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# WELCOME

Hello and welcome to the final issue of the TDW magazine for 2019. I know we are publishing early 2020 - but this is officially the final issue from 2019.

2019 drew to a close with a crescendo at TDW-Live in Congresbury, UK, our best event to date. We had a fun-filled three days looking at the how and why of structured content supported by leading experts and vendors showing us how! A full report is inside, so please go over and read that, I also published a round-up video to YouTube, which gives a good sense of what we covered over the three days.

TDW expanded at a rapid rate during 2019, and this is down to the fantastic support and backing we have from all corners of the globe. Our vendor members are supporting what we are doing. TD-iQ subscribers that feed my enthusiasm for what we do here and all of the warm and supportive comments that come our way from the wider community. Thank You!

I am excited about 2020, not only will we continue with this magazine, tutorials, events and some nice things we're working on in the background, so stay tuned!

We are building on the training success from 2019, migrating a number of our courses from the classroom to TD-iQ. Those wishing to take part in a fully online course may do so with a ticket to join in via the online learning website (TD-iQ). Although these courses are not part of a standard TD-iQ subscription, those TD-iQ subscribers wishing to join these courses can request a member discount from Claire.

I want to deliver the content that you out there in the technical communication world need. You have asked for more podcasts, I have scheduled them in. Already planned several more video-lead tutorials, some for YouTube, some for our app and some for TD-iQ only. We have looked over the stats to see which content resonates and plan to focus in these areas.

During 2019 I received several requests to bring back our news round-up and thoughts from the market. I initially stopped this as the level of effort was far greater than initially anticipated. The level of research, preparing the production, configuring the IT was all a bit of a bind. However, I have now streamlined this process, and we have decided to start during January to deliver a weekly podcast and a monthly news-round-up.

We are continuing to deliver tutorials to YouTube, looking at software, specifications, events, and more. TD-iQ is where we plan to broadcast live shows - you do not need to be a TD-iQ subscriber to join this streaming, to request an account you may contact Claire (details



MICHAEL INGLEDEW



inside). The reason for not streaming to YouTube is simple; there have been a lot of rule changes and hoops we need to jump through to make it happen. If we broadcast to our platform, we are in control of everything.

I also announced in the last issue of the TDW magazine that we were looking to retire the cartoon on the cover! A big mistake - a number of you got in touch to ask us not to do so, for now, the cartoon cover page is staying.

Wherever you are in the world from all of us here at TDW, we wish you the very best for 2020, and we look forward to supporting you over the next year. As ever please continue to send your thoughts, feedback and comments!

- Mike





# THE BIG QUESTION

## IS IT TIME TO TAKE YOUR PUBS TO THE NEXT LEVEL?

### THE CHANGING ROLE OF THE TECHNICAL PUBLICATION

Mike Ingledew

Industry 4.0 and the desire to have the deeply connected platform is affecting the way that we now view our technical publications and here's why.

and skills, all part of conventional technical publications.

S1000D and similar XML-based production methodologies now provide the producers of content the mechanisms to identify and configure our content to match specific configurations, variants, conditions of the platform, presenting the right content at the right time to the immediate need.

#### SO WHAT?

With Industry 4.0 and the IoT (Internet of Things), we are rapidly capturing and analysing data directly from the product itself. Generating a fault code is now possible through the connected platform and rapid data analysis. These fault codes will already be defined and listed in the technical publication. It is now possible to connect the platform and generated fault codes directly to the technical content, opening the ability for maintenance processes to be triggered, even before the platform returns to the maintenance line.

Content creation methodologies like S1000D take the technical publication far beyond the traditional printed page. They are identifying each building block of our content to open opportunity to reduce downtime and maintenance costs.

To learn more about how this is happening today, join us on our webinar on this subject.



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Most modern platforms at some level are capturing metrics, stats, performance inputs around the larger platform, components or sub-components installed. These metrics are providing valuable insight into how the platform is not only performing in real-time but also performance v design, allowing us to assess if our original predictions and modelling were correct.

Traditionally the technical publication has been produced with a focus on what the user reads on the page, collecting multiple input sources, collating and presenting information in a way that the maintainer, pilot or an operator can interpret in a no-fuss matter of fact style. The printed technical manual, while containing the necessary and vital information, was nothing more than a dumb print-out of the painstakingly produced content.

New production methods for technical publications has changed and is continuously evolving at pace. This evolution is due to the simple fact that the tech pub contains a raft of rich information that can, when leveraged correctly, bring the platform closer to the supporting publication content. Producing technical content with new XML (eXtensible mark-Up Language) creation methods takes the information from the page. XML adds the opportunity for platforms to integrate and leverage content far beyond presentation to the end-user.

Good examples of the types of traditional information contained within useful technical publications include items like tools, spares



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## ASD-STE100 SIMPLIFIED TECHNICAL ENGLISH (STE) BASICS 3: NOUNS



Ciaran Dodd

As part of my two-day Introduction to ASD-STE 100 Simplified Technical English course, we review some essentials of grammar that you must know to understand the rules of STE. In the next few articles, I will:

- describe these essentials of grammar, and
- explain why you need to know them to write well in STE.

### WHAT IS A NOUN?

STE defines a noun as:

**"noun (n):** A word that is the name of a person, place, object, idea, quality, or activity." (2-0-4, ASD-STE100, 2017)

Nouns are an important part of English grammar, mainly because they form the subject of the sentence and there are many rules that relate to nouns only. There are different types of nouns, for example:

countable nouns <i>a chair / chairs</i>	uncountable nouns <i>water</i>
concrete nouns <i>a chair / chairs, water</i>	abstract nouns <i>a promise / promises, honesty</i>
common nouns <i>a chair / chairs, water, a promise / promises, honesty</i>	proper nouns (names) <i>Elizabeth, France</i>

### NOUNS IN STE – WHAT YOU NEED TO KNOW

1. A word that is a noun, may also be a verb or adjective. 'Damage' is both a noun and a verb. 'Door' is both noun and adjective. On its own, 'door' is clearly a noun. But if I write 'door handle', 'door' is behaving as an adjective because it is describing what sort of handle I am talking about.

These pairings are common in English. Sometimes in technical writing, several nouns are put together to describe a main noun: 'computer network server'. STE calls this a noun cluster (section 2). All the individual words in this noun cluster are nouns. The main noun is 'server' while the nouns 'computer' and 'network' are adjectives because they describe which server we are discussing.

STE limits noun clusters because they can confuse readers. You need to be able to identify whether words are nouns, verbs, or adjectives to correctly apply the rules on noun clusters, and to correctly use the words in the dictionary.

2. In technical writing there will be hundreds of different names for parts



and processes which STE can't possibly include in the dictionary. To solve this, section 1 contains the rules on which words you can use, including the categories you can use to approve a word as a technical name. As with technical verbs, if you can put the technical name in to an appropriate category, you can use the word as a technical name. For example, category 1 is 'names in the official parts information'. Again, you need to know if the word that you want to use is a noun to use these categories.

3. A noun tells you what the sentence is about. In STE it is especially important that sentences are written clearly so that a user can understand the instruction or descriptive text. Descriptive writing can be particularly complex to follow and so in section 6, STE gives rules to help you to structure descriptive sentences in a logical way. The STE rules use keywords to help the user follow the logic of what you are explaining. These keywords are nouns.

4. You need to be able to identify a noun correctly so that you can use related parts of speech correctly, such as articles, pronouns and adjectives.

This article summarises some of the main reasons why you need to be able to identify and correctly use nouns. We'll explore the related parts of speech in the next article.



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

Ernest Starling

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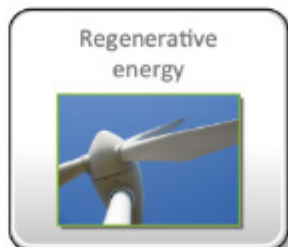
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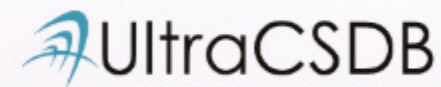


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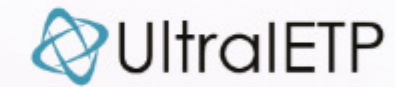


Mechanical engineering

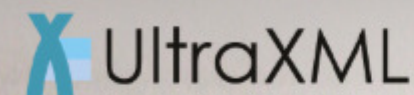
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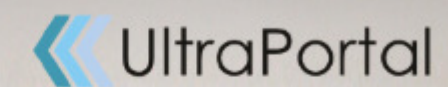
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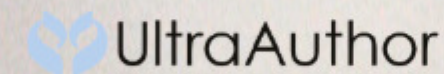
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## THE CIR - IT'S A STANDARD WARNING!

THE S1000D CIR - POWERFUL YET POLARISING - WHAT ARE THEY AND HOW CAN THEY BE USED? IN THIS BRIEF S1000DWORLD ARTICLE WE LOOK AT THE S1000D CIR.

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A question sent to me regularly is that of the Common Information Repository (CIR), are they a good or bad thing, and should we be using them? The most common application of the CIR I see is around Warnings, Cautions and Tools.

### IS THE CIR A GOOD THING?

The truthful answer is that it depends! To understand why 'it depends', you need to understand the role the CIR plays and how software and projects can leverage the CIR capability to maximum benefit. You also then have to understand the problems using a CIR could introduce to a complex, safety-critical project.

We accept when creating our content that there is commonality across our technical manual or set of manuals. After all, this is ONE of the perceived modern information challenges S1000D is aiming to address. Write once, use many - now I have written plenty of times why this is not as simple as the statement implies, but stick with it.

If we dive a little deeper into our content,

there may be many smaller pieces (fragments) of information that are common across multiple procedures, practices and instruction – for example, a standard warning that must be followed across various processes and procedures.

### STEP-IN THE CIR FOR WARNINGS

The theory is that we can hold this standard warning in a library of Warnings (CIR), and this is where the warning resides, is maintained and managed.

From an authoring perspective inserting a warning has just become a much easier task. Projects using the CIR (and assuming the software supports it) can present the standard warnings to the author for selection and insertion into the data module. A quick, simple task that has saved a tremendous amount of time and energy. The author triggers software capability to load a CIR when inserting a warning element.

For projects where items like warnings and cautions are pre-defined and must not be changed, the CIR provides a simple way for us to centralise and manage these XML fragments.



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The CIR then also provides a mechanism where if a warning is changed (in the CIR) and again providing the software supports it, it is a simple means to update all warnings across a complete dataset without the need for author involvement. We can appreciate that this is a massive time-saver and provides value to a project.

### HERE IS WHERE THE CIR CAN POLARISE OPINION.

Some organisations have strict processes when it comes to the verification of technical documentation. Even the smallest of changes require a data module to be revalidated and sent through a verification and issue process. The CIR approach to warnings in this 'global update' context could quickly turn into a management nightmare. There would need to be capability within the CSDB (Common Source Database) that flags all modules that have been affected by a single warning change in the CIR. This is why many platforms will not use the CIR in this way.

Even if projects do not use the CIR, most CSDB vendors provide the capability to use libraries from where our authors call standard information. Generally in the form of an XML snippet injected into the data module for the author to use or re-work. A common practice



WEBINAR

in software development is to have a snippet library; developers call standard lines of code from a common source and drop it into their own code.

The CIR is a powerful centralised capability that is wider than just warnings and often delivers upside when used correctly. But it does indeed polarise opinion, and many organisations will not entertain the use of the S1000D CIR capability for fear of inadvertently 'damaging' existing content

Keep an eye out on TD-iQ - a full detailed tutorial on the CIRs and how to use them.

Do you use the CIRs capability in S1000D? What do you think? Let me know.

michael@techdataworld.com





# My Way

## A basic guide to CorelDRAW® Symbol Library

Happy New Year to you all and I hope you are all looking forward to another exciting year in the world of technical publications.

In this issue I would like to discuss Symbol Libraries. For all you technical illustrators a touch of nostalgia and a small history lesson for non illustrators.

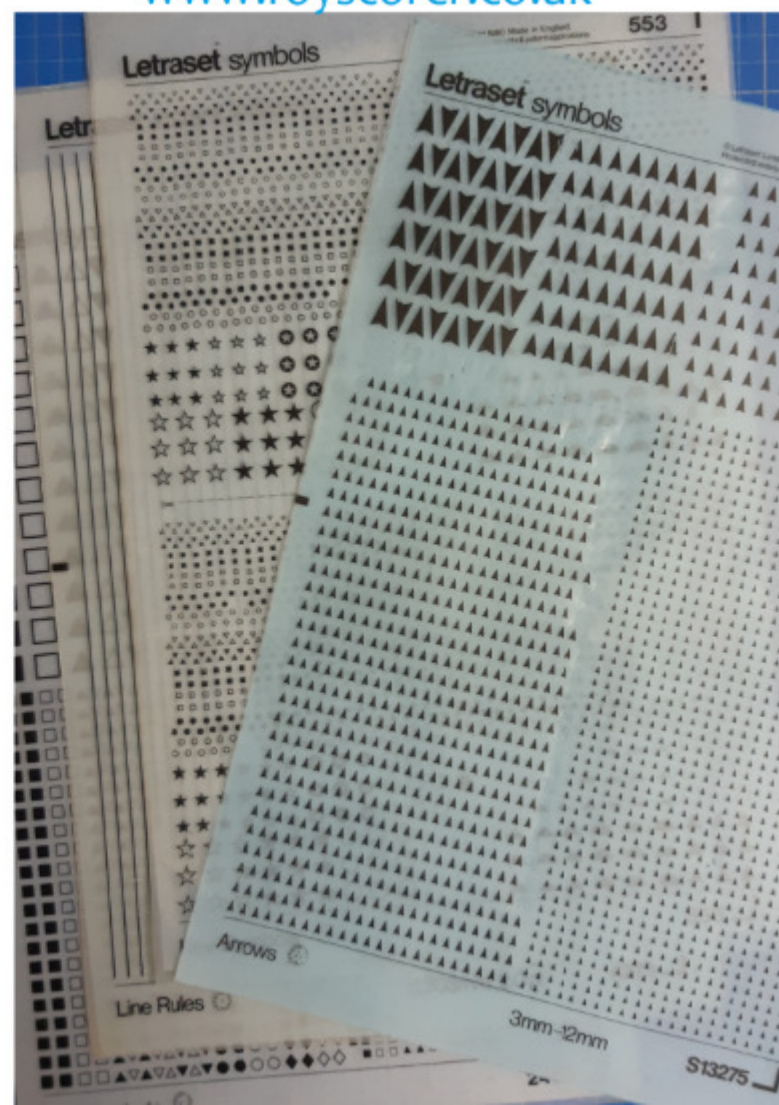
It wasn't until years 3 and 4 at Portsmouth College of Art (HND) course, that we were allowed to use nut templates. My first introduction to a symbol library. The template helps produce hexagonal nuts and bolt heads to always look the same. As pictured, it contains a limited number of sizes and degrees of ellipses. Any larger and you have to illustrate the nut/bolt head from scratch.

After leaving college in 1986, my first job was to produce exploded technical illustrations for an illustrated parts catalogue for the MCV 80, later renamed Warrior Tank. Here each page artwork was produced at A2 size, twice up A4 finished printed page. This included all the headers and footers, Equipment title and date using lettering stencils. Annotation lines had a particular size arrow head or dot from a specific stencil; again the beginnings of a symbol library.

A few years later and a new publication and new house styles. The Titles, headers and footers etc. were replaced by typesetting machines, so a lot of cut and paste; arrow head stencils and circle/dots were also replaced with Letraset sheets. I now had a folder of various symbols.

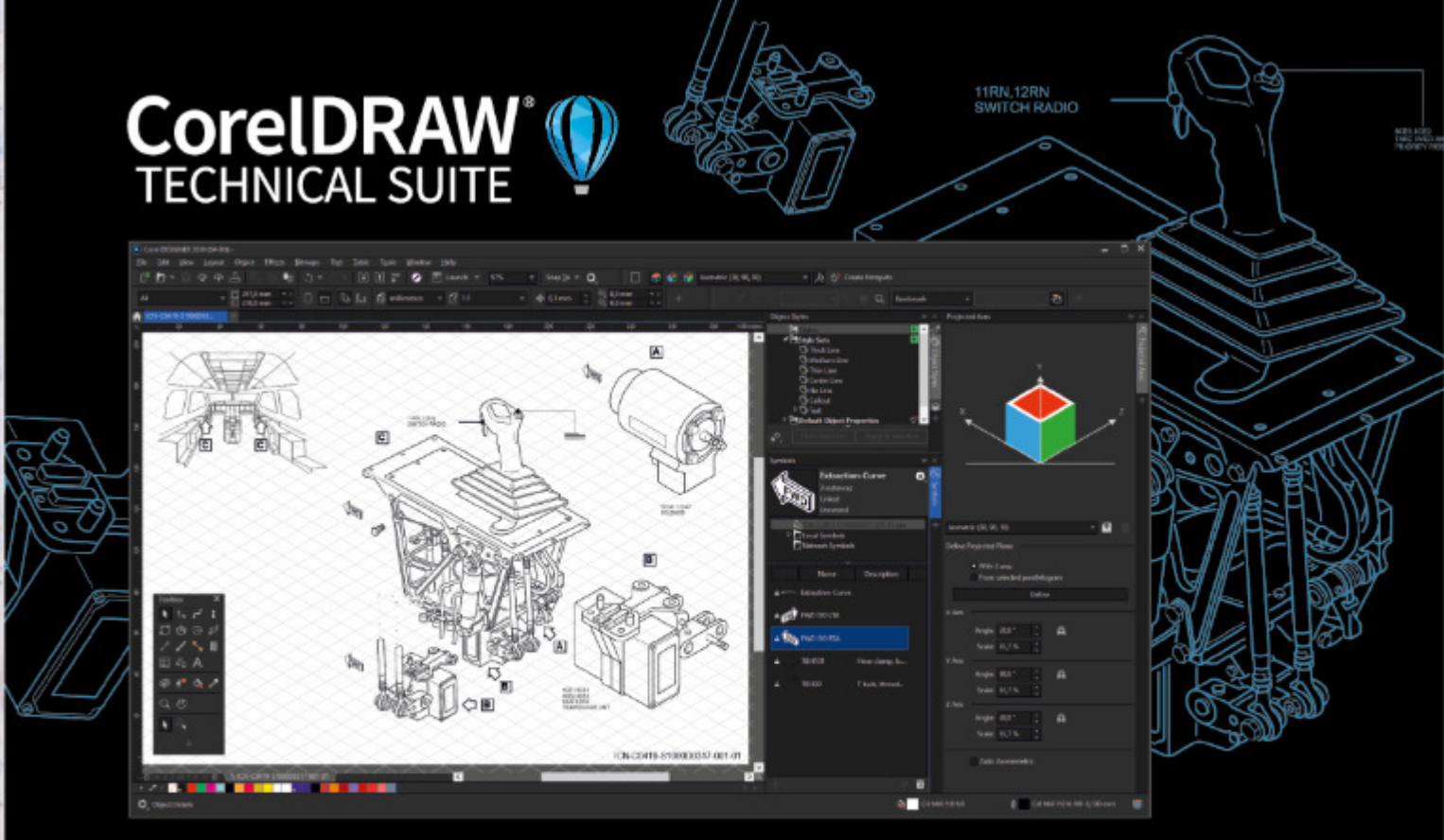


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This would be the way for a few years until the dawn of the computer. A change of jobs and work producing graphics and desktop publishing. It was then I moved to the Joint Air Delivery Test and Evaluation Unit JADTEU and a very welcome return to technical illustration all day every day. One of the first things I did was to make a symbol library for the studio to give consistency; Hexagonal nuts and bolt heads looked different from each illustrator. At college and my first place of employment it was standard practice that all hexagonal nuts and bolt heads were illustrated showing 3 of the six faces unless the nut or bolt were held in a specific place.

Name	Type	Description
Symbol 1	Symbol	
Symbol 10	Symbol	
Symbol 11	Symbol	
Symbol 12	Symbol	
Symbol 13	Symbol	
Symbol 14	Symbol	
Symbol 2	Symbol	
Symbol 3	Symbol	

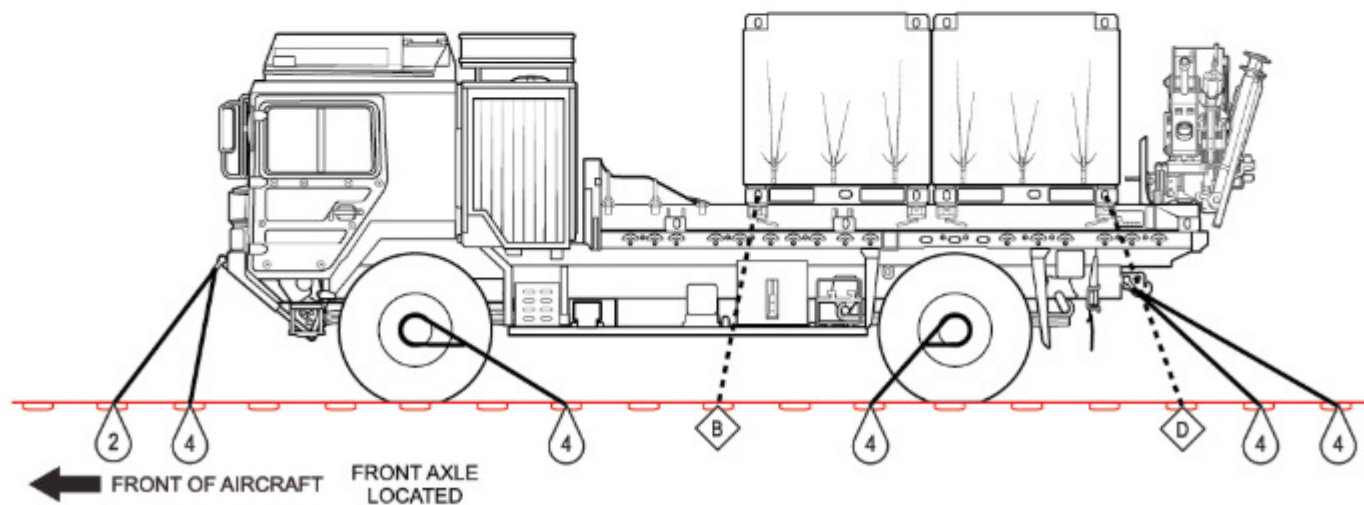
So now we have a set of symbols that are used across all illustrations and nuts and bolts now look the same.

With the introduction of the A400M to the Royal Air Force, JADTEU started a new air transport publication. That featured a more modern design, with improved layout and illustrations.

One part was the symbols for the tie-down schemes. So another symbol library was created.

Name	Type	Description
Symbol 1	Symbol	
Symbol 10	Symbol	
Symbol 11	Symbol	
Symbol 13	Symbol	
Symbol 14	Symbol	
Symbol 15	Symbol	
Symbol 16	Symbol	
Symbol 17	Symbol	
Symbol 18	Symbol	

To produce a symbol library in CorelDRAW® is very straight forward using the user



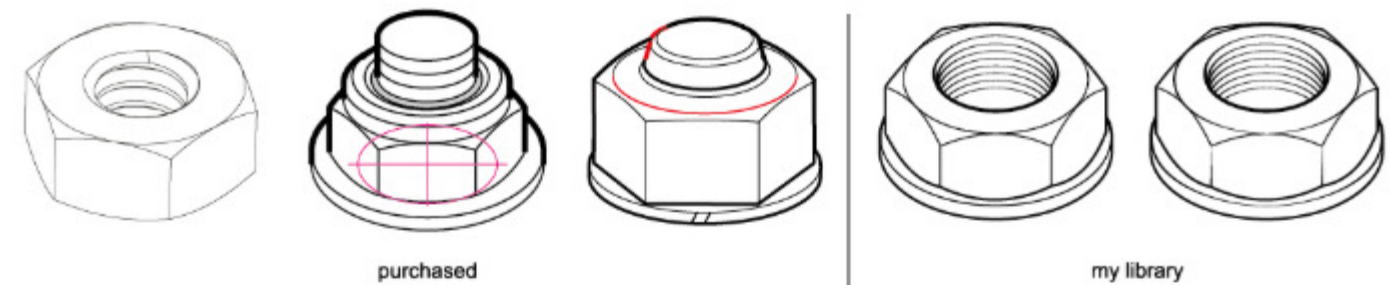
guides and manuals.

Back when illustrations were produced by hand, up size and then reduced for printing as hard copy, the illustrations would sharpen up and any minor discrepancies would vanish.

But in this digital age, it is the opposite. A lot of us are using smart phones and tablets as well as a pc to view documents, we can zoom in to enlarge some areas. This is when any minor fault with an illustration will become more prominent.

Over the years I have found several symbol libraries and purchased them.

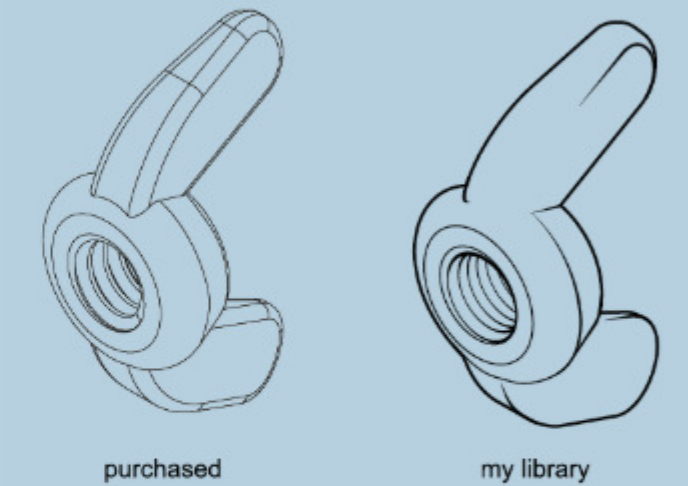
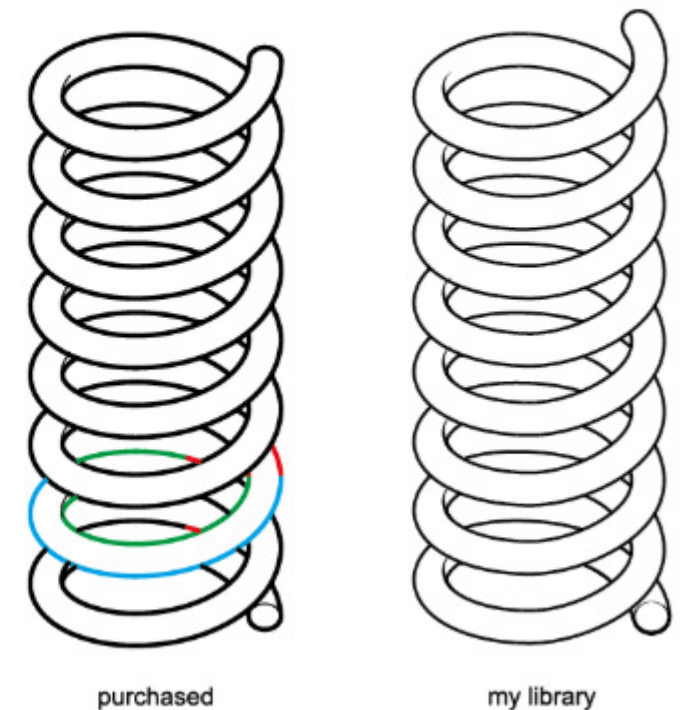
The wing nut pictured on the left is part of a purchased set of symbols/items. As I need to use an item, I improve the part and



replace in that library.

The three hexagonal nuts on the left are part of a large collection I have purchased. These have been enlarged to show what could be considered as poor quality when the viewer zooms in.

The springs show another possible problematic area. Some symbol libraries look very nice and even after you zoom in, show no defects. It is only if you wish to edit such an item that you find it is constructed with shapes and not paths. Editing it then can be time consuming, or on occasions impossible, the opposite to the purpose of a library.



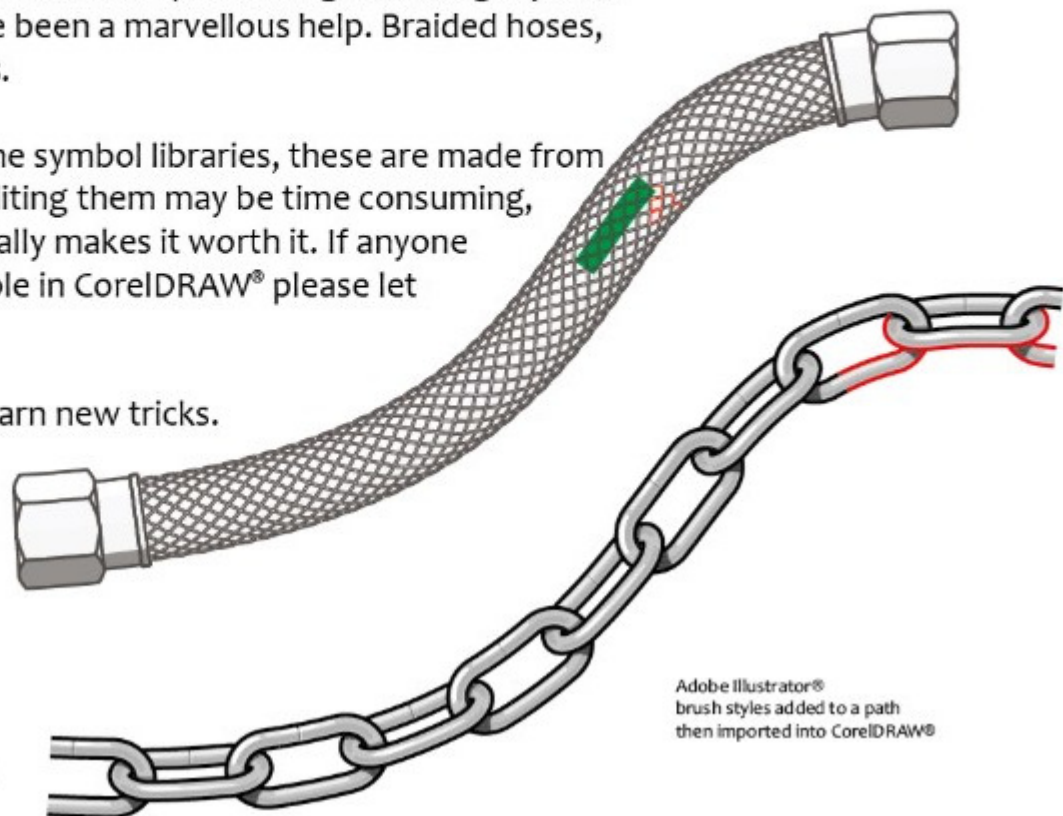


There are occasions that I dip away from CorelDRAW® and use Adobe Illustrator®. Only because I have not had the time to experiment with artistic brushes.

I came across some brushes when purchasing nut/fixings symbol libraries and these have been a marvellous help. Braided hoses, chains, wires and ropes.

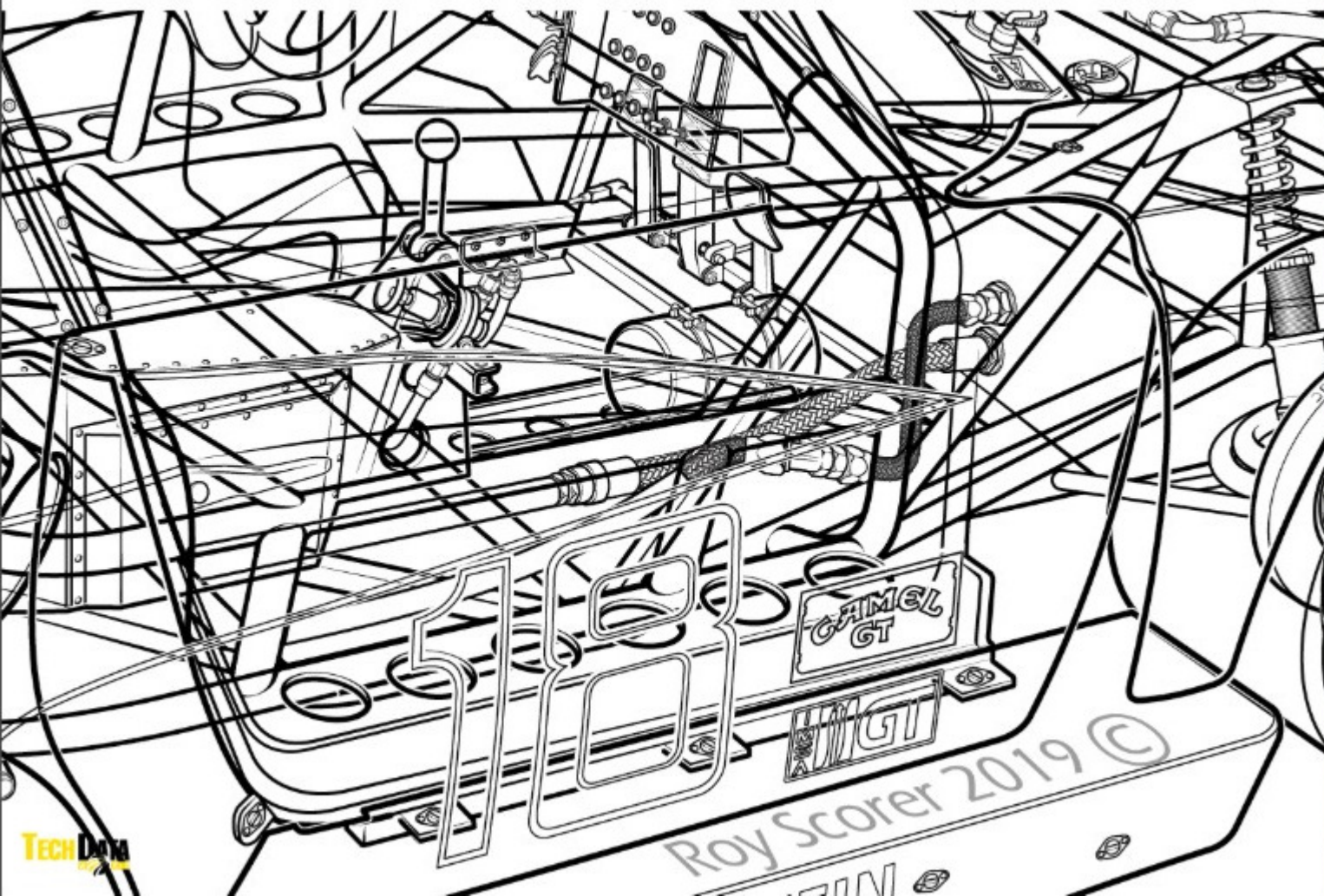
Just be aware, as per the symbol libraries, these are made from objects not paths so editing them may be time consuming, but the time saved initially makes it worth it. If anyone knows this to be possible in CorelDRAW® please let me know.

It is never too late to learn new tricks.



Adobe Illustrator® brush styles added to a path then imported into CorelDRAW®

1981 Porsche 935 JLP-3



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## RECEIVING INFORMATION FROM EXTERNAL APPLICATIONS

The second place in our example process data module where we could use the external application interface is the point at which we ask the user to use a special tool to perform the measurement of damage. Here we use a `<pushButton>` element for the user to indicate that a text box is to be populated using the data returned from the depth-o-meter intelligent tool. Refer to Figure 3

Notice that the `<externalApplication>` element uses a `<receiveByName>` (it can also use a `<receiveByPosition>`) element. The `<receiveByName>` is intended to get a value from the external application interface by the value's name. Let's say that the Depth-o-meter can provide details of the length and depth of the damage. For the acceptance limit in our example case, we don't care how long the dents, nicks, scratches and scores are – we are just interested in their depth. Therefore, we ask for the `damageDepth` parameter to be returned. Obviously, the process data module author needs to know the data names of the data returned or, if `<receiveByPosition>` is used, the position of a parameter in a list of values returned from the tool to be able to create the external application interface call.

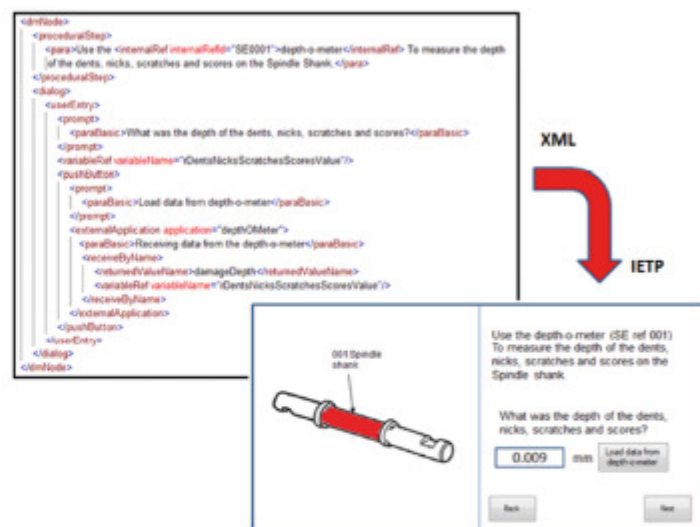


FIGURE 3 - RECEIVING DATA USING AN `<externalApplication>` ELEMENT ATTACHED TO A `<userEntry>` ELEMENT USING A `<pushButton>` ELEMENT

## MORE ON USER ENTRIES

We used a `<userEntry>` element in the last section to capture the value of the depth of damage. As we saw, user entries are text boxes with a label. We set the attribute `@mandatory` to the value "1" to tell the IETP that the user MUST enter a value before pressing the Next button – the default value if the attribute is not used. A value of "0" means the user may but does not need to enter a value.

In the `<userEntry>` use a `<prompt>` element to tell the user what value to enter. The schema provides an attribute called `@textDisplayPosition` on element `<prompt>` with values "top", "bottom", "right" and "left" which tells the stylesheet to position the label above, below, to the left or to the right of the text box respectively. See Figure 4.

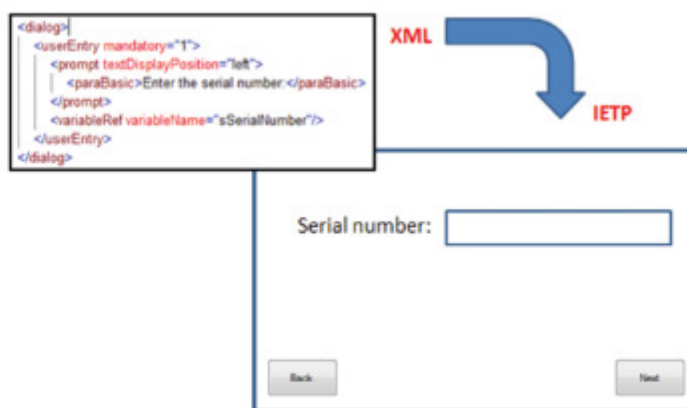


FIGURE 4 - USER ENTRY PROMPT

A user entry can be active (allowing the user to enter a value) or greyed-out (not allowing a value to be entered) by using an element `<enabledState>`. The enabled state is evaluated by an `<expression>` that it contains that depending on the result either enables or disables the user entry based on what has gone before – an example of such a dialog is one that is part of a group of dialogs and say if the part is not a serialised part, the user could be asked to enter a part number instead. See Figure 5.

There is also an attribute on the `<userEntry>` to control the visible length of the text box displayed. This is called `@dataEntryFieldLength` which is measured in characters. If you do not specify this attribute, the default of twenty characters applies. Note though that the value in `@dataEntryFieldLength` is not a maximum number of characters allowed in the text box. If the user exceeds the value, then as the user types, the text box should scroll so the user can enter more information.

A default value can be supplied by the author through the use of the `<default>` element which also contains an `<expression>`. The default value will be displayed in the text box when the node is displayed and if the enabled state is "True", the user can change this default.

There is an element `<validate>` which we saw in our example process data module that uses an expression to make sure that the value entered by the user is correct. It can check both numerical and non-numerical entries. For example we could check that a value is in a range (say 0-100) or we could check that a string is in a set of allowable strings (for example that a CAGE code entered is one of the allowed CAGE codes for a project), or we could check the length of a string using an operator.

## USER MESSAGE

The user message is designed to give information back from the IETP to the user. It resembles a message box or an alert in your favourite programming language. It comes with one or two buttons for Submit and Cancel. In the example shown in Figure 6, the attribute

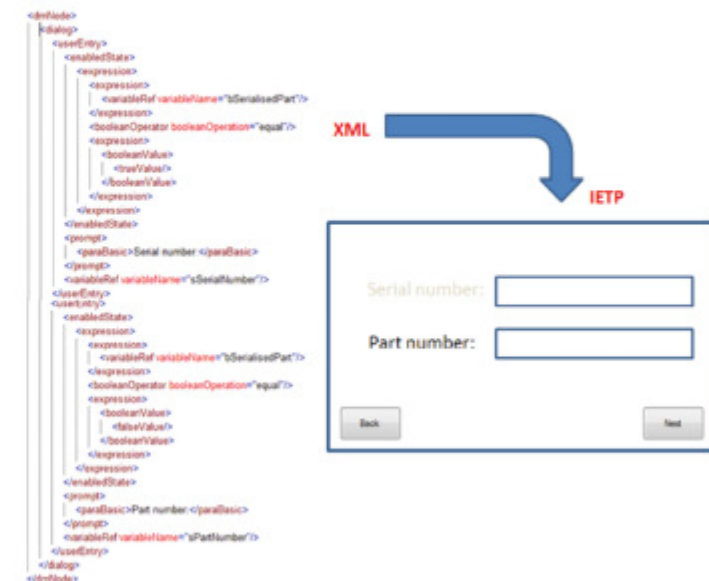


FIGURE 5 - A `<userEntry>` WITH `<enabledState>` SET TO THE VALUE TRUE FOR ONE OF THEM BASED ON A VARIABLE'S VALUE

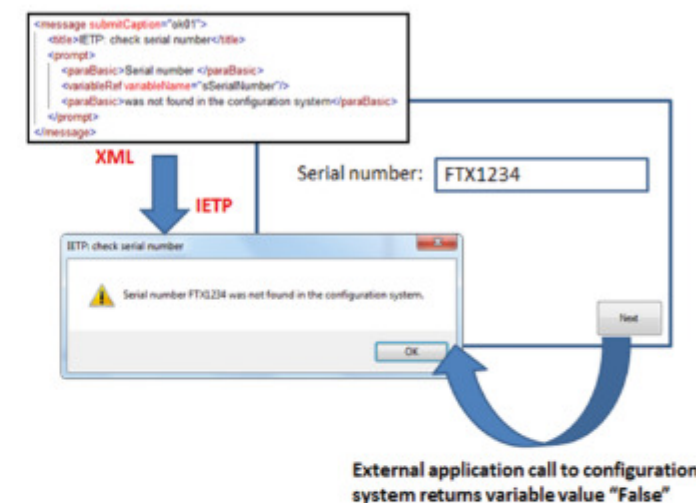


FIGURE 6 - A `<message>` ELEMENT EXAMPLE



@submitCaption is set to the value "ok01" - in S1000D this is a project configurable attribute and the value "ok01" sets the caption text on the button to the value "OK". The value of the <title> element is displayed as the message box title. Notice also that <paraBasic> must not throw a new line on the output if we are to achieve the value of the variable reference "FTX1234" being displayed inline. Refer to Figure 6.

### MENUS

We have already seen the use of the menu dialogs in the example process data module given in the previous articles where we used a <menu> element extensively. They are very powerful and allow the user to select zero, one or more menu options and can be presented horizontally or vertically as a list.

The number of values that can be selected is given through the use of the attribute @choiceSelection where a value of "multiple" means more than one menu choice can be selected and the value "single" (the default if not specified) allows just one value to be selected. An example where "multiple" would be used is shown in Figure 7 where the user selects all types of damage that have been found. An example where "single" would be used could be select a colour- say "red", "green" or "blue".

The user can also use the attribute @mandatory set to the value "1" which means that a value MUST be selected or a value "0" meaning that the user doesn't have to select any value at all.

To control the physical layout of the menu choices you can use another attribute @menuFlow to specify that the menu items are listed vertically (using the value "list") or horizontally (using the value "inline"). Figure 7 shows a dialog where @menuFlow isn't given, and therefore the default value "list" applies.

### PULLDOWN MENU

A menu with a value of "pulldown" for the

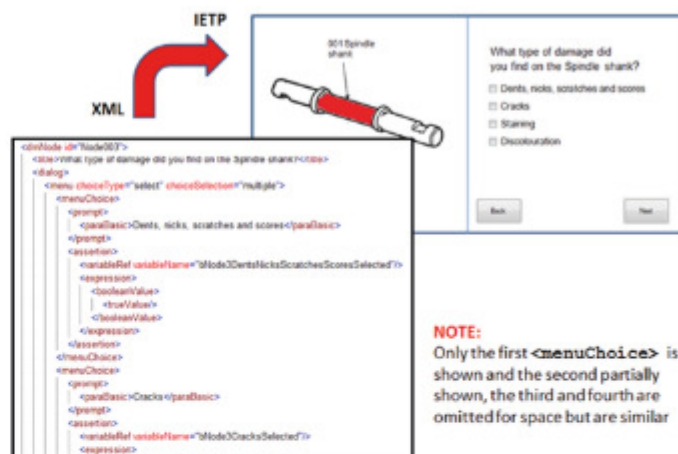


FIGURE 7 - A MENU WHERE THE USER CAN SELECT ZERO OR MORE CHOICES

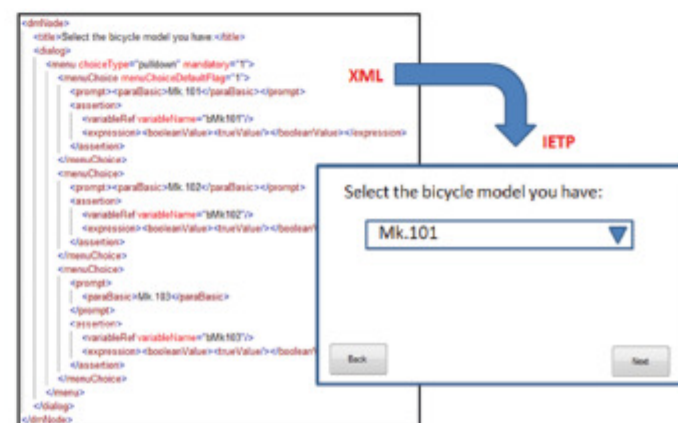


FIGURE 8 - A "PULLDOWN" MENU WITH A DEFAULT VALUE IN WHICH THE USER MUST SELECT ONE VALUE

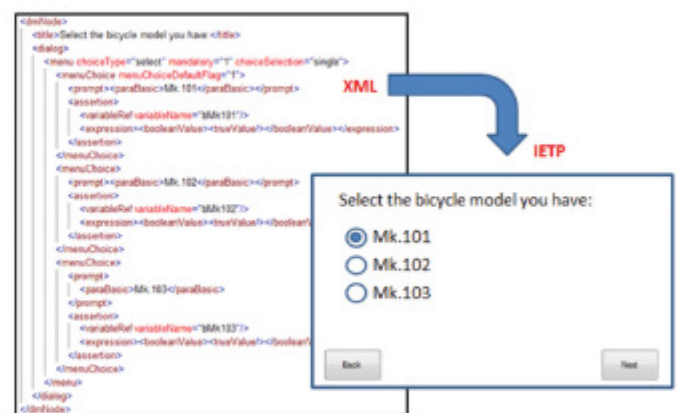


FIGURE 9 - A MENU WITH RADIO BUTTON (@choiceSelection = "single")

**NOTE:** Only the first <menuChoice> is shown and the second partially shown, the third and fourth are omitted for space but are similar

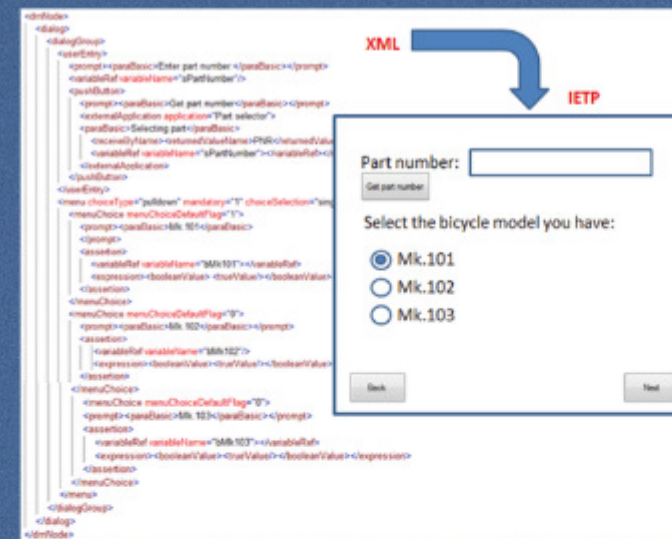


FIGURE 10 - LAYING OUT DIALOGS WITH THE <dialogGroup> ELEMENT

attribute @choiceType will display similar to Figure 8 and the user can select one value only in a drop-down list. In a pulldown menu, if you wish, you can make one of the values the default value by setting the attribute @menuChoiceDefaultFlag to the value "1" (as shown on the <menuChoice> with the value "Mk.101" in Figure 8).

### RADIO BUTTONS OR CHECK BOXES?

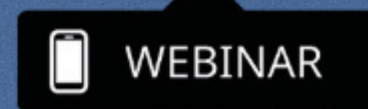
S1000D says that menus with the @choiceType attribute set to the value "multiple" are normally represented as checkboxes (a box that gets a tick mark or a blank when you select it - Figure 7), and menus with the @choiceType attribute set to the value "single" are represented as a radio button (a circle that gets a dot or a blank when you select it - Figure 9). In visual programming languages, a group of related radio buttons are mutually exclusive, meaning that when you select a radio button to "on", the others will automatically set to "off".

### DIALOG GROUPS

Dialogs can be grouped together on a node (screen) to form some quite complex dialog designs. This is achieved by using the element <dialogGroup>. To show a complex mark-up example of a dialog group would take much space, so in Figure 10 we build just two dialogs on one screen using a <dialog> with a <dialogGroup> and show again how to use an <externalApplication> to populate the part number <userEntry> text box from say the configuration system.

### CONCLUSION

So that concludes this article and, as you can see, the process data module is complex but very powerful and to create one requires a different type of authoring skill. To describe it has taken us three articles so far, and we are still not finished. In the next article we will look at expressions and operators, the interface to S1000D applicability model and the process data modules looping mechanisms.





# THE CHIEF OF THE DEFENCE STAFF – A CHAMPION OF SUPPORT ENGINEERING?

Peter Stuttard is the Chief Executive of Aspire, a Support Engineering specialist of over 40 years' experience. An ex REME aviation engineer, he has worked at senior level on a wide range of national and international programmes, from armoured fighting vehicles, submarines and combat aircraft, to tug-boats and communications systems.

So, I reconsidered, General Sir Nick Carter has to think about Support Engineering, and the argument for this is evident in his talk, for those with the eyes to see...

The first point that the CDS makes is that the world, outside of our warm, safe and comfortable Western bubble, is a very, very dangerous place. In addition to the threats that we have all become familiar with over the last couple of decades, that is the 'asymmetric' warfare that the West has engaged in Mali, Afghanistan, Iraq, Syria etc, Western militaries are increasingly also looking to prepare for potential conflicts with nation states, so called Peer to Peer, or Peer to near Peer, 'divisional' warfare. We should note, that such threats are not instead of but, as well as, the asymmetric threats.

He then goes on to talk about the new kit being acquired by our Armed Forces, he lists the Queen Elizabeth Carriers, the P8 Poseidon and Boxer. He could have included, the F35 Lightning II, Protector, Fleet Tanker, Fleet Solid Support Ships, Type 26, Type 31e, Ajax, and a number of capability upgrade programmes amongst others.

The point is that our Defence capabilities are increasingly dependent on these highly technological solutions, which are, as the General

This article is my response to the annual speech made by the Chief of the Defence Staff [CDS], General Sir Nick Carter, at the Royal United Services Institute [RUSI] this year.

I was going to start it with a comment along the lines of "General Sir Nick Carter has much more to think about than Support Engineering issues."

But, as those who know me will be painfully aware I am something of a history buff, and there is one undisputable fact from history, which I do like to point out. That is, that every great general throughout history has, without exception, been an excellent logistician. The list of such generals dates back to Leonidas, Alexander the Great, the Duke of Marlborough and Wellington, and the latter three never lost a single major battle between them.

A transcript of the Chief of the Defence Staff's RUSI talk can be found here: <https://www.gov.uk/government/speeches/chief-of-the-defence-staff-general-sir-nick-carters-annual-rusi-speech>.



states, transforming warfare.

The next point is that increasingly, we are engaged in 'political warfare' the CDS makes an interesting observation, that the assertion made by Clausewitz, namely that 'war is an extension of politics' has now been reversed and that politics, (political warfare) may be seen an extension of war. You only have to observe the manoeuvrings of Russia and China to realise that this, a form of brinkmanship, is a present reality.

You could argue that this is nothing new, the "Great Game" has been going on for a very long time. We could also argue that such an approach is the only viable strategy today, because the 'conventional warfare' technologies of the opposing states have resulted in a strategic stalemate.

The Western nations, have, as a minimum, to maintain that stalemate; we have to sustain a credible warfighting capability.

This is of course where Support Engineering comes into the picture, whilst we have fabulous technical capabilities, but they are realised by precariously small quantities of platforms and

equipment. It is also a fact of life that many of these systems are incredibly complex (there is a cogent argument that they are too complex) and such complexity introduces vulnerabilities. It is therefore absolutely critical that these technologies are maintained, in so far as is practicable, in an operational state, and that this maintenance can be achieved under combat conditions. In order to do this, it is essential that highly effective and agile support solutions are put in place. Support Solutions that can continue to perform their role even when we are engaged in high intensity, peer to peer, combat operations. In such conditions it is probable that there will be no 1st to 4th line repair because the Lines of Communication are likely to be cut or compromised and that we are losing support resources to enemy action. That is, our Support Systems need to deliver a high level of readiness and to have built in resilience, (here I am picking up on the words of the CDS, and considering them in the support context).

I believe that we are a long, long way from being able to field such a support capability today. This means, by logical extension, that the capabilities that we think we have, we do not; they are much diminished by a general lack of adequate support. 'Efficiencies' made in support resources in recent decades, the transfer of too much responsibility to industry, (or perhaps the transfer of inappropriate responsibility to industry may be more accurate) have resulted in significant operational risk being imposed on our Armed Forces.

Clearly the CDS is acutely aware of this situation, towards the end of the talk he asks the question, "And how do we improve the availability of our key platforms?"

Well, that is a relatively easy question to answer, we simply need to implement high quality Support Engineering programmes, do some 'proper' ILS if you prefer. Good ILS programmes are in truth a great rarity, I would have said a few years ago that we need to improve the ILS being implemented, but now, increasingly, I think the problem is that ILS is simply not being done at all on a great many programmes. And by 'proper ILS' I do not mean the LSAR stuffing, the proscriptive standards constrained approach, followed by too many programmes in the

past. Rather I envisage an intelligent systems and systems engineering based approach, an approach capitalising on modern IT capabilities, on implementing Model Based Systems Engineering [MBSE], on utilising Support Digital Twins, an approach where innovation is the norm rather than the exception.

I will pick up on one final point from the General's speech, he quotes Antonio Giustozzi (Google him) who, the General states, observed that "every age has its follies, the folly of our age has been an irresistible desire to change the world without first studying and understanding it."

This is the key to the problems we face in the Support Engineering domain today, the key to the lack of investment, the failure of imagination, the lack of innovation, the overreliance on proscriptive standards, the recurring failure to respond to the all too evident shortcomings of so many Support Programmes.

We do not have sufficient people who are willing, or able, to study and to understand, really understand, and then to implement, effective Support Engineering.

Given the significant Defence capabilities that we have in the United Kingdom (as outlined in the speech) this is a significant shortcoming, a shortcoming that it is imperative we rectify with some alacrity.

Perhaps the proposed Design for Support Centre of Excellence (D4S) or perhaps the UK Government's proposed review of the MOD will go some way to rectifying this situation?







After a break for lunch, a presentation by Lewis Marshall, SDL on "HOW to Publish Engaging Interactive manuals from S1000D content".

During the entirety of Day 1, the room deeply engaged with taking notes and asking plenty of great questions.

We closed Day 1 with a session spending time with the vendors in the room and the delegates heading off to enjoy the hotel facilities.

#### DAY 2 - PRACTITIONERS (TECH PUBS)

Again this year we had two tracks running, Technical Publications chaired by Mike Ingledew and Track Two, 'Support' Chaired by Peter Stuttard and the team from Aspire.

To kick-off the day, we welcomed everyone in the Great Room to start, setting the scene and giving time for the delegates to orientate themselves.

In this part of the review, I will focus on the Technical Publications Track. Lee Fitzsimons from Aspire has reviewed Track 2.

Leveraging modern technical information was the thought piece this year delivered by Mike. Showing how organisations are leveraging technical content today via the IoT and Industry 4.0, connecting the technical publication to the platform.

Technical Illustrations in the 21st century, Roy Scorer, looking at how the role of illustrations has and is continuing to evolve.

A short Coffee break over we started with a presentation from Christian Schmaehl from Corel Software demonstrating the "How "in Technical illustration ". With a massive sigh of relief, Ketul Chauhan from SAFRAN Electric and Power arrived in the nick of time to present "Deploying Technical Manuals to a Global customer base with Augmented Reality".

After a successful morning, it was lunch where there was a great deal of discussion and debate going on in the fringes around topics covered during the earlier presentations.

The afternoon session started with Fernando

# TDW-LIVE

**W**ell hello again, another year has passed, and we have just finished our annual conference TDW-Live. To say I feel overwhelmed is an understatement. The feedback I have had has been brilliant, the best since I have been attending.

The event ran again over three days, kicking off with a workshop day, two formal days split-up with our famous Pie N Pint night. (or as Don from Jana thought 'Pint and Pie' night).

Day 1 & 2 numbers far exceeded last years event, and Day 3 matching the 2018 event. It was great to see plenty of new faces, project teams and exhibitors.

We attracted new vendors Corel Software, Sonovision UK and tImNexus while welcoming back Raytheon Software, Lionbridge, SDL, CDS Defence and Security, Etteplan and Aspire, which

I thank sincerely for their continued support.

Again we live-streamed the event via our TD-iQ platform, pulling in people from Australia, Germany, Poland and more from around the world.

Our agenda focused deliberately on the how and why of technical support information – jammed full of educational presentations on HOW to achieve success.

#### DAY 1 - WORKSHOP DAY

Day 1 Workshop day, we had four presentations showing delegates how to convert an old 1970s Morris 1100 Workshop Manual.

The first presentation was "How do we convert a paper-based manual into something more modern and useful ". Emphasis placed on why

# #9

*A review of the 2019 event  
- Claire Ingledew - conference Director*

we would want to convert content and the technologies and tools used.

A short coffee break and then it was into "Applying STE principles to legacy content". Ciaran Dodd pulled apart elements of the old Morris Workshop Manual and showed how the content is created today with STE.

Part Two of the conversion presentation looked at "applying S1000D and DITA Principles". Comparing S1000D to DITA and looking at the level of effort required to embark on a strategy to adopt either methodology.



Alvarez from Raytheon Software presentation on "BBMF Digital Transformation" (persevering the past, preparing for the future) using the Spitfire platform and the migration from 1930s technical manuals to S1000D based IETP solutions.

A regular supporter of the TDW-Live event, Etteplan with a new face this year! Roy Winjnen as regular contributor Berry Braster was over in the states, Roy presented "Verifying our technical content to STE" using the Etteplan STE Checker.

We had our last break of the afternoon a quick coffee and cake then back to Don Bridges from Jana Inc who had travelled in from the USA to present "S1000D, DITA or something else - What's your requirement?". A fun and engaging presentation around S1000D v DITA with prizes handed out to delegates during the session.

With the Supportability Track finishing, we joined together for the last presentation of the day with Mark Willis from CDS Defence and Security. Marks presentation on "Breaking out of the technical publication stove-pipe - an integrated support engineering offering" showed how CDS is changing the approach to technical publications for their clients.

Day 2 ended with delegates being able to speak to the vendors around the room and for those who were attending the Pie 'n' Pint night a chance to go and freshen up.

## THE TDW-LIVE AND OUR FAMOUS PIE 'N' PINT NIGHT.

We welcomed new faces to the Pie 'n' Pint this year. It was lovely to see people talking work and also just general day to day conversations. I had a great discussion with Ciaran Dodd, Suzanne Smith from Corel Software and Emma Wrigley (JADTEU). I can't remember the last time I laughed as much as I did that night. It wasn't just our group the atmosphere was great all night laughing and joking, it was fantastic to see everyone letting their hair down.

### DAY 3

Another full day with eight compelling presentations!

To start the day we had Dr John Erkoyuncu from Cranfield University with an update on Augmented Reality. We moved nicely into Kamal Rassool from PTC with an exciting introduction "Beyond the IETP" The Next Generation of Technical Publications, looking at how PTC is addressing crucial industry challenges.

Then came Ian Milward with an update on DE&S Technical Publications Policy, Advice & Guidance. Then followed a quick coffee break to recharge the batteries.

Everyone recharged, we welcomed for the first time Dr Mike Day from Rolls-Royce with "Why Do All the Tagging and Not Use It?". The

audience deeply engaged with what Mike had to say taking plenty of notes.

We also welcome for the first time Lt Col Chris Ireland, Wildcat, who was due to present on Day 2, but last-minute work challenges forced an agenda change to Day 3. Chris presented on support challenges around the Wildcat and also talked about the capabilities of this fantastic piece of equipment.

A short lunch break gave everyone time to have a last-minute chat with the remaining vendors, then downhill for the last presentations.

Closing this years event was Peter Stuttard and then Mike Ingledew, Peter looked at when support goes wrong and then Mike gave an update on Industry, Trends, News and Topics.

The event finally closed with an endnote from Mike, wishing the delegates a safe onward journey and announcing the dates for TDW-Live 2020 - our tenth birthday!

For me this year I found myself understanding a little bit more but I know I have a long way to go. Please, when I see you next year remember if I look a little lost, I will try and answer as much as I can if not I will quickly call for the man who fronts this whole thing for help ;-)

It leaves for me to say a huge 'Thank You' to all our vendors and delegates for your support again this year. Without you, the event would not be as unique as it is. I hope you all found it exciting and useful and I look forward to seeing you at TDW-Live#10 - dates agreed, and registration will open in February.

Presentations - have all been released on TD-iQ, if you attended the event you have access to the presentations. TD-iQ subscribers have access as part of your subscription. If you did not participate in the event and would like information on how to access the recordings, please contact me directly

([claire@techdataworld.com](mailto:claire@techdataworld.com))

Until TDW-Live 2020 - **Claire**





## TDW-LIVE #9 - SUPPORT TRACK REVIEW

— LEE FITZSIMONS

The theme of this year's Support Engineering stream was context and, like context itself, the theme permeated through the day and stitched together the individual presentations. The stream started with Peter Stuttard and Lee Fitzsimons of Aspire setting the scene with a discussion about the importance of Support Engineers understanding what it is that they contribute to and how, through the lifecycle of an activity, their perspective must change from the wider context to the narrowest, most detailed and then - crucially - back out to the widest to make the best decisions.

Peter went on to discuss the importance of strong leadership in the Support Engineering field. His presentation kicked off with a quote from a recent National Audit Office report into the Ministry of Defence which stated that '...the Department has resorted to short-term decision-making, increasing the longer-term risks to value for money and the likelihood of returning to past poor practices...'. Citing the importance of Support Engineering Peter went on to describe some trends that have been seen relating to a lack of, weak or misguided leadership in the field of Support Engineering - chief of which is a tendency, on large procurement programmes, for Support Engineering to be led by contract rather than being led by good principles. It is notable that there were no representatives from the MoD in the room but general agreement among the industry peers.

Robin Smith, of Arke Ltd, discussed an ongoing study - on behalf of DSTL - into the potential impact of additive manufacturing techniques on logistic demand. A fascinating overview of the techniques that are included under the umbrella term 'additive manufacturing', or AM, and an in depth look at the way the study has approached the 'horses for courses' relationship between different AM techniques and the unique



challenges experienced by each of the land, sea and air domains of UK Armed Forces. The key takeaway from Robin's presentation was that additive manufacturing is simply another (albeit very impressive) tool in a wider manufacturing toolbox. The feeling from the audience was that the deployed manufacturing capability as a whole would benefit from a holistic overhaul which would have to include topics like the complexity and robustness of modern equipment, restrictive support contracts that encourage 1st to 4th line repair and the dwindling skillsets of Armed Forces engineers. Needless to say, the conversation here was pretty wide ranging.

Luca Leone is involved in a number of projects in the workspace. For TDW-Live he was presenting as the Head of Programme for the ambitious AERALIS project and as the Cyber and Skills Lead for Team Defence Information. Luca shared updates on the activities of TDI and AERALIS. The latter, in particular, was met with keen interest from the audience; projects like AERALIS don't come around often (More information on AERALIS can be found here: <https://aeralis.com/>). The final point of Luca's talk introduced the audience of Support Engineers to a proposed concept for a Design for Supportability Centre of Excellence (D4S) which was being driven by TDI, AERALIS, Aspire Consulting Ltd and a number of other industry partners. Key to the concept is the idea of a physical workspace where Support Engineering best practice and emerging technologies can be demonstrated. When the audience were asked if they would use it, the response was a tentative yes. It was tentative because the majority of the audience were support engineers who provide service into

Defence, there were no representatives from Defence (UK MoD, DE&S etc.) in the room.

Following Luca was a presentation that was prepared by Chris Preston of the Defence Logistics organisation. The presentation was delivered by Peter, on Chris' behalf as Chris was unable to attend. Written to provide Chris' educated opinion on the future vision of defence logistics with a specific focus on the exploitation of science & technology. Chris reinforced Robin's earlier presentation regarding additive manufacturing and it's presence as a potential key development moving forwards but added concepts like robotic autonomous systems and artificial intelligence in support. Those development areas have been around for a while and are being well exploited in industry, Defence is trying to work out how to best exploit it. Looking forward, though the technologies to improve key support areas of energy, nutrition and water are beginning to get the focus that they demand. It is difficult to host discussion on a presentation that was being delivered but, one of the key talking points was the image of the Defence Support Network concept. The 'more experienced' support engineers in the room met this with a little cynicism among the because visions like these seem to come about reasonably often. It was healthy cynicism though that fuelled some good conversation and conversation is, I think, the only way to measure success at these events.

I volunteered for the 'graveyard' shift and, with dwindling numbers, I presented a slightly glib exploration of the effects of performing, or asking questions of, analysis at the wrong level of a Support Engineering construct. On a large procurement programmes it is absolutely right to expect all organisations involved to contribute to the Support Engineering activities but asking - as in my example - a ladder manufacturer how severe the failure of their ladder is to something like a ship, simply doesn't make sense. It's a trend though, that is seen often.

A good, enjoyable day of healthy discussion between support engineers from industry. The challenge for next year will be to get some of the customers into the room and have them engage with that conversation.



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## How do we access the presentations from TDW-Live?

All presentations are now available on TD-iQ, if you attended the event or are a full TD-iQ subscriber you may now access the recordings. If you did not attend and are not a subscriber you can contact us at TDW to discuss how you may access the recordings.

## Please don't retire the cartoons on the cover of the magazine!

OK, OK, the only reason I suggested retiring the cartoons was down to the fact that I am slowly running out of ideas for the cover! We have discussed it here internally and have given the magazine cover a stay of execution. However, if you do have suggestions for the cover please do send them in and we will have them created by our cartoonist! I am glad you like the cartoons.

## I found your tutorial with MindManager really useful - do you suggest how else we can use this tool?

I am glad you found it useful, please follow our channels as we use MindManager for a number of tech docs related tasks and we will show you more how you can really use this affordable tool to great advantage.

## What do you think about the S1000D CIR's are they good or bad?

This is a great question as the CIR (Common Information Repository) capability in S1000D polarises opinion. From the 'no way' to the 'these are the best thing since sliced bread!' The genuine reality of the CIR (and I hate to do this) it depends! It depends on your own work-flows, requirements and needs. I have bumped a CIR tutorial up the list so we can get it up on TD-iQ.

## Where did TD-iQ go? It's vanished!

You are the unlucky one! Over the holiday period we upgraded our server and this was the one where TD-iQ is hosted. We had to take the server off-line for a while to perform the migration process and of course it did not go as well as planned! You should be good now.

## Where has your web-chat gone?

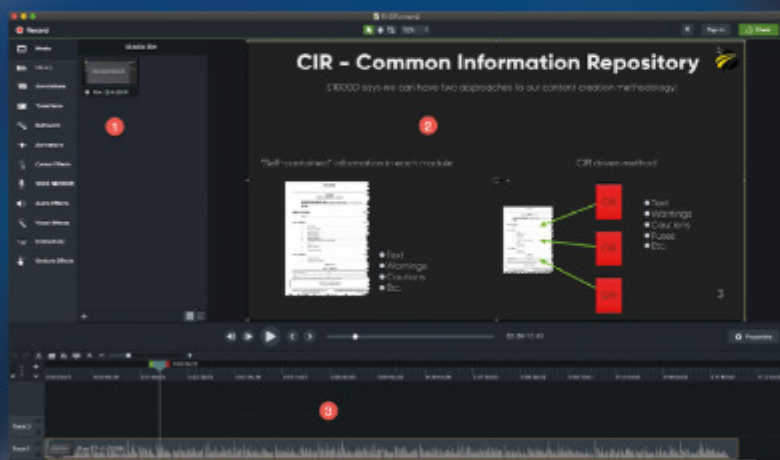
We removed it, we looked at the number of chats we were getting and then looked at the type of chats. In the main we were being pestered by those looking for a new career opportunity. We found that those actually requiring TDW type support contacted us via email and phone, so we have taken the chat off all of the websites.

## You've said a couple of times you're retiring the members website and migrating to the app - can we keep the website?

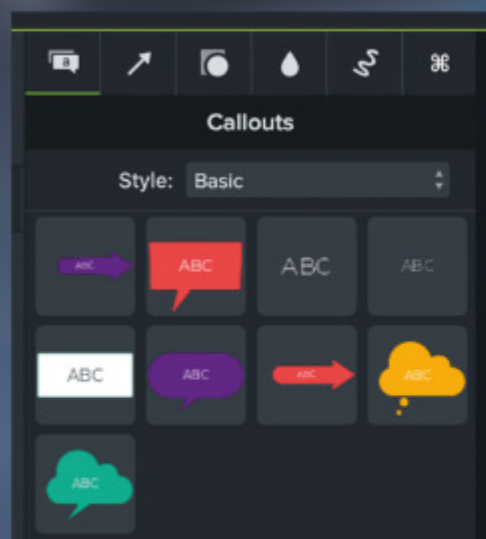
Yep! You're about the fourth or fifth person to ask, so we'll keep it for now, it's just another thing we need to manage, but will keep it up for as long as is practicable. Our longer term objective is to move content into our app, this is simply where the majority of people are accessing our content.



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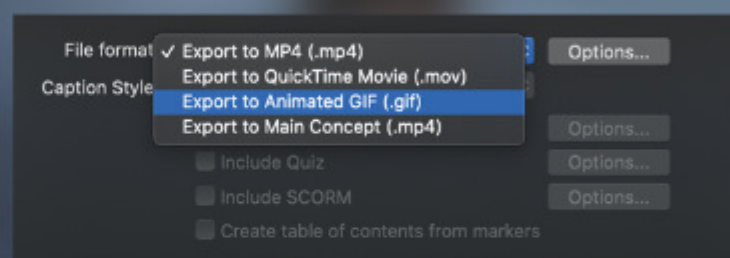
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## ON THE COVER

The TDW van on the road - someone has used the term "TDW Mystery Machine" which we love! We plan to bring you more images from our road-trips and publish them each quarter in the magazine.

If you have any suggestions or ideas for the cover of the TDW magazine - let us know and we will get our man to do it!

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