title> and there isn't one, it doesn't get loaded. I mean for flamin' cripes sake, that data module may be the one that is most important in the exchange - and you, yes you Mr Perfect, are slowing down my updates getting to the runway. There could be a 'plane with its engines on waiting for my data. And what do you do? You reject the data module and send it back to the contractor!! Gordon Bennett! Can the information be used? Yes of course it can! So just bloody load it will you!! Leave the flamin' decision to reject it or load it to me, don't automatically throw it out!! Tell me if it's a broken rule and how serious it is for cripes sake. Gosh that's really getting to me now. I'm gonna have to stop and have a sit down before I go on!!!

Now I'm back, I am still angry despite a lovely cup of char. How about the graphics business rules? Does it matter that a line is a hare's breath thicker than it should be? Or that a font isn't in Sans- bloody Serif or its nine point rather than 10? One man's 9pt is another's 10 anyway – do you realise that a point measures 0.3527777778 mm! Can I read the illustration? does it tell me what to do? Of course it does. Get a life will you?

# NUMBER 2 - THE PROCESS DATA MODULE

Dialogs, Check boxes, radio buttons? What bleedin' planet is Perfect on!! My authors aren't computer flamin' programing geeks with anoraks! They have





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# DR GRUMPY COMPLAINS

just got used to putting in tags!! How does he expect them to know what a variable is? Or what an If sequence is? Bleedin' flamin' hell, they have just got used to computers - and some still want the typing pool back!! If this gets asked for, then I'd have to lay them all off and bring in the geeks - and they have absolutely no product knowledge!

# Number 1 - 3D multimedia, virtual reality and augmented reality

Don't blinkin' run before you can bloomin' walk. I mean jumping from paper to a head dress is a big step for the maintainers. I can see safety issues with all those overalled guys bumping into each other or stumbling over hardware because they can't see a blinking thing! Heck I can see it now. Some of our guys can't see reality, let alone augmented reality. And as for wearing a hollow lens - what will that do to their street cred'?.

I say don't make the same mistake again! Speak to the maintainers and see what they want and need and consider what can be done with teck to make things cheaper, better and faster rather than implement something that is gee whizz and just because its sexy and in reality is totally bloody useless.

Some of these guys have inspected components before and they know where they fail - some have done over 2,000.000 inspections for flips sake! All they need to know is where the procedure has changed since the last issue imagine that guy having to wear a contraption on his bonce and answer loads of questions when he knows a feature of the component is out of limits before he can tighten the straps on his hollow lens or goggle glasses! He is gonna be right pee'd off and not motivated! Flamin' Nora!

Don't get me wrong this new teck is great, but don't just use it 'cos its there - consider the business case and the affect on the users. Speak to the guys who do the flaming job!

So TDW, I really appreciate your mag! But please don't publish articles without reading them and considering that what has been written is actually pants. In future, please stick to publishing accurate articles like mine in the issue before!

Keep up the good work!

Yours Sincerely,

Dr Grumpy, FRACAS, MBGS, FRANT



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# HOW WILL AI AFFECT TECHNICAL PUBLICATIONS? AI IN POWER POINT.

KEEPING AN EYE ON TECHNOLOGY WITH TDW



IN THE FIELD OF TECHNICAL INFORMATION PRODUCTION AND DEPLOYMENT WE NEED TO KEEP AN EYE ON TECHNOLOGICAL INNOVATIONS THAT WILL AFFECT THE WAY WE EITHER PRODUCE, MANAGE OR DEPLOY OUR TECHNICAL INFORMATION MICHAEL INGLEDEW

reation and deployment of content is and has become much easier and cheaper.

software is becoming so advanced these days and we are able to leverage our content in ways that only a few years ago were simply unimaginable.

I am personally seeing now the discussion and debate around **Artificial Intelligence** (AI) and how it can be leveraged in technical content.

Having attended a number of webinars recently, it is clear that the technology thinkers are going to start driving our attention toward AI.

If like me, at first, when someone mentioned AII was thinking robots, Terminator and so on. Now whilst this is a reasonable image to generate in my minds eye, I have learned that AI is much richer, deeper and powerful than the next gadget to help you clean your carpet or achieve world domination via time travel.

A statistic for you: the level of content we now produce is extraordinary, I read recently that 90% of the content that exists in the world today was created in the last two years - think about that for a moment. This will only exponentially grow and balloon.

What does this mean for technical content creators like you and I? Well firstly the days of having a guru sat in the corner who knows each and every piece of content that we have ever produced is rapidly disappearing. If the statistic above is to be believed, and there is no

reason not to, then a human brain trying to keep pace with the quantity of content that is being produced is simply impossible.

This is where the world of AI will come in.
Intelligently knowing the content that we have and making it available in the blink of a robotic eye. Based on context presenting and making available content we have likely long forgotten we have, own or scribed back in the day.

#### IMAGINE MY SURPRISE USING MICROSOFT POWER POINT

I recently had to put together some slides for a client, and they wanted the slides to be in MS Power Point, a simple set of slides to show the concepts of publishing electronic manuals for use by their MRO's (Maintenance Repair Organisations).

I started planning my lessons, then started filling in the gaps before actually placing content in to each and every slide.

My process is much like everyone else, I plan what I am going to say, then I say it, then I place in the supporting imagery for the message I am trying to get over to my audience.

I reached the stage of placing in images and I quickly noticed that Power Point was doing something rather interesting - as I placed in an image in to a slide - it was reading the image and trying to understand what the image 'was'.

Essentially (for those of you who know webdesign) - it was populating the ALT information for each image - a textual piece of descriptive



information that tells a user/reader what the image is if for some reason the image itself can not be displayed.

A good example of ALT information is if you receive a HTML based email and your email client blocks the automatic downloading of the images - there are a bunch of words to tell you what image should be there.

Well Power Point is now doing this intelligently for you. But what I was blown away by was how spookily accurate the intelligence engine was in Power Point.

I was placing in to a slide a picture of an A400M taxiing in a runway - and Power Point understood the image to be 'A large air plane on a runway at an airport' - this blew my mind - I never told it!

The reality is that this is still early generation capability and I found that if I deliberately wanted to, I could fool Power Point in to making some very strange 'intelligent' predictions - but this is early generation capability - it will only get better more accurate and useful from a wider Al perspective.

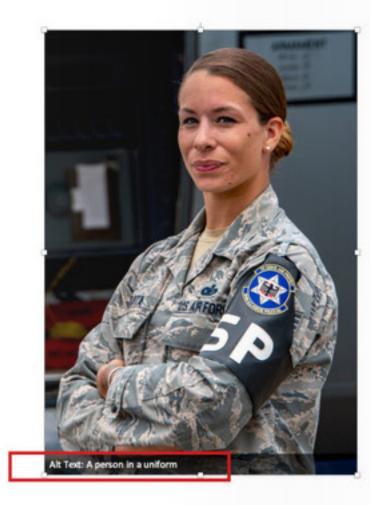
The power that this kind of AI will deliver to us in terms of rapid content creation, imagery



FROM POWER POINT

location and content reuse is going to get stronger and stronger.

Now how many of you are going to go straight to Power Point and try this out? Let me know how you get on!



# UNDERSTANDING STRUCTURED LANGUAGES (XML) **& ASD S1000D FOR ENGINEERS**

# INTRODUCTION

Often the key decision makers around the use of standards and specifications will be the engineering department, business improvement teams or others who are not entirely familiar with the intricacies of technical or support publications.

This is why we created this course "Understanding Structured Languages (XML) and ASD S1000D (for engineers)".

The course is focused on the why, what and how of structured languages, the key benefits of using XML (eXtensible Markup Language) and what do we gain verses traditional production methods.

We then move on to how and why ASD S1000D came about, how does S1000D use structure to deliver support publications and most importantly is there any benefit to doing so.

By the end of this course all attendees will understand the background of structured languages and how they are employed today in the modern information world.

# WHO IS THIS COURSE FOR?

This course is designed for all those that need to understand the reasoning behind structured languages, why we use them and how we use them in modern production methodologies.

#### WHAT WE COVER ON THIS COURSE

We start with the background and thought processes behind structured languages, why they came about, moving up through examples of industry adoptions of structure. You will learn the key components of a

structured information approach. We look at some examples of structure v traditional content production and discuss what this gives us. The second part of the course we move into specifically looking at ASD S1000D, where, when, why and how it uses structure, the key processes associated with S1000D and look at some of the strengths and weaknesses of the specification. We compare S1000D to DITA and discuss the major differences in approach. Finally we look at the S1000D Cost Curve and where the ROI sits for technical support information on platforms.

NEXT SCHEDULED COURSE

Date: 8 & 9 May 2019

Location: Best Western Hotel (Appleby Park) - Tamworth (UK)

**Duration:** Two Full Days

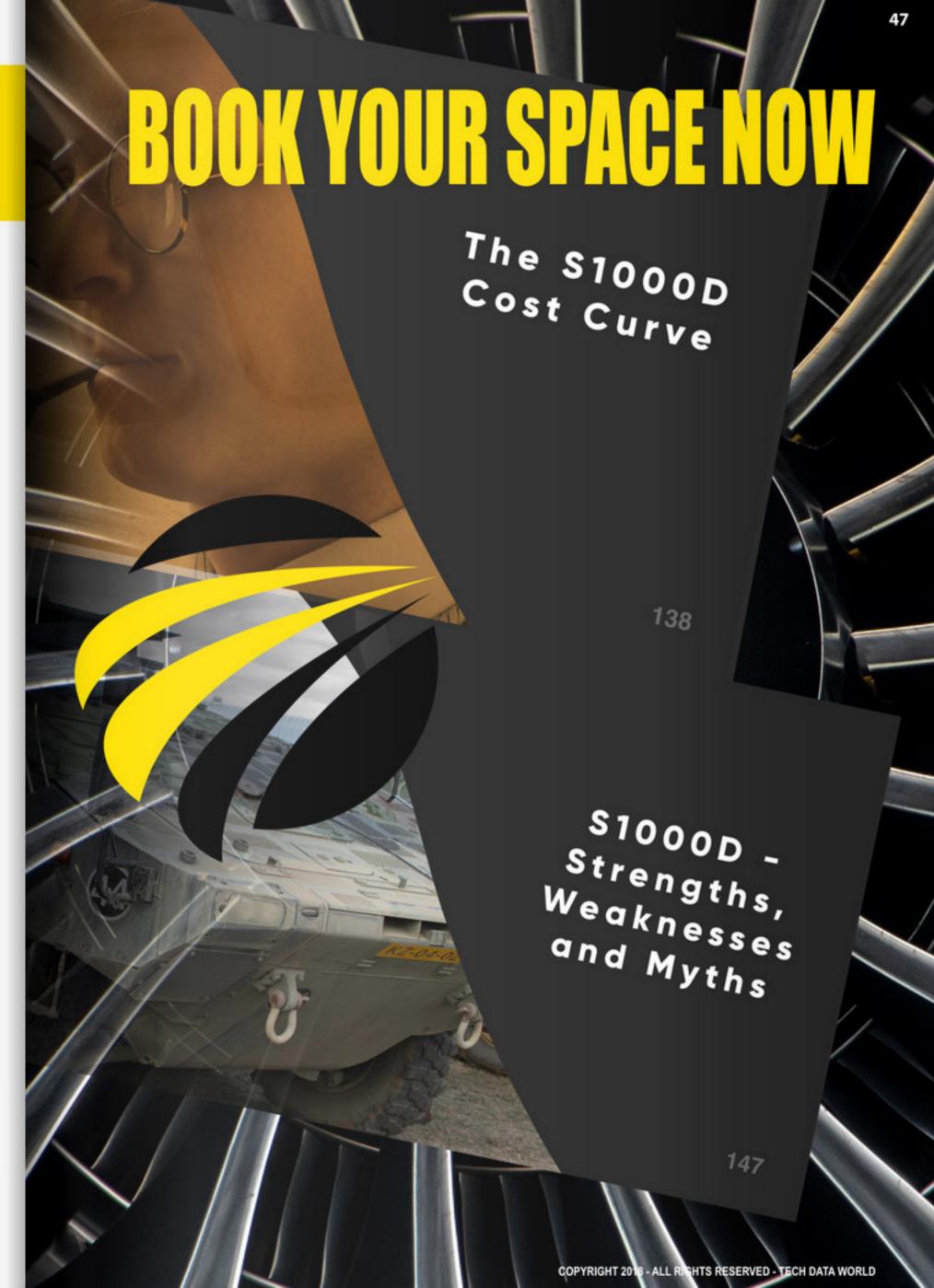
WHAT DO YOU GET?

Each student will receive full colour handouts to follow the course along as well as access to TD-iQ for three months post the course to access a full recording of the course. All refreshments and lunch is provided for the duration of the course. Certificates are available to those who require them.

#### MORE INFORMATION AND BOOKING DETAILS:

If you would like more information, pricing or to book your space, please email Claire Ingledew (claire@ techdataworld.com) who will send you the course synopsis.







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# Should we be upgrading our \$1000D Data?

This is a great question and to many this is a binary choice, which of course it is not. Those of us that have been working with \$1000D now for many years know how much of a pain and cost it is to migrate content from one version to another. What makes it even more of a challenge is those that sign-off on the budgets to do just this do not always fully understand why we would or would not want to. They see a simple technical publication and think 'it works' and we are left with our outdated often limiting structures. Your question got me thinking, so thank you for it, I believe there is a white-paper or two in your question as well as some tutorials. I know we spent some time together going over your question and I have given you some thoughts to put in your business case -. To everyone else - watch out for the tutorials I will produce on this topic.

# What are the benefits of using the S1000D CIR?

Another great question and I know you sent this in based on following our A2Z of S1000D series - thank you for this question and again I will do a tutorial or three on this topic. The reality is that not all projects use them and there are a couple of different mindsets towards the CIR - some love them, some hate them and believe that they are a duplication of production effort. Watch this space for a tutorial.

# Where have Thursday Thoughts gone? We loved watching them!

To be honest - producing video for YouTube, TD-iQ and the A2Z series is massively time consuming and I have let a few things slip off my plate on this front. I know a number of you at the TDW-Live event said you enjoyed them and would like them to come back - so right now we are thinking a monthly news round up for our network. Five Minute Fridays are a little easier to put together - but Thursday Thoughts take a lot of thought! We will do our best to get them back on the schedule during early 2109 - I am glad you like them and thanks for the positive vibes.

**SEND YOUR QUESTIONS TO:** 50 memberservices@techdataworld.com

# SEARCH: MICHARUNGUEDEWATDW in

# What Commercial off the shelf viewers are there out there?

Your question is of course a good one and I know you are in a build or buy situation. Check-out our members list at the back of this magazine, the majority of the software companies who support TDW do have a solution for an IETP.



# Our customer wants change bars and LOEP! But we issued the Data Module already!

What a great question and discussion we had around this topic at TDW-Live - your client is expecting the traditional components of a technical publication, but you are using the S1000D delivery methodologies to hide and show a data module pre-post modification state of a platform. If in pre state the module is hidden and but if in post state the module is shown - but the end user wants to have LOEP, change bars etc displayed when a platform is migrated to a post state. But in an \$1000D sense the module is already issued, accepted and deployed.

This is a great example of where traditional publications and mindsets meets the new structured and modular world of information deployment and filtering.

Thank you for giving us permission to do some tutorials around this specific issue we are looking forward to getting our teeth in to this one.



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HICO OFFERS A FULL SPECTRUM OF IT-SOLUTIONS AND SERVICES FROM A SINGLE SOURCE - FROM ENGINEERING-SUPPORT AND -INTEGRATION IN THE IPS-PROCESS, DEVELOPMENT OF MAINTENANCE PROGRAMS, MATERIAL SUPPLY CONCEPTS TO INNOVATIVE SOLUTIONS FOR TECHNICAL DOCUMENTATION AND TECHNICAL COMMUNICATION.

HICO SOLUTIONS ARE BASED ON GLOBALLY RECOGNIZED SPECIFICATIONS AND INTERNATIONAL STANDARDS (SUCH AS ASD/AIA/ATA S1000D®, ATA ISPEC 2200 OR IETD-EXPORTSTANDARD) AS PART OF THE ASD SUITE OF ILS-SPECIFICATIONS AND STANDARDS FROM THE ATA E-BUSINESS PROGRAM.

IPS System Integration, Technical Authoring Services, 2D/3D Illustration Services,



# JANA, Inc.







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JANA IS A TECHNICAL DOCUMENTATION SERVICES COMPANY WITH 45 YEARS OF EXPERIENCE IN PROVIDING BEST-IN-CLASS TECHNICAL DATA AUTHORING AND MANAGEMENT SERVICES. JANA'S SERVICE AND SOFTWARE SOLUTIONS ARE EMPLOYED BY SEVERAL OF THE WORLD'S LARGEST AND

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JANA'S CORE BUSINESS IS THE AUTHORING, ILLUSTRATING, PUBLISHING AND DELIVERY OF TECHNICAL PUBLICATIONS. REGARDLESS OF THE INDUSTRY, JANA'S CLIENTS KNOW THAT THEY CAN RELY ON OUR BROAD BASE OF TECHNICAL KNOWLEDGE AND EXPERIENCE TO DELIVER ON THE PROMISE OF A FINAL DELIVERY WHICH IS HIGHLY ACCURATE AND ON-TIME.

AS INDUSTRIES, TRENDS AND METHODS CONTINUE TO EVOLVE, JANA STANDS FIRM IN THE BELIEF THAT THE BASIC REQUIREMENTS FOR A SUCCESSFUL DATA MANAGEMENT STRATEGY - RELIABLE, SCALABLE SERVICES SUPPORTED BY WELL-ESTABLISHED, REPEATABLE PROCESSES - HAVE NOT CHANGED. JANA'S CLIENTS WILL ALWAYS BE ABLE TO RELY ON THE QUALITY OF OUR PEOPLE AND THE QUALITY OF OUR PROCESSES TO PROVIDE THE RIGHT SOLUTIONS, RIGHT NOW.

AUTHORING SERVICES, ILLUSTRATION SERVICES, S1000D, ATA ISPEC 2200, DOCUMENTATION SOFTWARE CONSULTING

# LIONBRIDGE











# LIONBRIDGE

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LIONBRIDGE INTERNATIONAL OPERATES AS AN INTEGRATED CONTENT DEVELOPMENT, TRANSLATION AND TRAINING SOLUTIONS ORGANISATION WITHIN THE LIONBRIDGE TECHNOLOGIES, INC. GROUP OF COMPANIES THAT

PROVIDES A COMPREHENSIVE RANGE OF TECHNICAL DOCUMENTATION, LANGUAGE TRANSLATION, ILS, DESIGN DRAFTING AND TRAINING/ LEARNING SERVICES.

FOR OVER 40 YEARS, LIONBRIDGE HAS PROVIDED TECHNICAL DOCUMENTATION SERVICES TO LEADING COMPANIES IN THE AEROSPACE, DEFENCE, MARINE, IT/TELECOMS, TRANSPORTATION, ENERGY & POWER, AND AUTOMOTIVE INDUSTRIES. WE POSSESS THE EXPERTISE AND DEDICATION TO CUSTOMER SERVICE REQUIRED TO PROVIDE EXEMPLARY TECHNICAL ILLUSTRATION AND DOCUMENTATION, CONTENT DEVELOPMENT, ENGINEERING AND DATA SERVICES. OUR CONTENT DEVELOPMENT TEAMS COMPRISE OF OVER 1,000 HIGHLY SKILLED TECHNICAL AUTHORS, TECHNICAL ILLUSTRATORS, ENGINEERS, DATA ANALYSTS, AND DATA COORDINATORS. THESE TECHNICAL RESOURCES ARE LOCATED AROUND THE GLOBE, INCLUDING EUROPEAN LOCATIONS IN THE UK (DERBY, COVENTRY AND BRISTOL), POLAND, FINLAND, AND FRANCE AS WELL AS INTERNATIONAL LOCATIONS IN THE US AND INDIA.

TECHNICAL AUTHORING, ILLUSTRATION SERVICES, TRAINING, INTEGRATED LOGISTICS SUPPORT, DOCUMENTA







# O'NEIL & ASSOCIATES, INC.













FOR 70 YEARS, O'NEIL & ASSOCIATES (ONEIL) HAS SPECIALIZED IN CREATING PRODUCT SUPPORT DOCUMENTATION TO SERVE THE AEROSPACE, MILITARY, AND INDUSTRIAL MARKETS. OUR CLIENTS OFTEN DEPEND ON US TO ENHANCE THEIR PROCESSES; INFUSE NEW TECHNOLOGY; OR CREATE ENTIRELY NEW PRODUCT INFORMATION SUPPORT SYSTEMS, ELEARNING TOOLS, AND INTERACTIVE ELECTRONIC TECHNICAL MANUALS (IETMs). EACH YEAR, WE PRODUCE TENS OF THOUSANDS OF GRAPHICS, ANIMATIONS, MODELS, AND DIAGRAMS.

OUR CLIENTS DEPEND ON US TO: AUTHOR SUPPORT MATERIALS THAT TAKE ADVANTAGE OF NEW TECHNOLOGIES, CREATE A COST-EFFECTIVE IETM, DEVELOP ELEARNING TOOLS AND PROGRAMS, COMPLY WITH S1000D™ STANDARDS, CREATE DATABASE-DRIVEN AUTHORING SYSTEMS FOR SERIAL-NUMBER-SPECIFIC MANUALS

THE LATTER INVOLVES IMPLEMENTING A CONTENT MANAGEMENT SYSTEM TO OUTPUT A TECHNICAL MANUAL COVERING A USER'S PARTICULAR SERIAL-NUMBERED PIECE OF EQUIPMENT, INSTEAD OF A RANGE OF MODELS. THESE CUSTOM MANUALS CAN BE PROVIDED IN 40 DIFFERENT LANGUAGES AND PREPRINTED AND SHIPPED WITH THE PRODUCT. OFTEN, THE MANUALS ARE DELIVERED VIA THE WEB.

WE SERVE CUSTOMERS WORLDWIDE FROM OUR CORPORATE HEADQUARTERS LOCATED IN MIAMISBURG, OHIO (JUST SOUTH OF DAYTON), AND SEVERAL OTHER LOCATIONS AROUND THE WORLD. WE OFFER OUR CUSTOMERS AN EXCELLENT SOURCE OF CAPACITY, EXPERTISE, TECHNOLOGY, AND QUALITY.

ECHNICAL WRITING, TECHNICAL ILLUSTRATING, CONTENT MANAGEMENT SYSTEMS, S1000D, ATA ISPEC2200

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EAGLE PUBLISHING SYSTEM IS AN AUTHORING TOOL AND COMMON SOURCE DATABASE (CSDB) USED TO PRODUCE AND MANAGE ASD S1000D DATA FOR INTERACTIVE ELECTRONIC TECHNICAL MANUALS. EPS IS FAST, POWERFUL, INTUITIVE AND ROBUST AND INCORPORATES FEATURES FOR PROGRAM MANAGEMENT AND DATA DEVELOPMENT, ON TIME AT MINIMAL COST. EASY TO USE PRODUCTIVITY TOOLS INCLUDE AN INTEGRATED EDITOR WITH A REAL-TIME PREVIEW. DATA MODULES CAN BE LINKED TO EAGLE LSAR RECORDS TO POPULATE PROCEDURAL, FAULT, MAINTENANCE SCHEDULES AND ILLUSTRATED PARTS TECHNICAL DATA DIRECTLY FROM ENGINEERING DATA. AUTHORING CHANGES MADE IN EPS FLOW BACK TO THE LSAR. AUTHORS CAN PREVIEW THE DATA WITH A CHOICE OF INTEGRATED IETM VIEWERS.

EAGLE WEB CAN GIVE CUSTOMERS REVIEW ACCESS TO THE LSAR AND TECHNICAL PUBLICATIONS DATA WITH COMMENTING CAPABILITIES USING NOTHING MORE THAN A BROWSER. THE EAGLE MAINTENANCE MANAGEMENT INFORMATION SYSTEM (MMIS) IS A THIN-CLIENT TOOL USED TO SUPPORT FIELDED SYSTEMS WITH ASSET TRACKING, CONFIGURATION MANAGEMENT, FRACAS, WORK-

CSDB, EAGLE PUBLISHING SYSTEM, EAGLE EDITOR, EAGLE LOGISTICS TOOLKIT, LSAR

# RTP-UK LTD





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RTP ARE BASED IN BRISTOL AND PROVIDE INTEGRATED LOGISTIC SUPPORT (ILS),

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ILS - ILS SERVICE FOR MILITARY AND CIVIL SYSTEMS AND EQUIPMENT, SAFETY CASE, SYSTEM DEVELOPMENT SUPPORT BASED ON RELIABILITY AND MAINTAINABILITY STUDIES, LIFE CYCLE COST (LCC) CALCULATION

TECHNICAL DOCUMENTATION: RTP OFFERS ITS CUSTOMERS VAST EXPERIENCE IN BOTH THE MILITARY AND CIVIL DOMAINS. ITS AUTHORS, ENGINEERS AND SPECIALISTS OPERATE IN A MILITARY AND CIVIL ENVIRONMENT, ALLOWING AN INTERDISCIPLINARY APPROACH TO LAND, SEA AND AIRFORCE PROGRAMS. WITH OVER 300 STAFF, OPERATING IN AN INTERNATIONAL ENVIRONMENT, TOGETHER WITH ADDITIONAL LOW COST OFF-SHORE PRODUCTION FACILITIES, CUSTOMERS CAN BENEFIT FROM THE COMPANY'S SPECIALIST KNOWLEDGE IN MULTINATIONAL PROGRAMS.

TRAINING SOLUTIONS: RTP IS CAPABLE OF DEVELOPING AND DELIVERING: ANALYSIS OF TRAINING NEEDS (TNA TO JSP822 IF REQUIRED), GENERATION OF TRAINING MATERIAL TO DSAT QUALITY STANDARDS:, E-LEARNING MATERIAL, ELECTRONIC TECHNICAL DOCUMENTATION, MODELING & SIMULATION, COMPUTER/WEB BASED TRAINING (CBT/WBT), CAI FOR CLASSROOMS, LEARNING MANAGEMENT SYSTEMS (LMS/ LCMS), Provision of Training Personnel, SCORM Compliant

# AUTHORING, ILLUSTRATING, ILS, SAFETY, TRAINING









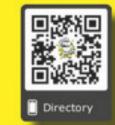




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SDL IS THE GLOBAL INNOVATOR IN LANGUAGE TRANSLATION TECHNOLOGY, SERVICES AND CONTENT MANAGEMENT, INCLUDING TECHNICAL CONTENT CREATION, MANAGEMENT AND DELIVERY SOLUTIONS FOR THE AEROSPACE AND DEFENCE INDUSTRY. FOR MORE THAN 20 YEARS, SDL HAS TRANSFORMED BUSINESS RESULTS BY ENABLING EIGHTEEN OF THE TOP 20 AEROSPACE AND DEFENCE LEADERS TO MANAGE AND PUBLISH TECHNICAL DOCUMENTATION USING COMPLEX INDUSTRY STANDARDS SUCH AS S1000D AND ISPEC 2200 TO DELIVER ACCURATE, UP-TO-DATE CONTENT.

S1000D, AUTHORING, PUBLISHING, DELIVERY, TECHNICAL DOCUMENTATION







# SEMCON PRODUCT INFORMATION UK

semcon











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SEMCON IS AN INTERNATIONAL TECHNOLOGY COMPANY THAT DEVELOPS PRODUCTS AND PRODUCT INFORMATION BASED ON HUMAN NEEDS AND BEHAVIOURS. WE STRENGTHEN OUR CUSTOMERS' COMPETITIVENESS BY ALWAYS STARTING FROM THE END USER, BECAUSE THE PERSON WHO KNOWS MOST ABOUT THE USER'S NEEDS

CREATES THE BEST PRODUCTS AND THE CLEAREST BENEFITS TO HUMANS. WITH MORE THAN 2,000 SPECIALISED EMPLOYEES, SEMCON HAS THE ABILITY TO TAKE CARE OF THE ENTIRE PRODUCT DEVELOPMENT CYCLE, FROM STRATEGY AND TECHNOLOGY DEVELOPMENT TO DESIGN AND PRODUCT INFORMATION.

SEMCON GROUP HAS OPERATIONS IN MORE THAN 30 LOCATIONS IN SWEDEN, GERMANY, UK, BRAZIL, HUNGARY, INDIA, CHINA AND NORWAY. OUR INTERNATIONAL PRESENCE MEANS THAT WE HELP OUR CLIENTS GLOBALLY BY UTILISING NETWORKS OF SPECIALIST RESOURCES FROM DIFFERENT REGIONS OF THE WORLD.

SEMCON HAS EXTENSIVE EXPERIENCE IN WORKING WITH COMPANIES OPERATING IN CHALLENGING ENVIRONMENTS, WITH TECHNICALLY COMPLEX PRODUCTS. WE ARE USED TO DESCRIBING COMPLEX PRODUCTS IN A SIMPLE MANNER. SEMCON'S PRODUCT INFORMATION OFFER COVERS THE ENTIRE INFORMATION DEVELOPMENT CYCLE - FROM STRATEGY, INFORMATION DESIGN, DEVELOPMENT AND PRODUCTION TO DISTRIBUTION. THE INFORMATION IS MADE AVAILABLE IN AN APPROPRIATE MANNER FOR THE USER - WHICH TODAY MEANS MORE FREQUENT DISTRIBUTION VIA DIGITAL SOLUTIONS, SUCH AS ANIMATIONS, MOBILE APPS, VIRTUAL AND AUGMENTED REALITY.

RING SERVICES, ILLUSTRATION SERVICES, AUGMENTED REALITY, DIGITAL DISTRIBUTION, CONTENT MANAGEMENT SYSTEM

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TECHNODATA GMBH FOUNDED IN 1985 AND HAS SINCE THEN OPERATED AS ONE OF EUROPE'S LEADING SERVICE PROVIDERS OF TECHNICAL PUBLICATIONS AS A COMPETENT, ECONOMIC AND RELIABLE PARTNER IN THE CREATION OF TECHNICAL DOCUMENTATION FOR AIRCRAFTS, HELICOPTERS, AIRCRAFT SYSTEMS AND FOR THE EQUIPMENT PROVISIONING AND AVIATION INDUSTRIES IN THE MILITARY AND CIVILIAN AVIATION SECTORS.

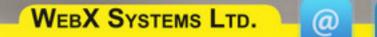
OUR TEAM CONSISTS OF SPECIALISTS WITH WIDE-RANGE AND LONG-TIME EXPERIENCE IN APPLICABLE CIVIL AND MILITARY PROGRAMS INCLUDING THE RELATED STANDARDS SUCH AS \$1000D / \$2000M, ATA ISPEC2200, SBs, NSGs, GDs, STYLE GUIDES, MANUFACTURER REGULATIONS & REQUIREMENTS ETC. AND HAS ALL THE CAPABILITIES NECESSARY TO MEET CONTRACTUAL REQUIREMENTS AND ANY KIND OF SPECIFICATIONS AT REASONABLE COST AND ON TIME.

OUR CORE COMPETENCE CONCERNING TECHNICAL PUBLICATIONS IN THE EQUIPMENT PROVISIONING AND AVIATION INDUSTRY RANGES FROM SMALL SIZE AIRCRAFT OVER HELICOPTERS TO AIRLINERS AND MILITARY JETS.

IN ADDITION TO THE A.M. AREAS OF TECH PUBS WE ALSO PROVIDE CSDB- AND IETP-X BROWSER SOFTWARE SOLUTIONS AS WELL AS SUPPORT IN THE AREAS OF TECHNICAL TRAININGS / AIRCRAFT SYSTEM TRAININGS, ILLUSTRATION PRODUCTION AND SUPPORT. SERVICE BULLETINS, LSA, MSG3, LORA, ATPs, TEMs, Engineering Dispositions and MTAs (Maintenance Task

THORING SERVICES, S1000D, ATA ISPEC2200, ILLUSTRATION SERVICES, CSDB, IETP, TRAINING















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CSDB, S1000D, ATA ISPEC, LSAR, IPC

# **TDW 5 Minute Friday**

**TOOLS - TIPS - PROCESS - RESOURCE** 





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