Communicator

The Institute of Scientific and Technical Communicators

Winter 2020

Focus on Standards

- Celebrate UK Technical Communication Awards
- Discover standards: ISO 20607:2019, S1000D and EN IEC/IEEE 82079-1
- Learn about data visualisation
- Plan your eLearning

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Contents

Winter 2020

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From the editor

Welcome to the Winter issue

For each issue, I read all the articles and find I often learn new things from them. I find it interesting to read a wide variety of topics and subjects and see how information gleaned from one can be used in another area. From this issue I've learnt some new terms; I hadn't come across governance, RACI, or LX before. Do you know these terms? Explore this issue of *Communicator* to discover more.

Focus on standards

Do you have guidelines that must be followed in your work? Some of these may be defined by your organisation, by your industry, by your team, by you. This issue focuses on standards.

Margaretha Hopman explains in detail ISO 20607:2019 Safety of machinery – Instruction handbook – general drafting principles.

Terry Howard investigates using S1000D, the international specification for the procurement and production of technical publications.

Ferry Vermeulen has created a guide to EN IEC/IEEE 82079-1 Preparation of information for use (instructions for use) of products — Part 1: Principles and general requirements.

eLearning has its own guidelines that you can follow for creating material suitable for learners. Helen Hill helps you plan your eLearning.

Governance is looked at by Chris Hester. What it is and how you can apply it is covered by her article.

Improvements

If you're wanting to improve how you share your data, Sawsan Khuri's article looks at data visualisation and how it can be used to change your perception of data.

Virginia Soares has tips for improving how search engines find your online content.

Ways of working

In Karen Mardahl's organisation, Agile methodology is used. She gives her thoughts on Agile especially in relation to the talk by Matt Reiner at this year's TCUK Metro.

John Flannery creates a different type of documentation and he helps you understand what REST APIs are.

Brexit

Has or is Brexit having an impact on how you write your content or how you and your organisation comply with standards? If you'd like to share your experiences, write to the letters page, or send me an email with ideas for writing an article.

Finally

As you will have noticed, the look and feel of Communicator has changed. In my role as *Communicator* Editor I have been working closely with the typesetter to try and bring you something that has a more modern feel. We hope you like it, and if you have any feedback, please let us know.

Happy reading. ■

Communicator volunteer required

Every issue of *Communicator* contains a book review.

Communicator is looking for someone to coordinate the book reviews. You'll need to find the books to review, find the reviewers and submit the book reviews on time for each issue.

Could you do this? Email Katherine or email the current Book Review Coordinator at bookreviewmanager@istc.or.g.uk for further details.

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Communicator
The quarterly journal of the ISTC
ISSN 0953-3699

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Subscriptions
www.istc.org.uk/subscribe-to-communicator

Guidelines
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2021 dates

Spring	copy by	24	January
Language	published	12	March
Summer	copy by	9	May
Trends	published	25	June
Autumn	copy by	22	August
Diversity	published	8	October
Winter	copy by	24	October
Visuals	published	10	December

Back issues
www.istc.org.uk/publications-and-resources/communicator/archive-of-back-issues
(ISTC login required)

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Printed sustainability by Greenhouse Graphics, an ISO 14001 accredited company

Letters from readers

Do you have something to say about the articles in *Communicator*? You can share your views on this page, or through the ISTC online channels.

Real world?

Alan wrote:

I'm really not sure if I'm living in the real world or not.

Every time I read *Communicator*, I feel either I'm not in the real world or that other communicators live on a different planet to me.

I started as a technical trainer in 1974 and a technical author in 1990, when documents were hand-written using a pad and pen, then sent to an agency for word-processing. Desktop computers soon came along, and I was soon bashing the keyboard using WordPerfect 5.1 for DOS. Things in my world have changed little since those days — I now use Word instead of WordPerfect.

I've worked as a contractor/consultant in technical documentation and technical training for more years than I care to remember and for many different companies and organisations both in this country and overseas in the Far and Middle East and Europe. I've worked for many years in the nuclear power industry as well as other sectors, including oil and gas, maritime, manufacturing, wastewater, government and legal — even for the fishing industry!

The astonishing fact is that I've never been asked to use anything other than Word in technical writing, and Adobe Acrobat for presentation on CD/storage device or print. No one seems to have even heard of MadCap Flare and most haven't heard of Adobe FrameMaker or other software either. Adobe InDesign was used in one organisation I worked for, but not by authors; only by page-layout personnel (the authors used Word). Again, most authors I've known haven't even heard of it, let alone used it.

I've also spent many years in technical and English language training, but nothing is used except Word and PowerPoint.

Fairly recently I was head-hunted to go to a European country to edit all the documentation on a multi-billion-dollar engineering project. I was specifically asked to mark-up, using a red ink pen, all the printed documents given to me by the engineers/authors. They all used Word to produce their documents which were then printed and passed to me to mark-up. After editing, I then passed them back to the relevant author for him/her to incorporate the changes in their document. I also had to photocopy every edited document and pass it to the person managing the project. I also scanned each edited document and retained it as a .pdf file. I might add that the changes I made were linguistic (multi-national team), not technical — the project manager checked the technical aspects.

Yet, every issue, *Communicator* is crammed with information about all sorts of software used in writing and training. Just exactly WHO uses it? Is this wonderful software only used by academics and software reviewers? It certainly isn't used in the real world where I live and work. In fact, most technical authors have never been trained as writers; they are simply highly knowledgeable people, usually engineers, who have been asked to write technical documents. The only software they are familiar with is Word and that is what they use. End of story!. ■

To have your say

Email communicator@istc.org.uk or get in touch through our ISTC_org social media channels.

ISTC Business Affiliates

Thank you for your continued support.
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as at 30 November 2020

Gold

Morson Projects
www.morson.com

Silver

3di Information Solutions www.3di-info.com

MadCap Software www.madcapsoftware.com

Technically Write IT (TWi) www.technicallywriteit.com

Bronze

Armada	www.armada.co.uk
Cherryleaf	www.cherryleaf.com
ESTON Training	www.estontrg.com
Firehead	firehead.net
Geo Language Services	www.geolanguages.co.uk
Interactive Technical Solutions	www.its-l.co.uk
The i-Team	the-i-team.co.uk
Omnilingua	www.omnilingua.co.uk
PSBT (Polskie Stowarzyszenie Biur Tłumaczeń)	www.psbt.pl

President's View

Introducing the new President, Linda Robins.

Introduction

I am pleased to be writing my first President's view having picked up the baton from Carol Leahy. I'd like to thank Carol for her enthusiasm and encouragement, and look forward to continuing to work with her on the ISTC Council. My aims are to promote the ISTC as the home of technical communication professional by:

- Providing our members with a community and resources for continuing professional development.
- Attracting members from the new roles in technical communication.

I have gained a great deal from my ISTC membership throughout my career. I have been on the ISTC Council since 2006; my responsibilities have included: Membership, introduction of the Junior Member Mentoring Scheme, Resources and UK Technical Communication (UKTC) Awards. Through long involvement with the ISTC Council, I have a good awareness of the way the groups work and how improvements are made. I bring this knowledge to the role of President together with energy and enthusiasm for initiating and implementing change.

How to progress

The President is responsible for the management of the ISTC Council and its functions. I believe that the present structure and organisation are sound. There is a strong presence of expertise and experience; we also have new ISTC Council members with the prospect of more, all bringing fresh ideas and eagerness. I am resolved to harness the strength of the ISTC Council in pursuit of my aims.

This is a critical time since we now need to publicise the value of membership of a professional body; it is not necessarily viewed as a career 'must'. Also the ISTC Council must reach out to a new wave of technical communicators engaged in newer roles such as information design and content management to ensure they know that we are there for them.

ISTC Council news

Many thanks to the members who have recently completed their terms on the ISTC Council: Alison Peck, Darren Mitcham, Derek Cooper and Ellis Pratt. We have all benefitted from their ideas, dedication and commitment. We welcomed four new members to the ISTC Council at our recent AGM: Andrew McFarland Campbell, Chris Knowles, James Bartley and Warren Singer.

We welcome prospective ISTC Council members to join an online ISTC Council meeting as observer to find out more about how we work. We also have opportunities for volunteers to join project teams or help with regular activities.

Changing times and methods

We are all adjusting to changing circumstances due to the COVID-19 pandemic. Our Horace Hockley Award recognised the importance of accurate and timely communication in this context. The award was presented to the Government Digital Services team for their commendable work in populating and maintaining the GOV.UK website with COVID-19-related regulations and guidance.

We have had to work differently and adapt to changes in our clients' ways of working. Those lone authors used to working from home have become 'dispensers of wisdom' to new arrivals to the regime. Productivity has increased in many cases without the distractions of the office environment. However, there are concerns about prolonged isolation to be managed. There are serious considerations in adjusting to and even establishing a new etiquette for online meetings and to managing people remotely. New guidance is emerging from training providers for online learning. The ISTC Council are contributing here and will continue to do so.

I have encountered one potential issue that has been exacerbated by remote working: How do we manage meetings and discussions such that all participants can speak without interruption? In online sessions, the usual cues may not be available, and specific protocols can act against smooth flow of conversation. A newly published book may well help: 'The Promise that Changes Everything. I won't interrupt you' by Nancy Kline director of the Time to Think global leadership development and coaching company[1]. The book has a broad aim to encourage independent thinking with the assurance for an individual that a speaker may have the opportunity to explain and develop ideas. I am in process of working through the principles and will report back.

Plans for 2021

TCUK Metro

This year's programme arranged as an online meeting ensured that we did have a conference and two speakers engaged for our original conference in London were able to participate.

We're now planning for TCUK Metro online due to the present cirucumstances and interim TCUK online sessions have been introduced.

UKTC Awards

Following the success of this year's event, we will be increasing publicity to attract even more quality entries for 2021.

And more...

We plan to progress initiatives for *Communicator*, Marketing and Resources in the short term; more of these in the next issue of *Communicator*. ■

Linda Robins FISTC

president@istc.org.uk

1. 'The Promise that Changes Everything. I won't interrupt you' by Nancy Kline Penguin Random House UK: ISBN 978-0-241-42351-6 2020.

ISTC President's Award 2020

A worthy recipient, Elaine Cole was presented with this award in recognition of her excellent service to the ISTC with ASL.

"Elaine worked with the ISTC from the May 2008 until her retirement at the end of 2019. She was very influential in setting up the service and continued to go 'above and beyond' in her management of all aspects of our administration with an obvious desire to help ISTC to succeed."

When Carol Leahy (immediate Past President) invited me to accept the President's Award, to say I was overwhelmed is an understatement. The invitation was completely unexpected and to be honest, it felt a bit strange to be awarded for doing my job. However, it was very gratifying to know that my work was being recognised in this way so I felt truly honoured and delighted to accept it.

ASL[1] took on the administration of the ISTC in May 2008 just as we were moving office to Airport House in Croydon and I was assigned as the ISTC's Executive Administrator. The administration was mainly carried out in Airport House by me and other team members in Croydon with the bookkeeping being undertaken in Yorkshire. In those early days ISTC Council held face-to-face meetings every quarter on a Saturday but after a year or so, the face-to-face quarterly meetings changed to bi-monthly virtual meetings with an annual face-to-face meeting in November, and of course the AGM held during conference.

ASL carried out the conference administration for the very first TCUK in 2009 which was held in Derby. Paul Ballard was the first conference Chair of TCUK, followed by David Farbey and Derek Cooper. Although conference was a whirlwind of activity it was always lovely to see ISTC members, many of whom have become friends and who I miss being in contact with on a regular basis.

In the course of my time looking after the ISTC administration, we implemented a number of improvements and which my successor, Chantel Sankey is continuing to do.

2020 has been a very strange year, for us all, and nothing like I expected my first year in retirement to be. Plans for holidays and outings have been put on hold but on the plus side, I have met people in my village, which I might not have done had I been gadding about! Let's hope that life will improve for us all.

I wish the ISTC and its members every success for the future. ■

Elaine Cole

1. ASL is the name of the organisation which provides the ISTC with administrative services, since 2008.

Member news

as at 6 November 2020

New members

A warm welcome to all new members who have joined the ISTC.

Member

Nadine Beasley	Dorset
Mhari Duncan	Scotland
Sarah Eager	North Ayrshire
Olivia Gwyn Jones	East Sussex
John Pickett	Switzerland

Junior

Johanna Coleman	West Yorkshire
Ewa Ilkow	Ireland
Eleanor Lovelock	South Yorkshire
Jacqueline Massenhove	Essex
Lucy Warwick	Oxfordshire
Martin Williams	Isle of Wight

Student

Laura Cannon	Northumberland
Joann Rowlands	Cheshire
Stephen Wild	Berkshire

Transfers

Congratulations to all on your new membership status.

Member

Mark Monaghan	Edinburgh

Rejoiners

Welcome back! We hope you gain much from your membership.

Member

Claire Annand	Hertfordshire
Anthony Diserens	Anglesey
Chris Hanley	Lancashire
Daniel Jennings	Oxfordshire
Jim Snowden	Berkshire

TCUK Metro 2020

The annual conference, hosted by the ISTC, was held online on Tuesday 29 September 2020.

Background

We had planned to break with recent tradition and host a one-day conference in London for 2020. This was tagged 'TCUK Metro' as a value-for-time-and-money opportunity for our members and TCUK Conference delegates alike.

In the event, restrictions owing to the COVID-19 pandemic meant that TCUK Metro broke different newer ground as the first virtual TCUK Conference courtesy of Zoom. Thanks to ASL[1] for making this such a positive practical experience and to our delegates for engaging so readily and enthusiastically.

Activities

The programme offered the essentials of the Conference experience as follows:

ISTC Annual General Meeting

The AGM was for ISTC members only ahead of the main conference. This was chaired by Peter Fountain as Secretary.

Award presentations

The presentations were open to all delegates. The awards were presented as follows: (for more details see page 28):

- UKTC Awards Overall winner: **Surpass Help Site** by BTL Group
- UKTC Merit Awards:
  - **Kedro Technical Documentation** by QuantumBlack Labs — *Judges' commendation,*
  - **Distitch** by Assia Brill and James Bartley
  - **Cognidox Online Help** by Martin Ley from Em-Dash Publications
  - **Mobile LPG Filling Truck Sales Brochure** by Koslan Crisplant Lanka (PVt) Ltd
  - **iHASCO Knowledge Base** by Spirit Software Ltd and iHASCO Ltd.
- *Communicator* Article of the Year:
  - **Helen Hill** for her series of articles on eLearning. (see page 12).
- **Horace Hockley Award:** to the Government Digital Services Team for maintaining the GOV.UK website during the COVID-19 pandemic, see pages 10-11.
- **Mike Austin Award:** to **David Farbey** for outstanding service as ISTC member and as an influential ISTC Council member, see page 9.
- **President's Award:** a special award for **Elaine Cole** in recognition of the excellent service to the ISTC with ASL, see page 7.

Webinars

These were introduced by Ellis Pratt as follows:

- **Matt Reiner:** 'How to Rapidly Create Documentation within an Agile Process'. Matt talked us through a five-stage process to develop and deliver documentation alongside the product as part of an agile development framework.
- **Nancy Labri:** 'Tech Writers Without Borders'. Nancy spoke to us about the non-profit organisation "Tech Writers Without Borders" who have been supporting initiatives around the world by pairing up volunteers with worthy causes.

The webinars were informative, thought provoking and well received by Conference. Questions were answered after each session with the promise of follow-up correspondence as required from both presenters.

Conference concluded with an informal discussion among delegates following up on ideas raised on the day.

Feedback

The post-conference survey provided positive answers to the Conference form and content. The replies were sufficiently detailed to conclude that the online programme was approved and delegates would attend again. There were suggestions for improvements to the form, also several useful ideas for future consideration.

Looking ahead

For now, we will plan for TCUK Metro online for 2021 unless and until conditions change. With the introduction of interim online sessions, we can take time to learn from these to see how best to develop the programme. Keep your eye on ISTC news for lunchtime events as well. ■

References

Horace Hockley Award https://istc.org.uk/homepage/professional-development-and-recognition/horace-hockley-award (accessed 9 November 2020).

Mike Austin Award https://istc.org.uk/homepage/professional-development-and-recognition/mike-austin-award (accessed 9 November 2020).

TCUK (Technical Communication UK conference) technicalcommunicationuk.com (accessed 9 November 2020).

TCUK 2020 presentations on YouTube:

- How to Rapidly Create Documentation Within an Agile Process — Matt Reiner
  www.youtube.com/watch?v=J5Id5Qj9XpY&feature=youtu.be&dm_i=142S,74ZJL,BVB6PA,SVV2A,1 (accessed 23 November 2020).
- Tech Writers Without Borders — Nancy Larbi
  www.youtube.com/watch?v=G_5h6t-TOV4&feature=youtu.be&dm_i=142S,74ZJL,BVB6PA,SVV2A,1 (accessed 23 November 2020).

UKTC Awards (UK Technical Communication Awards) uktcawards.com (accessed 9 November 2020).

Linda Robins FISTC

1. ASL is the name of the organisation which provides the ISTC with administrative services, since 2008.

Keep checking InfoPlus for more news on TCUK 2021

Mike Austin Award 2020

The ISTC Council presented the award to David Farbey for outstanding service as an ISTC member and as an influential ISTC Council member for nine years.

I want to thank the Institute of Scientific and Technical Communicators (ISTC) for honouring me with the Mike Austin Award for service to the ISTC, at TCUK Metro 2020 conference. I have benefitted so much from my time volunteering with the ISTC.

I joined the ISTC in 2000 becoming a Fellow in 2009. My involvement with the ISTC has been varied. I joined the ISTC Council in 2010 and my contribution to the ISTC Council has included responsibility for Learning and Professional Development (including the Continuing Professional Development (CPD) programme) and the TCUK Conference.

I've worked on the Professional Development portfolio; managed ISTC courses (now discontinued); planned a course accreditation scheme for third party training of technical communication training vendors. From November 2011 to October 2015: I was Chair of TCUK Conference which involved overall responsibility for organising the UK's largest annual educational event for technical communicators; three days of workshops and presentations, networking and social activities, and a vendor exhibition. I was responsible for planning, budgets, and scheduling, and for operational direction of the whole event. From September 2014, I took over responsibility for Professional Development and Recognition, which included, from time-to-time, Education and Training policy, the ISTC's CPD scheme, Mentoring, and Course Accreditation.

What is the Mike Austin Award?

The Mike Austin Award is presented for outstanding service to the ISTC over a period of time in recognition of hard work and conduct of an individual who has helped the ISTC to attain and exceed its objectives. ■

David Farbey with his Mike Austin Award

References

Mike Austin Award https://istc.org.uk/homepage/professional-development-and-recognition/mike-austin-award (accessed 20 November 2020).

David Farbey FISTC

Horace Hockley Award 2020

The ISTC presented this award to GOV.UK team at the Government Digital Service for their Coronavirus (COVID-19) content. Ben Hazell and Helen Nickols explain.

The GOV.UK team at the Government Digital Service accepted this year's award (over Zoom, naturally) on behalf of content designers working on COVID-19 guidance on GOV.UK. Ben Hazell and Helen Nickols write about their work.

GOV.UK is the website for the UK government, designed and run by the Government Digital Service (GDS). Since it launched in 2012, it's always aimed to make government information easy to find and understand. This mission has been critical during the COVID-19 pandemic. Content designers and policy experts from many government departments and agencies have worked hard to craft complex and fast-moving policy into clear guidance.

Cast your mind back to March this year. As the government ramped up its response to COVID-19 and lockdown began, there was a clear user need for people to have simple and unambiguous information available on GOV.UK.

This meant explaining unfamiliar concepts like 'social distancing' or 'self-isolation', being clear on changing restrictions, and helping people find information relevant to their needs.

Clear guidance

A huge amount of content design work has been undertaken at speed, to create services and guidance that are easy to find and to understand.

This work aimed to let people know what they must do, to encourage them to do what they should — and to give people the best chance of getting the help they were eligible for.

The GOV.UK coronavirus content team has worked closely with subject experts and content designers across government. We have shared data to help identify unmet user needs, advised on content design and strategy, and supported content teams with pair writing and content reviews.

Navigational pages

We knew we needed to help our users browse for information. So, we designed and built a series of navigational pages.

We created the landing page gov.uk/coronavirus using accordion patterns (expandable lists of links) to make it simple to browse but able to hold a lot of detailed guidance. It took less than 5 days to go from initial design to launch, and in the first 24 hours of going live there were more than 750,000 views of the page (from users who consented to cookies).

We also created hub pages on topics like education and work.

We made sure all our layouts and content were accessible and designed for mobile screens.

Over time we've improved the content and layouts of these pages to make sure people get what they're looking for. We've reviewed user journeys and feedback to continuously reshape things based on the evidence of how well we're meeting user needs.

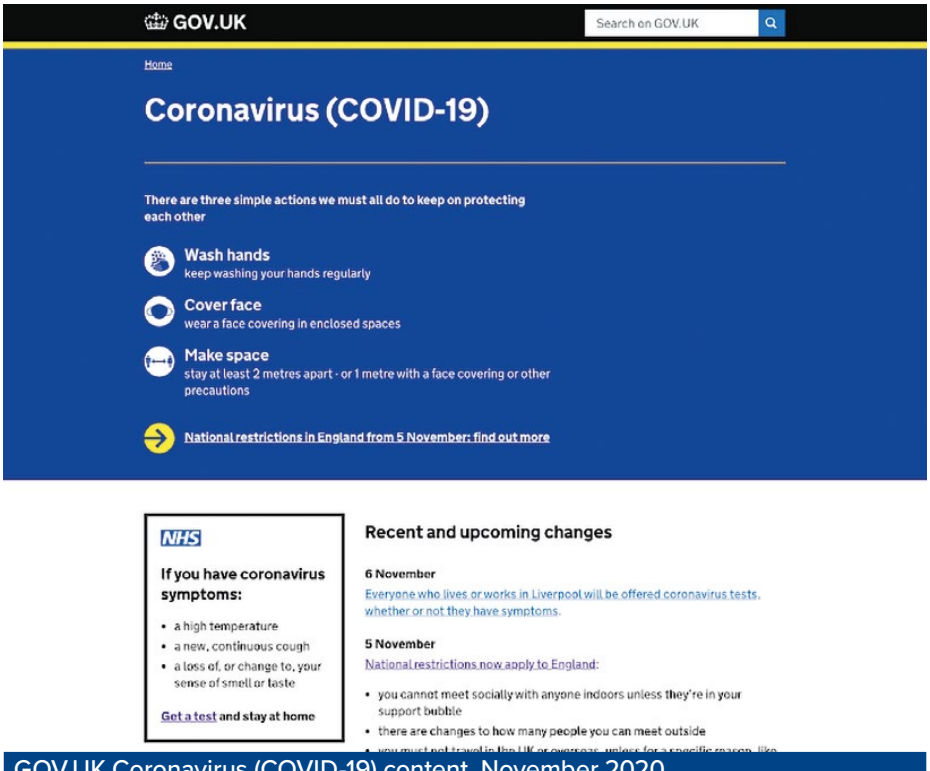
Checkers and lookups

Making lists of content was not enough. We knew we needed to help people discover guidance and support. To do this we have designed a series of checkers, also known as 'smart answers'. Users answer questions about their circumstances to see personalised information. These tools help people understand how COVID-19 affects them and what support is available.

They had to be built quickly, and be secure, robust and accessible. We were able to use existing design patterns and components to put things together quickly. Maintaining them with the latest information is challenging but we work closely with policy experts in the relevant departments to ensure information and signposting is accurate.

For example, the Find Support tool has been used by more than 365,000 people. It was developed to help anyone facing vulnerability, such as needing help paying bills, or knowing what to do if they were feeling unsafe.

As the government response changed, we created new services. For example, when Local COVID Alert



GOV.UK Coronavirus (COVID-19) content, November 2020.

Levels (frequently called 'tiers') were launched, a team worked around the clock to rapidly build a postcode checker. Ahead of the national restrictions being introduced it was used 13.7 million times to look up local rules.

The people behind the website

This was only possible through the hardworking team at GOV.UK, working with people across government and the NHS.

Our content designers work alongside product managers, performance analysts, developers and user researchers to scope user needs, deliver products and constantly improve. Our team delivery manager keeps an overview of the team's work. We test one another's assumptions and peer working has been essential.

In the face of this rapidly changing situation, we've strived to work sustainably, focusing on resilience and wellbeing. We have a culture of openness and honesty, and take time out to talk about challenging subjects that impact us.

Looking forward

Working on COVID-19 content means working on one of the most pressing issues facing the government.

Good content during a pandemic isn't about neat paragraphs. It means giving people the means to find the support they need — to pay their staff, have food delivered or know how to volunteer or work safely — as well as knowing the rules on meeting friends and family.

Our work is still not done. We don't know what lies ahead in the pandemic. In the coming months, we'll be getting to grips with new communication challenges that overlap with the end of the transition period from the EU, and perhaps a vaccine rollout.

But we've developed our ability to be much more responsive and pragmatic to fast-changing needs and situations.

We've been proud to be a part of it. ■

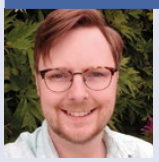
References

GOV.UK Coronavirus www.gov.uk/coronavirus (accessed 19 November 2020).

GOV.UK Find Support Tool. 'Find out what support you can get if you're affected by coronavirus' www.gov.uk/find-coronavirus-support (accessed 19 November 2020.

Horace Hockley Award istc.org.uk/homepage/professional-development-and-recognition/horace-hockley-award (accessed 19 November 2020).

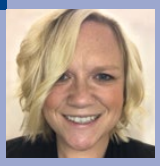
Ben Hazell



Ben is the content product lead for the GOV.UK coronavirus content team at the Government Digital Service. This team of 10 content designers has been working to support the management of clear guidance since the start of the pandemic. Ben has also worked on the government EU transition campaign, and on publishing workflow design for GOV.UK. Previously he was digital publishing editor for Telegraph.co.uk.

Helen Nickols

Helen is a senior content designer on GOV.UK, which she has worked for over 6 years. She has developed content on topics ranging from income tax, health and voting, to benefits.



And the winner is...me?

Helen Hill won the *Communicator* 2020 Article of the Year award for her series on eLearning. She shares her experience of contributing to *Communicator*.

As an imposter-brained business owner who had not done anything remotely like writing for a journal before and was lacking a serious amount of confidence, writing for a journal seemed like a task that would be something of a leap for me. How would I even begin to approach doing it? What did I have to offer? Did I know enough?

It was a fellow contributor who put me onto the journal and recommended it might be something that I wanted to try — cue my brain screeching that nobody needed my words of 'wisdom'.

> *User pain points and overcoming them arrived at a particularly good moment for me. As well as being an interesting read, it enabled me to show my non-technical writing manager some of the areas that I thought the company ought to review.*
>
> Quote from a *Communicator* reader

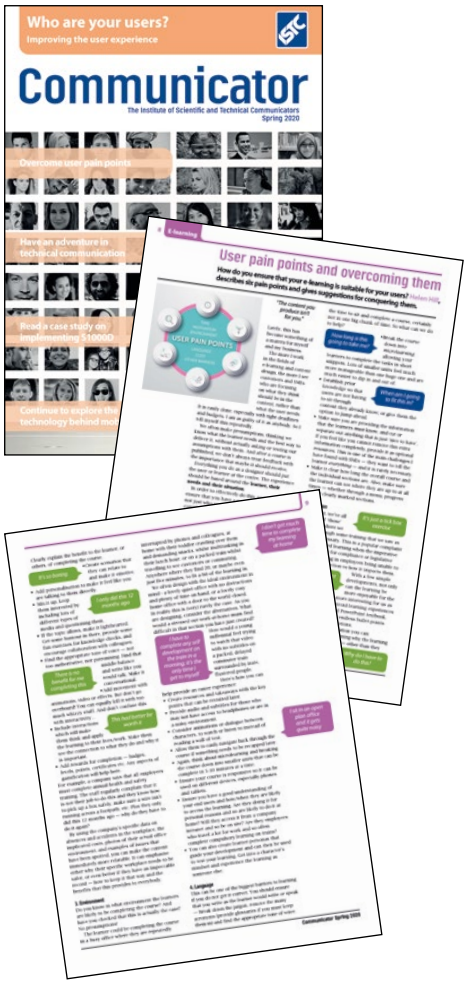
I cringed at the very idea of my name being used in a sentence along with the words 'expert' or 'writer', despite writing daily in my work. Around the time my second article was published I was still lamenting and wrote a blog post titled 'why I will not call myself a writer... yet'. Though I was starting to write I wasn't sure whether anyone was reading it.

Fast forward a year and it was a lovely surprise to win the Communicator article of the year award — making the shortlist was surprise enough. And to see some of the lovely feedback made my year.

I am so glad I overcame everything and tried, and not just because of the award. But because writing these articles (alongside a blogging accountability group) has given me room to develop my writing skills, grow my confidence, experiment with new writing techniques, develop my business brand and show my industry expertise.

I recently described myself as an eternal student, and it is a fitting description. I could happily complete qualifications for the rest of my life, in a whole myriad of subjects. Therefore, it is perfect that after a very squiggly career I landed in eLearning. Not only do I get to do lots of CPD but I get to learn whilst I work, in subjects from the everyday to the bizarre (phytosanitary export marks anyone?). I also get to create great learning experiences for learners, and have a forum to share my skills and development through platforms such as Communicator. I see writing these articles as an extension of my professional development and a way to help others, both of which are important to me.

I keep saying I will have a break with the next issue...but as long as they'll have me I shall keep going. If you are teetering on the periphery of possibly having a go - I urge you to give it a try. ■



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ISTC groups and online

ISTC area groups offer an opportunity for technical communicators to network and share knowledge and expertise. The groups are open to members and non members alike and meetings/events are generally free to attend. Refer to InfoPlus for the latest news and events. To get involved, contact the relevant organiser, or istc@istc.org.uk.

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Online groups

ISTC member discussion forums:
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Understanding data visualisation

Sawsan Khuri explores how data visualisation can change perception and cognition.

Are we critical enough when we see a chart or graph? The world has finally recognised the power of data, and the ability to influence using data graphics. We are taught to trust charts: lines show growth or decline, bars show quantity, pies show segments or market shares. Then we get some people who superimpose design and optical illusions onto straightforward data visualisation, and the story becomes distorted. So how does this work?

We perceive the world around us through our senses, and these observations become cognitive knowledge once they are processed and analysed against our existing knowledge base. Recent psychology, summarised by Alexandra Michel (2020), shows that there is a very fuzzy area in between perception and cognition, and that there is room for bias causing misinterpretation at every step.

What you perceive is what you see or hear, new information that you take in. How you understand what you perceive is your cognition, it is about matching the new information to pre-existing knowledge that you already have. If your existing knowledge is already biased towards something, whether consciously or unconsciously, then your cognition of the new information is bound to be influenced by it.

When we look at something, the image is processed by our visual cortex at the back of the brain, and the signal between the eyes and the visual cortex is really fast. Cognition, that is, thinking about and understanding what you have seen, is handled by the cerebral cortex and takes a lot longer. When you look at a graph, you want to quickly get the message and you don't actually expect to spend too long figuring out what it is trying to tell you. This sort of mirrors David Kahneman's explanations of the two systems of thinking, where System 1 is fast and based on emotions, with the other being slower and based on rational analytical thought. Data visualisations, dataviz for short, make the process of understanding data simpler by giving our brains a little visual help to try and think about the data more quickly. Things like line graphs and bar charts are simple, easy, almost intuitive to understand.

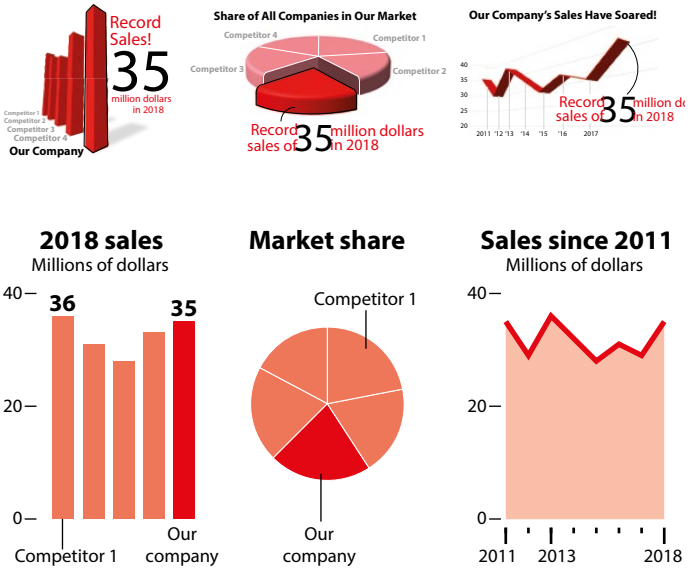

Figure 1. The top row shows three graphs using optical illusions to distort true company data. Underneath is the same data visualised using appropriate scales. From Alberto Cairo, How Charts Lie, charts available from www.thefunctionalart.com

The following example from Alberto Cairo highlights how optical illusions can be used to misrepresent data. In Figure 1, the top row shows a bar chart, a pie and a line chart of company trends and implies a thriving company with record sales. However, there are no scales on the bar graph, and a closer look at that pie chart brings doubt about the relative size of those slices. Below that is the same data visualised correctly. This company is not doing very well! It is doing worse than its main competitor in terms of dollar sales, it does not have a major slice of the market share pie, and its sales since 2011 have not exactly soared. Cairo's book 'How Charts Lie' is full of examples like this, his charts are available through his website from www.thefunctionalart.com.

Where does this begin? Let's take a step back for a minute and talk about data. Data points are basically measurements, evidence, things you can tangibly assess such as words in books, names and addresses, prices of stocks being traded, or the amount of a substance in a cell. Working with data has cognitive biases at every single step. It begins with where you choose to collect your data, all the way through to the methods you use for collecting and analysing that data. Quite often you have to make assumptions along the way, and in scientific experiments and investigative journalism, you have to declare all these assumptions and methods, so that the reader is clear what they are looking at. You also have to declare and justify all the algorithms you used for statistical analysis. But this is not necessary across the board in business or in journalism. With social media as it is today, we can all stick any data on any axes and call it evidence... who's to know?

The thing about real data is it doesn't lie. Once collected, as you are analysing it, it tells you the story. It provides the evidence. The responsibility then rests on the data visualisation designer to represent that data accurately. Accurately means without political agenda, personal gain, or greed. Accurately means telling it as it is, even if the results don't match what you wanted to hear.

There is more to it, dataviz is a method of communication. So, it is not only our responsibility to represent the data accurately, but we also need to do this in a way that informs and relays the message unambiguously. Dataviz reception, as Martin Engebretsen (2020) posits, requires a deeper investigation

Alberto Cairo has put forward the five qualities of a great data visualisation (Figure 2). First, they have to be truthful,

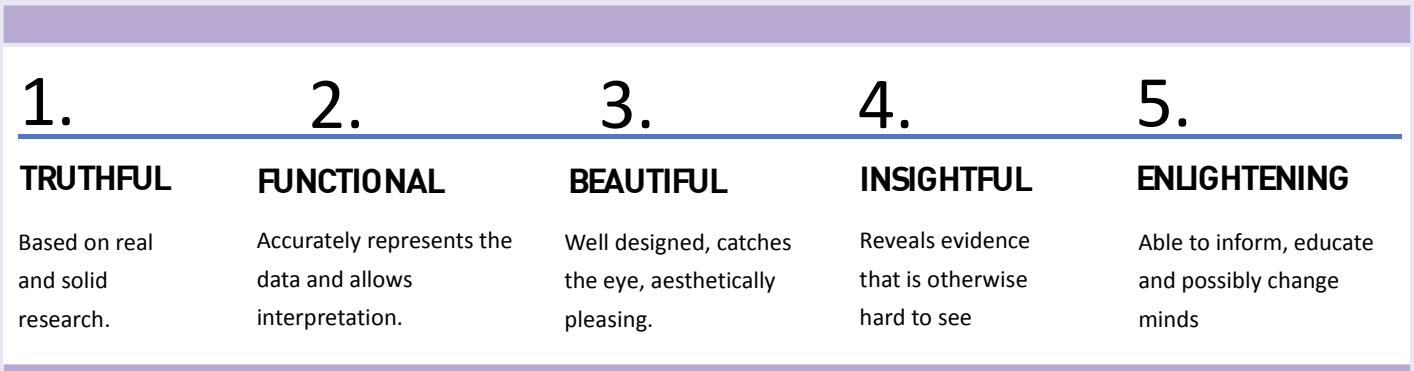

Figure 2. The five qualities of great data visualisations. Adapted from Alberto Cairo, 2016, The Truthful Art, published by New Riders, Pearson Education.

based on real and solid research, the data has to have provenance. Tell people where you got the data, and how it was collected and analysed. Second, the dataviz has to be functional. By that he meant that it has to accurately represent the data and allow the viewer to interpret the information correctly. It has to fulfil the function that a visual image is meant to convey.

The third rule is that the visualisation has to be beautiful. This is vital for viewer engagement with the data and how they will react to the message it is trying to deliver. A well designed, attractive graphic that a person enjoys looking at will relay the message so much more effectively than one that has been slapped together quickly and without attention to design detail. You can have a line graph, or you can use some creativity to make that story come alive. You do not have to be an artist to design a clear and beautiful graph – you need some sense of shape and colour, and the scope to make the dataviz relay the message.

For it to be part of the message, dataviz has to be insightful and enlightening, revealing its truths, adding to knowledge, useful and informative to people. Your graph is not just an add on to make the report look pretty, in and of itself it is also the message.

When we consider these five qualities of a great data visualisation together we see that, even though Cairo does not explicitly talk about perception and cognition, all these guidelines are to do with using perception and cognition principles to help people better understand the data they are looking at. In most cases, once people see an image, they try to understand it, their perception-cognition wheels are turning and they may not actually listen to most of the words that are being said to explain the graph. If the graph is confusing, so will the message be. If the graph is only able to be understood by a few specialists, then the message will be completely lost on the majority of viewers. Hence dataviz needs to be more than a line on a graph, it needs to be a truthful, functional, beautiful, insightful, and enlightening visualisation of your data.

In a world where there is misinformation around every corner, it is our responsibility as people who work with data, every sort of data, be it big or small or in between, to relay the information that the data provides clearly and accurately. It is our responsibility as dataviz producers, enablers and/or consumers to demand that the graphics communicate the truth. ■

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Kahneman, David (2011) Thinking, Fast and Slow, Penguin Books.

Michel, Alexandra (2020) Cognition and perception: Is there really a distinction? Observer, Association of Psychological Science. Available at: www.psychologicalscience.org/observer/cognition-and-perception-is-there-really-a-distinction (accessed 24 November 2020).

Further reading

Examples of dataviz that are enlightening, insightful, seriously beautiful, functional, and unwaveringly truthful can be found by going to:

David MacCandless and his team at Information is Beautiful https://informationisbeautiful.net (accessed 19 November 2020).

Andy Kirk at Visualising Data. www.visualisingdata.com (accessed 19 November 2020).

Max Roser at Our World In Data. https://ourworldindata.org (accessed 19 November 2020).

Sawsan Khuri, PhD FHEA FRSA

Sawsan is a facilitator of collaborative innovation and director at Collaborative Capacities. She established a now annual, international dataviz conference (https://idsc.miami.edu/events/vizum/) and is an enabler of dataviz as part of her commitment to more effective science communication.
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Tips for search engine optimisation

Virginia Soares gives tips for making your content achieve rich results with search engine optimisation.

Everyone and everything is impacted by search. It's how we and our audiences navigate our digital lives. This article is dedicated to providing you with the relevant search engine optimisation (SEO) techniques we have used in our organisation for findable content, identifying opportunities with search and increasing organic search equity.

How it was born and the steps taken

Since I became a tech writer five years ago, I've been continually asking myself how the content I publish reaches the audience. After being in the role of User Assistance Developer (formerly Technical Writer) for two years, I had the chance to be at a site visit with customers to perform usability tests with end users and IT consultants. The tests conducted aimed at making use cases with task-oriented activities leading to an error where the purpose was to find out how end users searched for troubleshooting. From the tests conducted, it was clearly seen that the results found were out of date or old pages bookmarked by the user, which resulted in users becoming frustrated or unaware if pages were right or not. This experience encouraged me to step in and go further and roll up my sleeves to do something about it. This led me to start an SEO project in my team as a collective work to improve pages in external search engines in order to provide the user with richer results.

Connecting reader and author

Being on the other side of the screen, makes it difficult to guide users on what they should be reading when finding page results, and being in the customer's shoes made us realise that our latest content was not reached for various reasons and we thought how this could be solved. To help customers find the pages we expected search engines to provide, we have put together a strategy with a list of the basics of SEO.

First steps to understand a user's behaviour

As a first step, to build a strategy with a list of the basics of SEO, we explored the resources we had in our hands (digital analytics, colleagues, blogs, SEO sessions, external articles, analytics). Search engines are answer machines resulting in search results based on the search query (keyword) submitted by the user. As a first step, to discover if users are coming mostly from external engines and visiting out of date results, we explored analytics for data analysis on content consumption using the Adobe Analytics tool. Using analytics metrics as a mechanism to understand users' behaviour enabled us to read how our audience finds content and how they end up clicking on such pages.

Basic measures to improve search rankings

After we collected the analytics to achieve our first results, we identified a set of 'SEO house rules' to be applied in our pages' content in order to reflect the SEO techniques.

The markup for alternate text within an image looks like this:

```
<image href="tip-ing.jpg">
        <alt>Here's a Tip!</alt>
</image>
```

Figure 1. Image metadata example

```
<title>e-IWO Employer Initiated Actions Termination/LOA Progam </title>
<shortdesc>You use this program to report termination as well as leave of absence of an
    employee in the Income Withholding Orders statement. The e-IWO functionality is used to
    process a deduction of a payment for child support from a parent's income in accordance
    with the requirements of the Federal Office of Child Support Enforcement (OCSE).
    </shortdesc>
<conbody>
    <section>
```

Figure 2. Short description and title metadata

To structure a good page and to have our pages indexed with top/first ranking results, we now consider the following SEO aspects:

- Taxonomy — categorisation and classification helps with organising content and assets into hierarchical relationships on our pages. This makes the searching easier. The structure and its subcategories should be relevant with one another.
- Keywords — use keywords because content should match with what users are searching for. Include a keyword where it makes sense, but do not have too many as Google may penalise such pages.
- Images — adding alternative text and captions (`<alt>` is a child element of `<image>`) to images (alt text is a ranking factor for search engines). Alt text is primarily used for visitors that rely on screen readers, but search engines usually index this text, see Figure 1.
- Short description — descriptions guide users because they summarise what the page is about. If your page does not have a description, Google may extract text from the page alone and display it, see Figure 2.

Tips for writing good short descriptions:

1. Summarise the topic
2. Add value
3. Get to the point
4. Make it self-contained
5. Be consistent
6. Be brief

1. Summarise the topic

- Avoid using 'this page', 'this article', instead, use the active voice and refer to the reader (you)
- One or two sentences
- Usually around 25 to 30 words
- Try not to exceed 50 words.

2. Add value

- Add something the title doesn't already address Don't repeat the title, at least not right away.

3. Get to the point

- Summarise what the entire page says.

4. Make it self-contained

- Write the page description so that it can stand on its own without:
  - List introductions
  - References to other pages
  - Cross-references.

5. Be consistent

- Be concise when writing the paragraph using a consistent tense verb.

6. Be brief

Follow all the previous guidelines — and keep it short!

Findability post-changes

Google's algorithm is constantly changing. That means, ranking factors are always being updated and this can have an impact on your websites. You might wonder whether this reflects on your pages and the answer is 'Yes'. Sites that stay on Google's side are more likely to be ranked more highly. Those who try to play the system suffer punishment in one way or another. So, if Google decides to update its ranking factors differently from the ones you have applied, it's likely that your pages will be punished. How do you solve this? Being up-to-date on the ultimate Google's algorithm is essential and bring them onto your pages pays off the experience users may have.

What to expect

After your SEO updates, you may expect that this will take place from overnight, but this is not true. Google does not clarify how much time it takes to have the new pages reflected in Google's results. You have to monitor and perform test results on a frequency that you think is relevant. From the time you make SEO changes until Google recrawls pages is an unknown factor so it's up to you when to test the results. If possible, get help from digital analysts in your organisation.

Next steps

To enhance our pages using SEO, there is a project going on in the organisation to improve URL taxonomy with agnostic URL (readable URL, which is a ranking factor). To transition to a readable URL structure, a pattern needs to be defined. Instead of providing a URL including version and other technical elements, the agnostic URL is a standard URL that does not include a version and always provides the latest version. Then, when Google indexes a page, only the agnostic URL is indexed. When a new version of the topic is published, the link in Google automatically opens the latest version.

Future expectations

Customers are the wheels for every business. Serving them with relevant and up-to-date content that's worthy is the key to win them. We do wish this is our customers' experience and that they no longer face out of date content. ■

References and further reading

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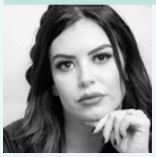
Virginia Soares



Virginia joined SAP in 2015 as a User Assistance Developer and later on became an SEO and analytics enthusiast. Since then, these topics have given her the opportunity to expand the SEO and analytics knowledge, with requests coming from stakeholders in order to understand user's behaviour. Virginia thinks that the SEO and analytics topic are fascinating with infinite possibilities. It enables you to become a strategist and provide benefits to the company in terms of marketing strategy, as well as a way to get closer to your audience.

Agile documentation processes

Follow-up thoughts on Matt Reiner's TCUK Metro 2020 talk from Karen Mardahl.

Creating documentation in a software development company that uses agile processes has been my job for the past four years. My technical authoring colleagues and I felt that we were ready to transition from the waterfall[1] method to the agile method back in 2016, but there is still so much to learn from and to share with other technical authors around the world.

Matt Reiner contributed valuable insights at TCUK Metro in September 2020. He made me long for those marvellous hallway talks with my TCUK friends after the presentation, so I was grateful that we can 'chat' here in *Communicator*. If you missed his talk, you can use the link in the References section to view the recording. I also included a link to the Agile Documentation Process that his team at k15t uses.

> *If the meeting is on video, no one can see you madly squeezing a stress ball under the table!*

This article assumes you are somewhat familiar with agile (otherwise go to the references). I want to focus on some of the questions that came up during Matt's talk and some ideas that popped up in my own mind. Documenting in an agile environment can sometimes feel like you are Gromit laying down train tracks on a penguin-driven train careening wildly through the physical and virtual office!

Resistance is futile

How do you cope with writing documentation when the development or scrum teams resist the idea of documentation? This was the first question to Matt. We have some of those teams. Sometimes the resistance is subtle. They forget anything needs to be written. They forget you are part of the team. They forget the details of the Definition of Done policy, which I certainly hope includes documentation!

I see the answer as persistent patience. You must be in their face one way or another. Ensure you are invited to their meetings, even if you need to invite yourself by forwarding their meetings on an Outlook calendar! Show up at their meetings. Talk and ask questions, which might require some sort of preparation prior to the meeting by reading whatever tool you have for tracking user stories or tasks. You are a professional, so you do all this with a smile on your face. If the meeting is on video, no one can see you madly squeezing a stress ball under the table!

> *How will this new initiative affect the documentation team?*

Bottom line: You must drive the efforts to collaborate when they don't. I have seen this work, but it takes time, and it is an agonising wait.

Tea. Earl Grey. Hot.

The second question continues this thread. How do you get the reviews done on time? If Captain Picard can get hot Earl Grey tea from a replicator, why can't we get our reviews? Our reviewers have other work, and the question is what priority have they put on reviewing our work. If they assign a low priority to the documentation, then the sound of our deadlines whooshing by will never faze them. Their slow response could also be a subtle form of resistance to documentation.

The in-your-face method works here, too. Announcing the review task in a meeting makes the entire team aware of the task. When one product owner asked what the deadline was, I put the deadline date in the first line of my request despite the sprint schedule indicating when tasks were due. The results were a tiny bit faster. A far better way has been booking short one-on-one meetings with the reviewer. A meeting of 15 to 30 minutes has often been extremely beneficial. The reviewer can look at the material in their own time, but then meet with you to give their feedback directly. This can be highly efficient because you can edit the source while they look on and approve. A review request by email might disappear, but a meeting can have a much higher success rate.

You say you don't have time for all those meetings? I understand. Try it, though. A colleague of mine has great success booking these small meetings all the time. At first I thought, wow, she books a lot of meetings. Then I said, wow, she is getting stuff done! Even if the other person needs to change the time, the meeting invitation is in their face. You can be done in 30 minutes as opposed to spending 30 minutes across the course of several days in email limbo stressing about the issue.

Speaking of meetings, someone asked me about the number of meetings. Agile has different types of meetings. In my part of the company, we made a pact with our teams. With the large number of teams we have, we said we would commit to one stand-up per sprint, and the sprint review meeting. We don't have time for the planning meetings, which Matt rightly says can be a valuable place to participate and start writing. We agreed to this pact with our scrum masters and several managers, which gives us clarity on what we can and cannot (manage) to do.

Engage!

My reaction to those two questions reveals something at the heart of agile: people. People are funny creatures! If you are shy or they are difficult, you have some extra challenges. Get creative to overcome shyness or tough colleagues. Time and patience are needed. Find methods that work for you so that you can get your work completed without multiple meltdowns.

1. Waterfall is a project management approach where the Project Manager establishes the requirements of the project at the beginning, rather than in an iterative fashion.

You can take steps to make yourself and your work more visible to others. This can help build good working relationships for you personally, but it can also raise the profile of documentation in your company. Participate in discussions on the company intranet channels. Speak up in meetings. My more outspoken colleagues, including myself, speak up in online discussions or office meetings with questions like "how will this new initiative affect the documentation team" or "can the technical authors participate in this project" and so on.

> *Gain control of the known so that you have more time for the unknown.*

If you are a lone writer, see if you can find any allies who can be a supporting partner. If you are more than one, then play off each other's strengths. Embrace your differences and use them to your advantage. For example, if one person is introverted and another person is fine speaking up, then use the outspoken person to pave the way for both. Once the path is clear, then the outspoken person should step back and support the quieter, perhaps introverted person to do their thing so they can have their moment to shine, but in a way that speaks to their skills.

When I talk about people and relationships, I am talking about the concept of soft skills. You know how to use your authoring tools and you know how to write. But how are your communication and collaboration skills? Soft skills might be the most powerful tool in your writer's kit, but that's especially so in the world of agile. You need to collaborate with people to get your work done. (I can name one resource for learning more about soft skills: see Ben Woelk's articles in past issues of *Communicator*.)

There are people everywhere when you're working to an agile process. All those meetings. All those reviewers. All those stick-in-the-muds. The stronger your negotiation and diplomatic skills are, the easier it is to work in agile. When you meet resistance, when you wait in vain for a review, that is when you need the soft skills of diplomacy and negotiation. If you are working remotely, it is extra challenging to find ways to strengthen relationships with colleagues. Having a virtual coffee can seem forced at times, but I am more and more convinced that having good people skills brings more success across the whole agile documentation process.

Make it so!

So what did Matt say that got me thinking? Testing the documentation is important for his team. I already collaborate with the software testers in my scrum teams to do reviews. However, I have expectations I may never have expressed. I will emphasise that they should use my drafts during their own QA (quality assurance) work. This means that reviewing the documentation shouldn't be an extra task, but a seamless part of what they already do. This could enrich their own work and my work. It is worth spelling out my expectations more clearly, so I will try that right away.

Another takeaway is time tracking. Like Matt, I really dislike estimating work. However, Matt reminded me that I have done this once before. I find it hard to estimate how long it will take to document a new feature because it is unknown. It is relatively easy to calculate the time to do routine tasks like building, publishing, and other daily tasks. In a past job, I calculated that it took me 3 hours to package all my work and check it into a repository. The repository was on the other side of the world, which is why the process took so long. Knowing it took 3 hours meant that I had to start it by a certain time in the afternoon to finish before I went home. Knowing how long certain tasks take puts you in better control of your own time and can reduce the stress of getting your work completed. Gain control of the known so that you have more time for the unknown.

I look forward to trying out the new ideas I picked up from Matt's talk. I also feel more convinced about the importance of people skills for technical authors based on the follow-up questions. I can continue to work on that concept, too. I look forward to more articles on the agile documentation process here in *Communicator*. ■

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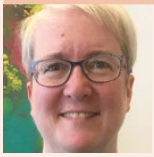
Karen Mardahl FISTC



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Standards in eLearning

Before you start the eLearning creation process, plan what you're going to do using the standards outlined by Helen Hill.

When the term 'standards' is used in relation to eLearning it can mean different things to different people — usually depending on their role in the eLearning creation process.

In an online search, the most common use of the term relates to how your course and the Learning Management System (LMS) in which it sits speak to each other. Not being someone who usually deals with the technical side of things personally, I think of standards as being the guidance that helps me to create the best learning experience for the learners. So, let's take a look at the myriad of standards that should be considered, whichever side of the LMS you sit.

First things first

The important thing with any of these standards is to agree them before you start the course creation process. They should be discussed in the scoping phases of a project, agreed upon with all the relevant stakeholders and then form part of the brief. By doing this you can avoid some costly rewrites and lengthy amendment processes further down the line, whilst helping yourself to achieve consistency, usability, and functionality.

The purpose of standards is of course to make sure everything works, but also to create the best learning experience you can for the learner and to maximise the likelihood of the learner successfully fulfilling the aim of the course through acquiring and implementing the new knowledge. Therefore, it is important to consider a range of standards encompassing all aspects of course creation.

As with any design, the most successful ones almost fade into the background to allow the message and content to be the focus. They help rather than hinder progress through the content and make the process intuitive for the learners. So, let's look at the standards that can help you achieve this.

Table 1. Types of eLearning standards

Technical	Design	Usability
SCORM	Writing	WCAG (Web Content Accessibility Guidelines)
AICC	Visual	Readability
xAPI	Methodology	User experience (UX) and learner experience (LX) design
	Media	UI (User interface)
	Assessments/ certifications	
	Quality processes	

Types of standards

I have broken the standards down into three distinct areas — Technical, Design, and Usability standards, see Table 1.

Technical standards

All LMSs have different features, offers and benefits. Combined with the number of authoring packages out there, this leads to a huge number of possibilities of combinations of software and LMS, therefore three file types have been developed as a universal solution — SCORM, AICC and xAPI. These are the main ways to export your course from your authoring tool and all interact differently with an LMS.

AICC (Aviation Industry Computer-Based Training Committee) was the original standard, created by the aviation industry, for how a course communicated with an LMS. This was then taken further to be developed into SCORM (Sharable Content Object Reference Model). xAPI is the most recent development which allowed the collection of more data than just course information.

As I stated earlier, I am far from being a technically minded person and so not best suited to explain this in any depth — there are many more people out there who can do this more clearly. Plus if you are a course creator you probably won't need to know much about this stuff, other than to know what the export types are that you may be asked for — I didn't even know what the acronyms stood for until now.

The only one of these I have ever used is SCORM. SCORM provides detailed information back to the LMS (learner completion rates, pass rates, time taken, etc) and appears to be the most widely used — no customers of mine have ever requested anything but this one.

If you wish to delve into the differences between the three in more detail I recommend reading the Trivantis article *'eLearning standards matter'*. I need to leave this one to the experts, and they explain it in lovely, simple terms better than I ever could.

So, let's move onto the things I do know about...

Design standards

When we refer to design standards this incorporates the written elements of the course as well as the visual. It includes the learning theory and methodology, the choice of media (and how these work) and the incorporation of assessments and certification boards. It can, and should, include your quality check processes.

The best way to ensure a consistent application of design standards is to ensure that *style guides* and a *design brief* are written, and that you have dedicated time and resource towards the quality checking process.

A *design brief* helps this process by laying out from the start the background of the project, the aims, design expectations and who the audience is. By making sure you and/or the team have a clear understanding of the audience, its level of prior knowledge and reasons for learning, the likely learning environment and any specific requests for the business

(branding, etc), then you can ensure that the content is tailored to meet these requirements.

For example, if your learners have little prior knowledge of the topic and do not have an academic background, then the writing style guide should set out that jargon needs to be either removed or well explained, and that plain language must be used to help increase their understanding.

In contrast, a style guide gets much further into the detail of the project. It sets out everything from the terminology and writing styles that should be used, to punctuation and grammar preferences, types of imagery, and how branding should be applied. Style guides generally take much more time to put together, but once you have a template set up, it is easily adaptable to future projects.

Here are some examples of considerations that could be included.

Writing (or editorial) style

- Language specifications — for example, UK or US English, any localisation or regional differences to account for?
- Specialist terminology — what is to be included or avoided and whether a glossary is required
- Tone of voice — how the product/process is described, and does it align with the brand's other communications
- Language style — for example, is the 'voice' active or passive, in the first/second/third person?
- Punctuation and grammar conventions — what are the preferences around lists, bullet points, use of abbreviations, etc?

Visual styling

- Image styling — is photography used, or illustrations? Any other specifics such as black and white or colour?
- Examples of the styling — include imagery here
- Symbols/icons and their style — what style is going to be used? Are they clear as to their meaning?
- Brand elements and the usage policy — for example, any specifics around logo size and positioning
- Guidance on use of characters or people — this should include guidance on how to avoid stereotyping
- Layout and hierarchy — what information or functions need to take precedence and how can you help make the flow logical and intuitive?

The aim is to consider how consistency will be achieved and how it has a clear visual link to the business's brand, whilst ensuring that the learner experience stays at the forefront.

Media

Rather than being specifically about where a media type is right for a piece of content, when referring to standards it is also about looking at the compatibility of the media with the technology available, the restricting factors in media choice and how the learners will be accessing the learning materials. For example, on what kind of device is the learning likely to take place? Will they be using the intranet/internet? Completing it at home or at work?

This can create important considerations for the design of the course — for example, if you know most of your learners will be completing the learning on a busy train on the way to meetings or out in the field, then you will need to design for unreliable internet connections, and for it to work well on phones and tablets, account for noisy conditions (for example, subtitles on videos) and break it into small chunks of learning. You may need to go light on large bandwidth-intensive videos, reduce or avoid the need to download and complete worksheets and to make sure that they will be able to save their progress and resume where they left off if they need to frequently dip in and out.

This can have a significant effect on the content production and costs — there is no use in creating that fancy, all-singing video or animation if it won't work when the learner needs it to. Really take the time to consider the likely learning environment for the learner and how it impacts your choices.

Methodology

When it comes to methodology standards we are looking at the reasoning behind how the learning is put together, the level of the learning and how our choices as designers enhance the likelihood of successful completion.

You need to ask questions such as; how will you:

- Apply instructional design practices?
- Make use of learning theories?
- Check learning is taking place?
- Account for all learners and the range of abilities (scaffolding[1], etc)?
- Increase opportunity for interaction?
- Ensure the learning is pitched at the right level?

This will influence how the learning and assessments are structured and the types of activities included.

Assessments

Assessments are not always given the in-depth consideration they should have, and they can be seen as a quick bolt-on at the end of the learning with a series of multiple-choice questions. Whilst that may be all that is needed in some cases, it is much more engaging to vary your assessment approach and challenge the learners in different ways.

Consider:

- How are you going to assess learning?
- What aims do the learners need to meet?
- How can you make sure the learner is using higher order thinking — that is, putting their learning into practice and not just guessing answers?
- What balance of formative and summative assessment is required?
- Does the course need to be validated by a certifying board?
- Is the learning to be accredited by CPD or an industry body?

Quality processes

What quality standards are in place in your team/project to ensure that standards are met and everything works as it should — Do you have a proofreader or an editor? A quality control manager? Or are you checking everything yourself?

Either way, it is a good idea to have a checklist of things to look for and to make sure you don't try to review everything

1. Scaffolding refers to a variety of instructional techniques used to move students progressively toward stronger understanding and, ultimately, greater independence in the learning process. Source: www.edglossary.org/scaffolding.

at once. Do a run through to check functionality, then punctuation and grammar, then other areas of the list. If you try to do too much at once things will inevitably be missed.

I also recommend that where possible you get someone involved in this process who has not been part of the content creation to have a look through, as it is very hard to edit your own work — we read what we think is there — and it is easy to fall into the trap of thinking that everyone would work through the content in the same way as we do, when actually there can be some surprises when someone else might click the wrong thing, or what they expect it to do.

If you do have to do it yourself, build time into the schedule to be able to step back from the course for a day or two before you complete the checks so you can look at it with fresh(er) eyes.

Usability

When it comes to usability there are four types of standard that should be considered — accessibility, the Readability Guidelines, user experience and user interface design. There is a lot of crossover with each of these areas as different fields and job roles have started to understand each other's role more and borrow tips to incorporate into their own.

Web Content Accessibility Guidelines (WCAG)

Some aspects of this actually will cross over into the technical column due to the nature of their setup, but to keep things simple for now, we will look at it as a standalone field.

Though WCAG was devised for web content specifically, it is a murky area as to whether this specifically relates to eLearning too. However, best practice is to ensure that at least the minimum standards are reached. The benefit of this is that it can actually create a better experience for all, not just those with disabilities — the zoom feature on websites was originally created for accessibility reasons and yet this is something we all use now.

WCAG relates to how a course or website functions in four key areas; here are those areas plus some examples of how they can be met.

It must be:

1. **Perceivable** — for example, providing text alternatives, making content readable by assistive devices, and providing captions.
2. **Operable** — for example, it can be navigated by a keyboard, provide enough time for everyone to read and use the content, and does not use content which could trigger seizures.
3. **Understandable** — for example, text should be readable and work in a predictable manner.
4. **Robust** — content must be compatible with a wide variety of user tools, such as assistive technologies.

Visit the WCAG website for more details. The 'At a Glance' guide is a great place to start — it can be quite overwhelming to jump straight into the full guidance.

Readability Guidelines

Not an official standard as yet (though they should be) the Readability Guidelines were created by Content Design London to advise on best practice for writing for everybody — making it inclusive, accessible, and easy to use. These guidelines are based on the principles of content and service design and are heavily backed by usability evidence.

Being an avid campaigner for the use of clear language and accessibility in eLearning, I do use them a lot in my work, and find them a great tool for backing up my arguments with why something should be implemented. They advise on everything from writing effective link next (no more 'click here'), structuring sentences, and writing alt text, to cultural consideration, use of pronouns and writing for disabilities.

The guidelines are becoming increasingly well-known as a go-to resource and becoming a standard for those in the know. I really recommend spending some time familiarising yourself with the guidance in them and how they can help you improve your writing and design, to ultimately improve the standard of your eLearning and the learning experience for your learners. Which leads me to the next standard.

User experience (UX) and learner experience (LX) design

UX design looks at how people interact with products and services, with the intention of creating meaningful and relevant experiences. It considers factors broader than the product itself, and sees the product as a combination of experiences.

> *"Think through all of the stages of a product or service – from initial intentions through final reflections, from first usage to help, service, and maintenance. Make them all work together seamlessly."*
>
> — Don Norman, inventor of the term *"User Experience"*

Clearly this is very relevant to the field of eLearning and so there is a lot we can learn from this discipline. In fact, learner experience (LX) design is becoming a field in its own right as an offshoot of UX design and instructional design. LX designers have a broader skillset than traditional instructional designers, incorporating principles from other industries such as UX, graphic design and content design.

It is from this that we can see how LX has evolved — to consider where the learner is before they even start the learning, their experience in acquiring the course, their feelings after they have completed it, their touchpoint with you or a support system throughout, and how the learning can be applied to their life. By using planning materials like user journey maps and user personas we gain a greater understanding of the learner and how we can best meet them where they are.

In short, we need to look at the whole experience and how we can make it as seamless as possible. By taking this holistic view, we can pre-empt potential issues which may arise and improve the flow from start to end.

User interface (UI) design

UI design is a part of UX design, but can also be looked at as a standalone discipline.

This discipline looks at building interfaces in software or devices, and how to make them user friendly, consistent, and enjoyable to use. It encompasses features such as navigation, dashboard features, menus, buttons, and hierarchy.

In eLearning, this relates in particular to the player window that the learning sits within. Luckily a lot of this is often pre-programmed in the authoring tools and we only have to make simple decisions such as colour, whether the menu sits left or right, and which buttons to include. But this should still be done with a good deal of consideration, ensuring we are making such decisions based on the users' needs — not our own preferences — particularly as it ties in closely with accessibility.

We should ask questions such as:

- Is it navigable by keyboard?
- Is the UI easy and intuitive to navigate and consistent in its layout?
- Does the colour pass accessibility checks?
- Are the buttons clear and well labelled with icons and text?
- Are there any cultural factors to account for which may affect your decisions — such as reading right to left?

Summary

Due to the overlap with many standards described here, it makes it relatively easy to pick them up and put them into action. They all complement each other and slot together nicely. Once you have templates set up and are familiar with the standards, it will become second nature to include the use of them and to design your learning with them in mind.

Though this can seem a lot of work to implement, much of it before you have even started putting your content together, by working through this process you are helping to make sure that standards are high — not just in the type of content you produce, but in the conversion of the learning into knowledge that can be implemented.

Working to standards helps everybody — your reputation for quality learning, the learners' experience, your company's credibility. It also helps you to make sure that your course communicates effectively with your LMS and that all the tech works as expected. And by working together we can help keep standards high in the industry. ■

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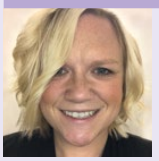
Helen Hill



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Documenting REST APIs

Do you know what a REST API is? John Flannery helps you understand.

Introduction

Like me, you might be a technical writer or an information developer who is writing API documentation, or maybe you have never heard of it and want to know more. In this article, I want to look at what an API is and what a REST API is. Then I will consider some of the challenges in documenting this kind of content. Finally, I will look at the future of REST and GraphQL.

What is an API?

An Application Programming Interface (API) is like a window that allows an application to share data and processes with other applications. These have become very important in the modern IT landscape where applications based in public and private clouds, accessed via mobile and IoT devices are an everyday expectation.

For example, imagine a popular taxi app. The map rendered there is not usually created by the taxi app. Instead, it uses a map API to access a map service. This service can just send data back to the taxi app or it can send a UI that is rendered within the taxi app's UI. To configure this, the app developer uses the map developer's API to access the map data.

What is REST?

Getting disparate components, applications, operating systems, and middleware to share data and processes with each other has been a long-running challenge in computing and computer networking. Before the internet and the invention of standard protocols by the W3C, applications tended to be siloed in their respective stacks or operating systems. Bridging these gaps was complex and was usually achieved by complex, custom software. This was expensive and difficult to scale and upgrade.

Luckily, the World Wide Web Consortium (W3C) foresaw this issue and set about creating the REST protocol to solve it. REpresentational State Transfer (REST) APIs are APIs that use a common protocol to allow RESTful applications to talk to each other. REST was invented by Roy Fielding during his time with the W3C. In the time before REST, the main API methodology was Simple Object Access Protocol (SOAP) and this was not very simple. In 2000, Roy foresaw a need for a common architecture in the early days of the web:

"Throughout the HTTP standardization process, I was called on to defend the design choices of the Web. That is an extremely difficult thing to do within a process that accepts proposals from anyone on a topic that was rapidly becoming the center of an entire industry. I had comments from well over 500 developers, many of whom were distinguished engineers with decades of experience, and I had to explain everything from the most abstract notions of Web interaction to the finest details of HTTP syntax. That process honed my model down to a core set of principles, properties, and constraints that are now called REST."[1]

Thus, REST became the standard that Roy envisaged in the intervening 20 years. It served its purpose admirably, allowing disparate nodes to connect and share information and code in a universally understood structure and method.

But what is REST? REST is best understood as a protocol, a common set of rules or language that applications can use to talk to each other. As stated, it was invented to provide this function in the common language of HTTP protocols. REST is a common set of components that can share tasks and data via HTTP protocols in a network (or across the internet).

End-user versus developer views

For us as writers, most of our audience are developers. These people have a different perspective on APIs from end users. Writers need to appreciate how end users' and developers' perspectives of APIs differ. End users tend to never see the API itself; they just get the results seamlessly integrated into their application. Figure 1 illustrates this with the taxi app example.

Developers tend to create APIs like the REST API to allow applications and users of applications to perform actions in the connected application. For example, consider a developer who is creating requests for a REST API. He uses an extension or application (Postman in this case) to create, read, update, or delete objects in the connected database. Figure 2 illustrates this:

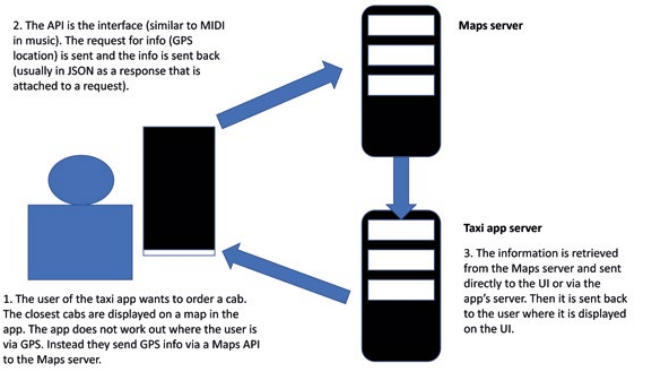


Figure 1. Taxi app example

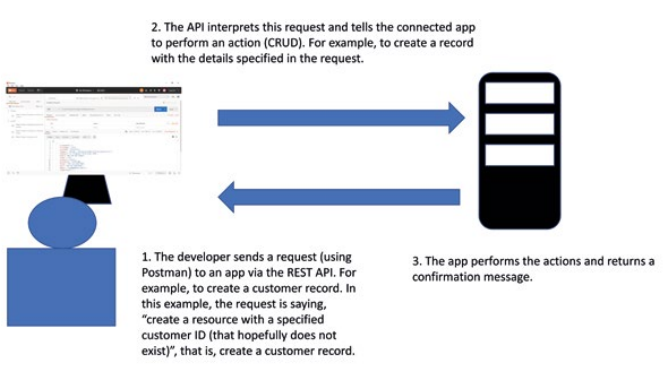


Figure 2. Creating requests for a REST API

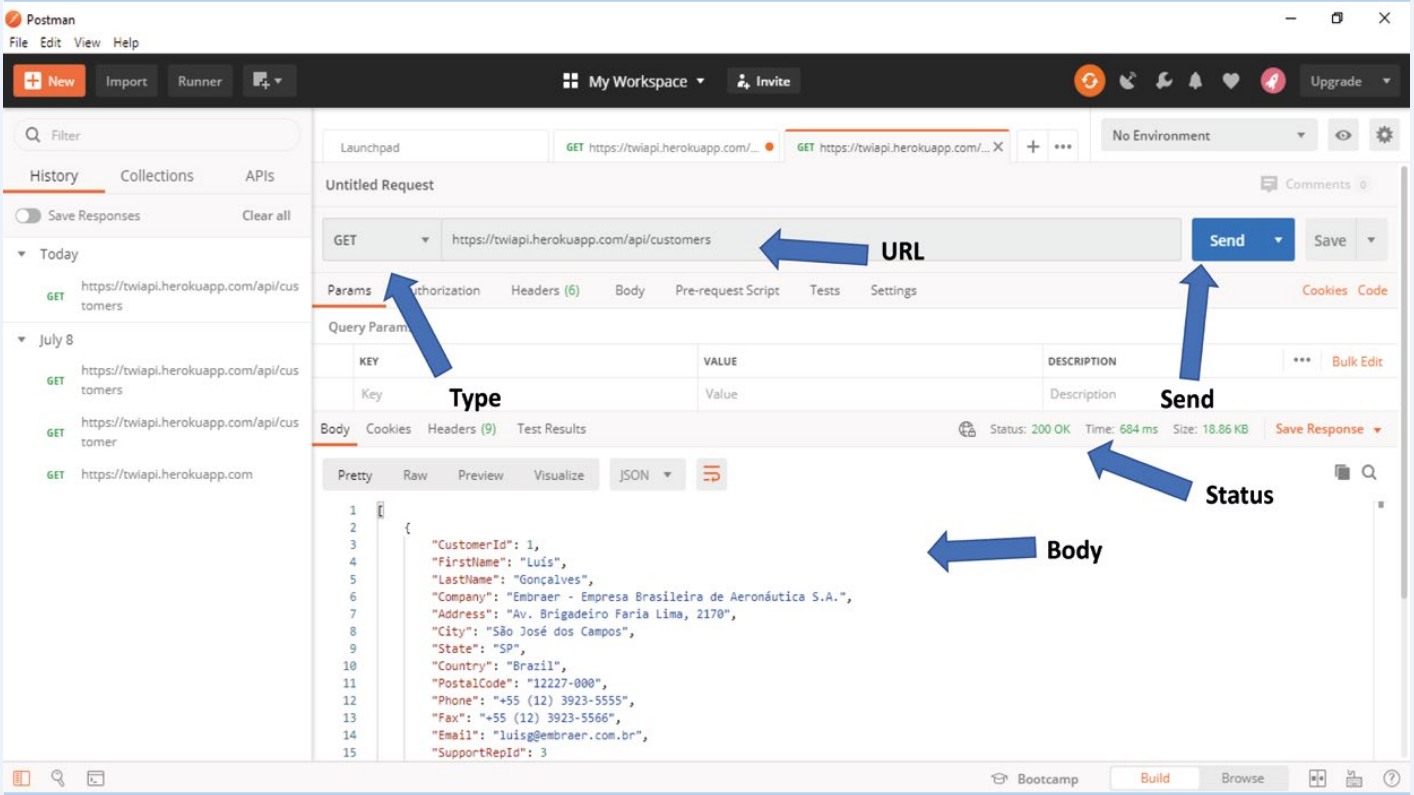


Figure 3. User interface of the Postman application

Every REST API consists of the following components:

- **Resources:** A resource can represent anything. Mostly these represent real-world objects or people (or at least they represent the software objects that represent these). In practical terms these are things like a user record or an entry in a database, or whatever the REST API developer wants it to be.
- **Endpoints:** Endpoints are logical collections of resources that are represented by a unique URL. Again, these tend to represent logical groupings. For example, all employee records might be represented in one endpoint and all customer records might be another endpoint. The endpoint is usually represented as something like /api/employees or /api/customers in the endpoint URL. The developer uses this URL and the required method to perform CRUD (create, repeat, update, and delete) actions.
- **Methods:** In REST, there are several standard methods like GET, POST, etc. Each of these performs a different technical function. For example, developers might use a GET method to retrieve information from an endpoint, for example a list of employee records. They might use a POST method to send information from their application to the web server (via a calendar API), for example, to schedule an appointment and add it to your calendar.

  Sometimes API developers may use a POST to get information, or they may not use POST methods at all and instead use GET methods. Therefore, the technical differences between these methods do not really matter outside of what they represent in a specific API.
- **Responses:** These resources consist of fields that can be updated and are usually returned as responses. You can request to view these or you can create, edit, or delete the contents of these response fields.

Figure 3 shows the UI of the Postman application. This gives you an idea of what a developer might see when they work with a REST API:

Developers enter the URL and select a method from the Type field. In the Body section, you can see the information that is returned in the response.

However, to be able to fully understand how developers use the REST API, you need to see it or experience it for yourself. You can watch one of the many videos[2] and these are very helpful.

Understanding REST with a test API

Of course, it is also much easier to understand what a REST API is if you use one. Like a video, this can help with visualizing what you are writing about. Len Baker (my colleague at TWi) and I are currently creating a training course about APIs and REST. As part of this, he created a test REST API that we could offer to participants to help them understand the concepts.

The model is very simple. Users use an application called Postman to create, read, update, and delete customer and employee records from the connected SQL database. This is illustrated by Figure 4.

We feel that this is the best way for authors to grasp the concepts of REST and to help appreciate what their readers (REST API developers) want in their documentation.

Documenting REST

What does all this mean for documentation? As you've probably intimated by now, REST APIs are very structured in

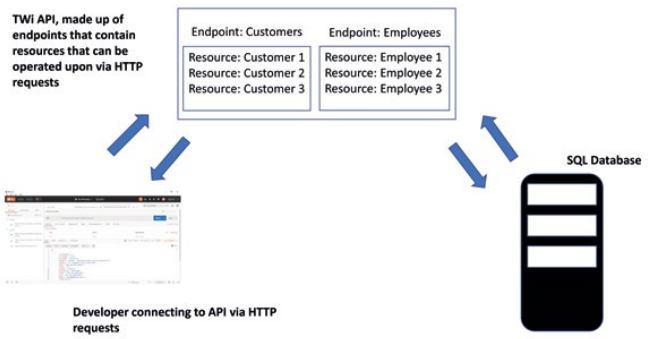


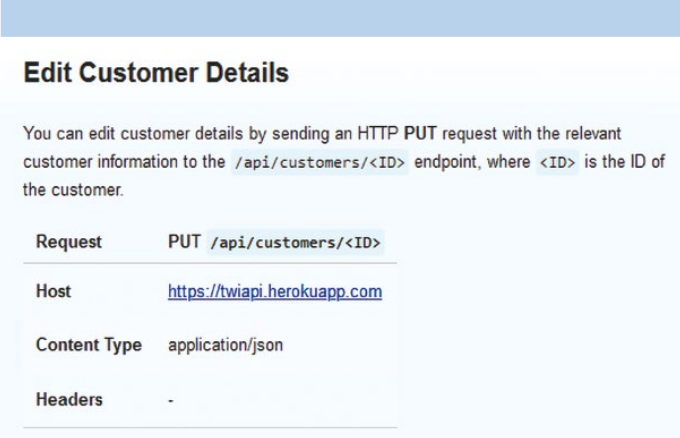
Figure 4. Create, read, and update customer and employee records

their design and this presents opportunities and challenges for writers. As a writer, you know that your REST API will consist of the main components, that is, resources, endpoints, methods, and resources. However, you do not know how your developer has implemented this until you engage with them and their API.

You also know that your audience is familiar with the concepts. You can reasonably expect that they will understand what the components are. They will know they have to use methods and will expect to use responses. However, like the writer, they will not know the specifics of the implementation that you are documenting.

From an information architecture point of view, you need to decide if it makes sense to group topics by expected business activities or if you should create more technical documentation that maps the model. This is something that authors tend to spend some time thinking about. There can be varying reasons to use one approach or the other:

- Tech-centric model: For example, if the API is very technical and does not map easily to real-world tasks, you might want to consider documentation that more closely follows the model to help users to find reference material more easily.
- Business-centric model: Conversely, your users may only want to know how to perform practical tasks like creating a record or accessing map data. In this case, it might make sense to make your documentation more business-orientated.



Edit Customer Details

You can edit customer details by sending an HTTP **PUT** request with the relevant customer information to the `/api/customers/<ID>` endpoint, where `<ID>` is the ID of the customer.

Request	PUT `/api/customers/<ID>`
Host	https://twiapi.herokuapp.com
Content Type	application/json
Headers	-

Figure 5. Operation descriptions

In general, we strive to match the business use case as much as possible while also creating a complete technical reference. To do this, we try to use a hybrid of both models that gives the best of both worlds. You can view this in our example documentation, see 3 in the Reference section.

In this documentation, we want to make it easy for users to get relevant information like a short description of what the operation is used for and what the request URL is. This is shown in Figure 5.

In Figure 6 you can see the request body information with a pop-out example. This makes it easy for developers to see what is and is not allowed for this request.

It is also important to consider the usual topics, like configuration information and connection and security information, that are needed to access the API in a real-world IT landscape.

Request Body Payload Example

An example of the JSON structure in the request body is as follows:

The request body can include the following:

Input Parameter	Description	Type	Size	Mandatory	Default Value
FirstName	The first name of the customer.	Varchar	2-40	Yes	-
LastName	The last name of the customer.	Varchar	2-20	Yes	-
Company	The name of the customers company.	Varchar	80	No	-

```
{
    "City": "Cork",
    "Country": "Ireland",
    "Phone": "+353 (0) 21 2428800"
}
```

Figure 6. Request body information

Glossary

API. Application Programming Interface. Enables different systems to interact with each other programmatically. Two types of APIs are web services and library-based APIs.

CRUD. Create, Read, Update and Delete actions.

GraphQL. A query language for your API, and a server-side runtime for executing queries by using a type system you define for your data. https://graphql.org.

HTTP. Hypertext Transfer Protocol. The application protocol for distributed, collaborative, hypermedia information systems, which is used for data communication on the World Wide Web.

IoT. Internet of Things.

JSON. JavaScript Object Notation. A lightweight syntax containing objects and arrays, usually used (instead of XML) to return information from a REST API.

Middleware. Software that acts as a bridge between an operating system or database and applications.

MIDI. Musical Instrument Digital Interface is a technical standard that describes a communications protocol.

Postman. Collaboration platform for API development.

REST API. Representational State Transfer uses web protocols (HTTP) to make requests and provide responses in a language-agnostic way, meaning that users can choose whatever programming language they want.

SOAP. Simple Object Access Protocol.

UI. User interface.

W3C. The World Wide Web Consortium is the main international standards organisation for the World Wide Web. www.w3.org.

REST in pieces?

You may have heard rumours from the front that REST is not long for this world. GraphQL is the new kid in town and word is that it is better than REST. Some say it is so good, in fact, that it will not require any documentation. We think that this might be somewhat overstating the reality.

REST is an architectural protocol but GraphQL is a query language. GraphQL allows developers to query for and return only the information that they need. REST returns its data in specific formats in the responses, and it returns all the data that is contained in that response. In a large IT landscape, this can have some performance implications. It is my belief and the belief of others[4] that IT ecosystems will use a mix of both for some time to come.

What if I am wrong? You might have heard that GraphQL is self-documenting. This is also overstated, I feel. It is self-documenting in the sense that you can associate documentation with objects in the model. Rest assured, I think it will still be up to technical writers to add the context and business knowledge that users will need to use it.

Many thanks are due to my colleague Len Baker for building the test API mentioned here, reviewing this article, and helping me greatly with all the content. ■

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John Flannery

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UKTC Awards 2020

The winners of these awards were announced, by Linda Robins, at the online conference, TCUK Metro, held on 29 September 2020.

The UKTC Awards 2020 attracted a very high standard of entries. There was variety in entry type, scope, number of contributors to a single entry, nationality, and industry sector.

One significant element this year was the comprehensive and pertinent information provided by all entrants as background to their respective entries. Entrants were required to provide details as follows:

- Description: purpose, scope and audience.
- Production: design and production; size of team; budget and scheduling constraints.
- Distribution: how distributed and size of audience.
- Impact: how the entry benefits the organisation and audience.

The detailed information was very helpful to the judges in their assessment. The pride in achievement was evident as the entrants were able to report success in their entry forms.

The winners were announced at the TCUK Metro on Tuesday 29 September 2020, a virtual conference hosted by the ISTC. Six companies, with contributors from several countries, were recognised for the quality of their entries, five receiving Merit Awards and one received a trophy as Overall Winner.

UKTC 2020 Winner

Surpass Help Site (BTL Group)
Georgie Jones (née Page) and **Tom Wardak** accepted the trophy for the **BTL Product Communications and Training Team** and gave some insights into the work that went into their entry, the **Surpass Help Site**.

The key objective was to provide a new documentation suite specifically for online use; this was in support of the Surpass product, an end-to-end eAssessment solution providing full digitisation of examination workflows for awarding organisations. The team were focused on putting the reader first; they also achieved their aim to have complete control of the platform with the ability to add and update material at any time.

Overall feedback from the judges
"This is a very impressive entry; it was ambitious in scope creating an online document suite providing task-based content specifically for online use. This was approached as a page-one re-structure and re-write of existing content. This involved extensive research, much cross-team work and usability testing throughout the project. The entry is engaging and evidently user-focused. The look and feel is inviting; use of text and graphics is appropriate and consistent. The user can be confident in the quality of the information provided. The judges declared this to be an outstanding end product for an exceptional team effort."
For more details, see page 30.

Merit Award (Judges' Commendation)

Kedro Technical Documentation (QuantumBlack Labs)
This entry was from QuantumBlack Labs, McKenzie & Company's AI and Machine Learning Centre of Excellence. Kedro comprises an ecosystem of products facilitating advanced analytics across a range of client projects. The documentation is intended to enable entry-level data engineers and data scientists to find out if Kedro will suit them.

Overall feedback from the judges
"The judges singled out this Merit Award winner for commendation since it is so successful in meeting its objective. It is designed to help new users assess the suitability of the Kedro product for their purposes. The entry is so readily usable and consistently informative; it includes good features such as links to relevant external documentation, the ability to copy and paste example code, and direct writing style to match the product framework. One judge without knowledge of Python observed, 'I started reading and I got hooked!'"

Merit Award

Distitch (Assia Brill, James Bartley)
Distitch is a new and technically sophisticated approach to knitting.
The entry is published in book form and is aimed at established knitters as a complete reference guide. An author, illustrator and editor worked together. The author created all the content with the illustrator refining the drawings, and the editor collaborating on content, structure and presentation. The entrants stated that the book 'advances both the level of research and development in the knitting world as well as demonstrating high quality technical documentation in a knitting context.'

Overall feedback from the judges
"Distitch is a very attractive and engaging entry with clear instructions and excellent clear graphics. The professional appearance of the samples with real world images using the same colour thread as the hand-drawn images impressed the judges especially. The structure is appropriate for the subject matter and consistently applied; a very accomplished piece."

Merit Award

Cognidox Online Help (Martin Ley, Em-Dash Publications)
To create the online help for Cognidox, the author reworked and restructured the content of three large manuals so that it was suitable for topic-based architecture. The material was then migrated to MadCap Flare; context-sensitive functionality was added; the author collaborated with the client's staff in creation of the dashboard-style front page and integration of tutorial videos. Also the author can update a help topic, build and publish the result and have it go live within a matter of minutes'.

Overall feedback from the judges
"Cognidox Online Help is an impressive entry and a great example of effective writing by a sole technical author. There was significant work in managing the migration of material and post-migration. The author collaborated on the dashboard style for the front page; this is effective and good use is made of Flare's features. The author also liaised extensively in integration of high quality video tutorials into the online help. The delivery of the content and the use of language are impressive."
For more details, see page 31.

Merit Award

Mobile LPG Filling Truck Sales Brochure (Koslan Crisplant Lanka(Pvt) Ltd)
Contributors: Oshadee Amarakoon, Mohamed Amjad Hassen, Iresha Nilumin Hewavasam, Bent Lindrup for Koslan Crisplant Lanka(Pvt) Ltd.

This is a technical brochure produced to 'provide a better understanding of the conceptual features of the company's latest mobile filling solution'. An important element of this was to highlight essential safety features. The brochure was designed from scratch using Adobe InDesign. Since the product was still conceptual, the illustrations were produced using Adobe Illustrator.

Overall feedback from the judges
"The brochure has a very professional feel; the graphics are very well designed and do a good job of explaining the system. The key information is provided in a very easy-to-digest form. The images and annotations complement each other well."

Merit Award

iHASCO Knowledge Base (Spirit Software Ltd & iHASCO Ltd)
iHasco provide eLearning focusing on Health and Safety and Compliance training. Spirit Software collaborated with iHasco to create a new online help for the Learning Management System presented in a new comprehensive knowledge base. This entailed considerable rationalisation and re-organisation using a topic-based method to achieve active help. The project was meticulously planned and implemented; user feedback has been favourable and there has been 20% increase in knowledge base usage.

Overall feedback from the judges
"iHASCO Knowledge Base is an accomplished entry providing information for three user types: learner, administrator and technical support staff. The entry is organised in such that it is always obvious who the text is intended for. There is a good 'look and feel' and the navigation is clear and consistent. Extensive and effective background work really shows through in the end product."
For more details see pages 32-33.

Looking ahead to 2021

The judges were really encouraged by this year's entries and look forward to attracting and similar standard of entries for 2021; we are hoping for a good quantity of quality entries. ■

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www.youtube.com/user/ISTCtechcomm
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Linda Robins FISTC

Linda is the ISTC Council member responsible for the UKTC Awards.

Tech-comms as linguistic Tetris

Tom Wardak explains how BTL rebuilt their documentation from the ground up and won the UK Technical Communications 2020 overall award.

2020 was always going to be an intense year for the Product Communications team at BTL, a digital examination software house. Two years ago, we set out to create a new documentation suite for Surpass, our eAssessment platform. What started as a minor frustration with an outdated content management system morphed into a mission to redefine our overriding principles and practices as Technical Authors.

This wasn't a simple copy-and-paste job. It was a ground-zero restructure and rewrite of all materials. Given that it needed to be done in tandem with all our other responsibilities, including client training, UX refinement with development teams, and maintaining the "old" documentation, we gave ourselves two years to complete the project — a conservative estimate in late 2018.

Then the world changed. The pandemic and the ensuing lockdown not only tested our remote working infrastructure, but our discipline and resolve. It's a minor miracle that we were able to pull together and get this project delivered on time and to the high standards we demanded of ourselves.

Although we were proud of what we had achieved, we knew that we were still relative novices in the realm of technical communications. We submitted the Surpass Help Site to the UK Technical Communication Awards to see whether it stood up to professional scrutiny. To our astonishment, we were crowned Overall Winners for 2020.

Following this, the ISTC invited me to write an article for this issue of *Communicator* and I'd like to take this opportunity to share some of the lessons we learned over the last two years.

The greatest gift this project gave us was the space to step back and reassess our philosophy of technical writing. After some reflection and a sizeable amount of research, we realised that the job of a Technical Author isn't to catalogue product functionality — it's to manage stress.

People don't read documentation for fun. Neither do the majority of users consult the instructions before they try to perform a task, whether that's building furniture or, as in our case, creating a digital examination.

Our research showed that people generally attempt to figure things out for themselves first and only seek help when they hit a barrier. So readers encounter documentation already at a heightened pitch of anxiety. They have deadlines staring them down and tools that don't seem to work as they expect.

Presenting that frazzled reader with reams of impenetrable reference information only buttresses those barriers and flares frustration. Information is useless if you don't know how to apply it in a practical context. Our job, then, was to take the Surpass encyclopaedia and kick it into useful shape, to create user materials that actually worked for the user.

This began with atomising the product into digestible nuggets that correlated with circumscribed activities in the software. It's an understandable impulse to want to crystallise every essence of the product, but documentation isn't cartography and any driver will tell you that route guidance on a sat nav gets them to their destination much quicker than an inch-thick atlas.

Next, we had to come to terms with the reality of how people consume content on the internet. Websites aren't books. A reader can enter at any point, so the structure needed to ensure that all entry points were valid. Every article had to be an island, wholly understandable on its own terms even if it meant a surplus of content redundancy across the site. This was a radical shift from our previous aesthetic that presumed a linear pathway and shunned repetition.

This was because we could not, at any point, assume any prior knowledge on behalf of the reader, so targeting superusers or digital natives was an immediate non-starter. We needed to boil down our style to its most essential components and communicate in the most basic way we could.

This wasn't a case of "dumbing down". Complex concepts don't mandate complex explanations. Tangled prose reflects a tangled writer with a loose grip on their subject matter. Eliminating ambiguity is a noble ideal, but we acknowledged that it's impossible in a language system that's built on abstract signifiers. Writing is more like charades than telepathy and all we can ever do is gesture towards meaning without ever touching it.

Therefore, our gestures had to be rigidly defined and controlled. Our language had to be incredibly basic, especially considering that, with a product reach of over 100 countries, a lot of our readers are non-native English speakers. So strict rules on punctuation, grammar, and dialect were imposed. Public enemies were made of adjectives, adverbs, and pronouns — indeed, anything that introduced uncertainty or any kind of interpretive slant on the writer's part.

This makes for outwardly simple and, dare I say, dull prose. "Select Save to save the item" will impress no one on a literary basis, but it is functional, succinct, and comprehensible. Technical writing has no ego or agenda, it is pure craft. In this way, technical writing is more like linguistic Tetris than anything else. And our main takeaway from this process has been an ever-growing appreciation and love of that craft. ■

Reference

The award-winning entry:

help.surpass.com.

Tom Wardak, PhD

Tom is a Senior Technical Author who co-manages the Product Communications team at BTL, a company specialising in eAssessment products. Prior to joining the company, Tom was an award-winning doctoral research scholar at the University of Sheffield's School of English, specialising in critical theories of textuality and authorship.

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Cognidox v10.0 online help

For his UK Technical Communication Merit Award, Martin Ley explains the process he undertook.

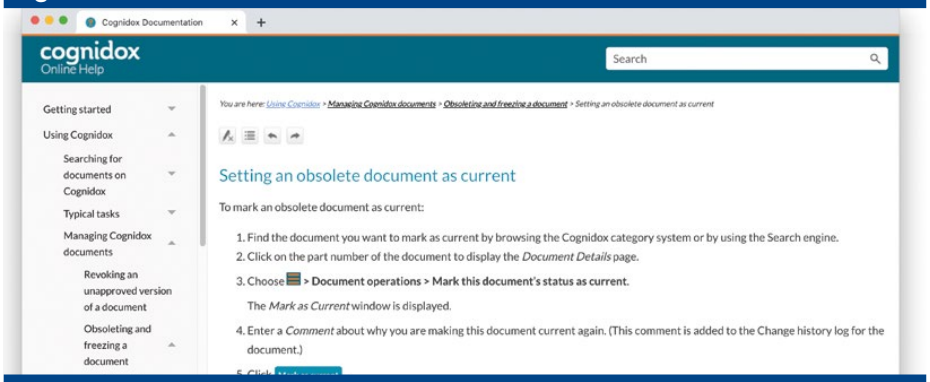
I was approached by Cognidox Ltd back in April of 2018 to talk about creating some online help for their web-based document management system. The project took a while to get off the ground, and entailed a massive amount of work, but it was extremely satisfying to have created such a user-friendly product. It was also great being part of a team — Cognidox is a very small Cambridge-based company, and they made me feel like part of the family. I'm now working on their next release...

I already had some experience with the Cognidox system, as it was used by another long-standing client of mine. Cognidox had decided to totally revamp the GUI, while retaining and extending the functionality. The existing documentation had been written by different people, initially by Cognidox's original owner, and subsequently by various technical authors, in a mixture of Word and FrameMaker. My task was to migrate three large documents (2x250-page FrameMaker docs, 1x150-page Word doc) to my tool of choice (MadCap Flare) and repurpose the information so that it was topic-based and context-sensitive.

I spent a good while looking over the source material, formulating a plan, and explaining to the team at Cognidox what would be involved. I suspect many of you will have migrated documents between authoring platforms and be aware of the usual pitfalls. I found many more on my journey! I actually created a spreadsheet, detailing everything I would need to do before, during and after the migration, just so I could keep tabs on progress and be sure I didn't leave anything out. It was a great starting point, but inevitably there were additions and endless rabbit holes to go down when I actually made a start on the work. I did quite a bit of research online before embarking on the project, to get ideas for smoothing the migration process.

Here is a shortened version of my process:

Figure 1.



Cognidox-Help-screen

- Pre-migration: Edit and sanitise the existing source documents. For example: FrameMaker — consolidate and apply styles consistently; work out how to handle conditional text, graphics frames, variables, cross references, tables etc. I used third-party tools in FrameMaker to do some of the heavy lifting. As for Word, well, it's a four-letter word...
- Create a Flare template for importing the source documents.
- Implement a git-based[1] source-control workflow. Flare's source control is pretty good, but we had some issues working with Cognidox's repository (Flare can't handle gitolite3, if anyone's interested). I ended up pushing to my own Bitbucket repo from Flare, and Cognidox pulled my sources from there.
- Import the documents. I needed to handle style mappings, apply a stylesheet, control graphics resampling.
- Fix any problems caused by the import process, of which there were many! I liaised with MadCap tech support (who were very helpful) and called in favours from long ago to come up with regular expressions that would automate many of the arcane Find/Replace operations I needed. I did use UltraEdit on occasion, but that tended to argue with Flare's source control. Something to be aware of!
- Rewrite and restructure the imported material to suit my topic-based approach, and to reflect the new GUI. Obviously, completely new screenshots were required (which I tried to keep to a minimum for the help). Each procedure had to be read carefully and then rewritten to match the GUI, as Cognidox functions were now accessed in a different way.
- Write material for all the new functionality. Short sentence, big job!
- Leverage Flare's functionality to improve usability (drop-downs, expanding text, pop-ups, snippets, related concepts, keywords, micro content, file tags etc).
- Implement context sensitive help calls.
- Build and publish directly to Cognidox's live server.

Phew!

This project is the first time I've been able to publish straight to a live server. It's quite satisfying (if a little nerve-wracking) to see updates appear out in the wild a short time after you press the button! A bit of a change from my early documentation days back in the 1980s, when I was cutting and pasting stuff onto hard proofs prior to sending off to a print shop!. ■

1. Git is a distributed version-control system for tracking changes in source code during software development.

Martin Ley, BSc, FISTC

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Spirit Software wins an award

Amanda Maher explains how the two companies collaborated to produce a successful project for the iHASCO knowledge base.

iHASCO are an eLearning provider specialising in Health and Safety and HR compliance. Their Learning Management System (LMS) has delivered over 5 million training sessions to businesses across the UK and Europe.

The knowledge base for their LMS had evolved over time with many different contributors and had lost the confidence of both customers and support staff. So iHASCO connected with Spirit Software for technical authoring expertise, to help them create an accurate and professional knowledge base that would provide their customers with the information they needed, and reduce unnecessary calls to the customer support team.

Spirit Software specialises in providing technical authoring and solutions architecture services in diverse industries from automotive to education.

My first meeting was with Nathan Pitman, Managing Director, and Amanda Lowndes, Customer Support Manager, at iHASCO's offices in Bracknell where we discussed the issue in more depth. I suggested putting forward a proposal for the project after more investigation. iHASCO gave me access to a test account in the LMS and subject matter experts (SMEs) in the sales and support departments to get answers to any questions.

The project

With most software, there are many routes a user can take to do a task, as I learned about the LMS, I mapped out all the possible routes to tasks using Visio. This map was compared to the current knowledge base and helped to identify any gaps. I also ran user scenarios under the test account and compared results with current help articles.

The investigation showed that the current knowledge base content could not be recycled, and new help content was needed. The existing knowledge base was managed using Help Scout; a helpdesk software product which includes a knowledge base content management system (CMS) called Help Scout Docs.

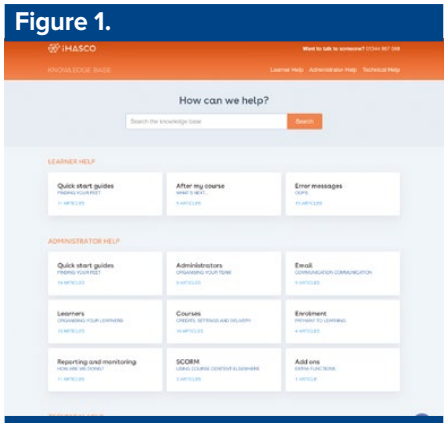
Time constraints meant that there was no opportunity to contact end users, however, Amanda Lowndes was incredibly knowledgeable in helping to identify the three different audience types:

1. LMS learners
2. LMS administrators
3. Technical staff.

Her input helped me to create user stories, user journeys and specific user goals that were kept at the forefront of the design process.

The entire project was completed online and we agreed to use Google Docs to manage the three draft

Figure 1.



Knowledge base

Amanda Maher with her award

> *iHASCO Knowledge Base is an accomplished entry providing information for three user types: learner, administrator and technical support staff. The entry is organised in such that it is always obvious who the text is intended for. There is a good 'look and feel' and the navigation is clear and consistent. Extensive and effective background work really shows through in the end product.*

stages. Communication between the team was via email, phone, Google Docs and Zoom. The project was planned and managed using Excel. To get a clear understanding of some processes I created flowcharts using Visio. For example, the authentication process had some legacy options and flowcharts mapped accurately what each type of user would experience.

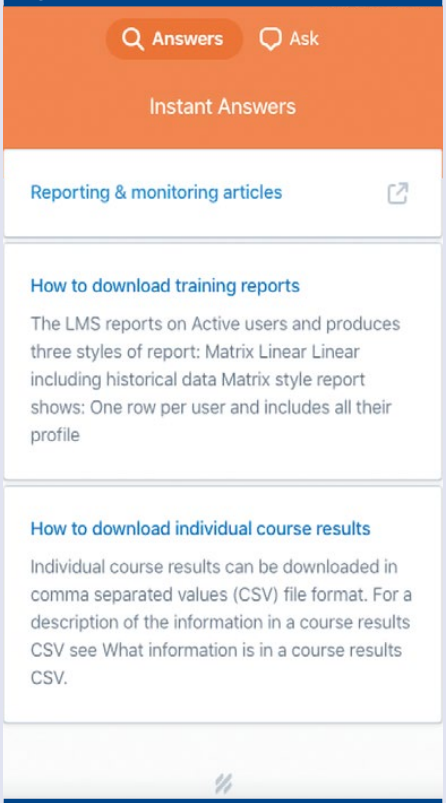
To make effective use of time and resources, the project was split into two streams:

1. Create the new knowledge base structure within Help Scout Docs to hold the new content. Convert the signed off content into HTML to populate the knowledge base.
2. Write the new topics, present to SMEs for three stages of review and sign off.

The design used topic-based content, this meant limiting the content to tasks and concepts. We also identified a need for Quick Start guides for new users. The benefits of this approach include potential content reuse.

The main scheduling constraint was the LMS development cycle. The next update was due to be released at the end of March 2020 and iHASCO wanted to launch the new knowledge base at the same time. Understandably, the COVID-19 restrictions delayed those plans.

Figure 2.



Knowledge base conceptual help

When all the content was completed, the final task was to apply the application branding to the knowledge base to create a seamless link to the LMS, before launching successfully in early April 2020.

The result

Nathan Pitman, Managing Director of iHASCO said "The impact of having accurate and up to date help content has been huge." The knowledge base (Figure 1) has become a single point of reference on the LMS, and resulted in

- Clients solving more issues themselves
- A confident customer support team
- A reference point for the Sales teams.

An unexpected benefit has been the ability to deliver instant answers (Figure 2) to users before they start a live chat. We can write rules that promote location-specific help topics that users can see without leaving the application.

As we reached completion it became evident that it would be an ideal project to put forward for the TCUK 2020 awards. Although putting my work forward for scrutiny was a daunting prospect, the feedback from the judges and the whole experience has been invaluable. In fact, the iHASCO team and I are already planning improvements to the knowledge base and hope to be back in 2021. ■

Amanda Maher MISTC

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Lessons in governance

Learning to evolve from standards to stewardship. Chris Hester takes you through what governance is and how you can apply it.

In my earlier years as a content strategist, I worked for a software company that organised teams by product. The teams had their own product manager, developers, designers, testers, and technical writers. And each writing team had their own methodologies, style and standards guides.

When the company decided to streamline the content development process and make product content available online, they created a new team (working group) to focus on finding the best solution. For a year, the team gathered requirements and researched content management systems. They analysed inputs, processes, and output. And finally, they developed a proof-of-concept.

What was the outcome? The company shelved the project. And writers continued supporting their teams with their own processes and tools.

At first glance, this project had the ingredients for success. Similar but not exact writing processes. A willingness to share publishing standards. So why did it take a year to reach the proof-of-concept stage? And what led to its demise?

The missing element was something I'd never heard of: governance. Since then, it's become an integral part of nearly every content project I've worked on.

What is governance?

Content is political and content projects more so; responses to this project announcement were typical: Who is managing this project? Who will own the system? What will happen to my job? What will my customers think? My process and standards make sense, so can we agree to use those?

Governance helps answer those questions. When we first hear the word, it is easy to equate governance with rules: what we are and are not allowed to do. As a result, people perceive governance as something that makes our work more difficult because of the rules.

In the past ten years, my content governance work has included developing and implementing governance plans, writing policies, procedures, and standards, and reviewing plans for risk and compliance issues. Through these experiences, I've learned three lessons about governance:

1. Governance is a framework.
2. Governance is a shared responsibility.
3. Governance is a continuous activity.

Let's look at each of these.

Lesson 1: Governance is a framework

When we approach governance as a framework, we can design a structure that enables people to get their work done. The framework clarifies roles and responsibilities, facilitates communication and collaboration, and establishes consistent practices. In my experience, a governance team in the form of a working group or steering committee leads the framework project. At a minimum, the governance framework addresses purpose, people, and a governance library.

> *Governance clarifies roles and responsibilities, facilitates communication and collaboration, and establishes consistent practices.*

Purpose

Too many content projects reach a point of chaos when someone says, "maybe we should have some governance around this." As if governance is a magic lasso that brings order to any project.

Ideally, governance should be in place before content work starts, and moreover, the governance team should be able to articulate why a governance framework and its related compliance are needed. For example:

- Clearly defined roles and responsibilities set expectations for work to be done and who is doing that work.
- Formalised processes capture critical steps and ensure uniformity across content planning, creation, review, and publishing activities. They also serve as repeatable processes against which to measure results.
- When people understand their roles and their assigned tasks within a process, they increase their productivity as a result of clearer communication, limited disruptions, minimised errors, and reduced errors and rework.

The team also captures risks as examples of why the framework is needed. For example, publishing content that doesn't meet brand or legal requirements could result in damage to the business's reputation, a loss of trust, or even lawsuits. If teams operate independently, the web development team can change the website architecture without notifying the content team.

Identifying governance, compliance, and risk issues helps the team solidify its purpose and goals for the framework, with the understanding that goals should be set to measure and manage the framework.

People

People are at the heart of our content projects, whether they are content creators, editors, brand reviewers, or customers. Defining roles and responsibilities helps people understand what's expected of them as well as the people they work with. This clarity is not limited to their own role; it also includes their colleagues' roles' (Pijnacker 2019). Pijnacker continues, explaining that employees with role clarity are 53% more efficient and 27% more effective at work than those who experience ambiguity in their roles.

Roles

Roles are not the same as titles. Titles are usually the official name assigned to a level or position in a company for the purpose of organisational structure or salary. Roles describe what a person does as a function on a team, while responsibilities are the tasks and activities assigned to that role.

Depending on how teams or processes are defined, employees may serve multiple roles. A technical writer may also be a technical editor. A content strategist may also serve as project manager. What matters is that the person has the skills and knowledge needed for these roles, knows when they are needed for these roles, and knows what work needs to be completed in these roles.

RACI Charts

A RACI chart is the most common tool used for illustrating the relationship between roles and responsibilities, identifying the person who is:

- **R**esponsible (who is doing the work?)
- **A**ccountable (who owns or approves the work?)
- **C**onsulted (who gives input on the work?)
- **I**nformed (who needs to know, but is not consulted, about the work?)

A RACI chart supports cross-functional activities and helps teams operate more smoothly. Table 1 illustrates how a RACI for cross-functional technical writing projects might look.

Depending on how roles are assigned, leadership may use the chart to identify and remediate resource issues or conflicts. For example, if a task has no Rs, it indicates nobody was assigned to complete the task, but too many Rs may be a sign that too many people were assigned. One corrective action could be to reassign a Responsible resource as a Consulted resource.

A RACI chart helps to remove the politics from the content project by identifying task owners, decision-makers, and escalation points.

Let's not forget customers. Some organisations include customers on RACI charts as Consulted or Informed, particularly organisations with a heavy investment in user experience research and design.

Governance library

The *governance library* stores the supporting documents that operationalise the governance: the policies, standards, guidelines, and processes.

- Policies document business rules and are intended to address a principle or minimise a risk. Compliance is mandatory.
- Standards set criteria for achieving a high-quality level of performance or practice.
- Guidelines are general recommendations, often based on best practices. Compliance is recommended.
- Processes capture the tasks and activities related to how content work gets done.

When building the library and implementing these documents, it is important to distinguish between them, their purpose, and how they serve the framework. 'Organisations often conflate policy and standards; however, the two areas are not the same. Policies exist to protect the organisation. They do not address online quality and how to achieve it—that is the role of standards' (Welchman 2015:13).

The ideal starting point for gathering governance resources is the corporate policy and procedures centre. While these documents supersede the content governance, they are a critical resource to content teams. As a next step, the governance team would look for gaps in this material: what about content is not covered? What needs to be addressed in the form of policies, standards, and guidelines?

Evaluating the processes is different. Content teams tend to follow similar processes: plan, create, review (different types), publish. One complaint about the process is common: the content process takes too long. Studying the processes with an eye for consistency and efficiency is a necessary step. By aligning new or revised processes with RACI charts, leadership can make sure the right people are in the right roles and that they get the support they need to fill their roles successfully.

When the governance library is available, employees have access to documentation that informs their work, which leads to fewer revisions, faster reviews, and faster publishing cycles. This includes:

- Policies (or rules) that protect the business
- Brand and editorial standards that help ensure work is done consistently

Table 1. RACI cross-functional technical writing project example

	Technical writer	Editor	Product manager	Developer	Marketing	Legal
Plan topics	R	C	C	I	I	I
Write draft	R	C	I	C	I	I
Technical accuracy	R	C	C	A	I	I
Brand compliance	R	C	I	I	A	I
Legal compliance	R	C	I	I	I	A
Style and standards	R	A	I	I	C	C
Sign-off for publishing	R	C	A	I	I	I

- Guidelines that address topics such as accessibility, content optimisation, forms, media usage, templates, tags, and taxonomy, etc.

Process documents, together with the RACI charts, also belong in the governance library. This documentation about workflows, the inputs and outputs, the dependencies, and the people makes the work process transparent. By removing mystery and doubt, transparency reinforces the value of adhering to the policies, processes, and standards.

Lesson 2: Governance is a shared responsibility

Consider governance from the viewpoint that it is 'the structure enabling content stewardship, beginning with metadata and workflow strategy, policy development and technology solutions to serve the creation, use and distribution of content' (Harrison 2018).

This idea of content stewardship adds a layer of shared responsibility to every role. In other words, each person working within the framework is entrusted to care for and about content. This is more than following the steps prescribed by a workflow diagram — it extends to being mindful of the content in front of you and taking care of it in accordance with the entire governance framework.

> *Participating in professional development activities such as communities of practice, professional organisations, conferences, and external learning can help you bring value to your roles within an organisation.*

- If you are responsible for publishing content and notice errors in the copy, do you return it to a copy editor, fix it yourself or publish anyway? A RACI chart may guide you to publish, but content governance entrusts and empowers you to return it to a copy editor.
- What if you are asked to publish the content immediately and there is no time for copy editing? Again, content governance entrusts and empowers you to take care of the content. Can you fix the errors and then publish? Do the errors warrant a delay in publishing? What is best for the customers and the business?

Content stewardship also relies on the stewards themselves to communicate and trust each other as the governance framework solidifies. Between RACI charts and well-defined workflows, one person's structure might be another's blocker. Asking for clarification or support in order to complete a task or help a peer resolve an issue only serves to reinforce the framework. Likewise, encouraging employees to provide feedback and identify improvement opportunities also benefit the governance framework.

Lesson 3: Governance is continuous

Governance does not end at implementation: consistent oversight helps build consistent practices. Keep in mind that introducing a framework and formalised processes may initially result in decreased productivity because people need time to learn new tasks and responsibilities. This is common with change. It is also common for people to request process changes before they have fully adapted, for example, 'This isn't working for us. We need to re-evaluate and start over'. It takes time for adoption and even more time for results to surface.

As the company grows and evolves, the governance team must also evolve the framework, making updates as needed to support operations. Organisational changes should activate reviews of roles, responsibilities, and processes. Legal and regulatory updates should initiate process, standard, and even policy reviews. Disconnects between leadership direction and governance documentation creates a frustrating work environment. When employees start to question their roles or encounter ambiguity in tasks, there is a temptation to create workarounds or shortcuts to get the work done. Not having the information needed to complete a job properly is a risk to content quality and process integrity.

Training

Regular training is a valuable tool in the adoption and success of a governance framework. The governance team can use formal training to introduce the framework, lead people through library documents, and inform employees of new or changed processes. Training doesn't stop with the governance team, though. Participating in professional development activities such as communities of practice, professional organisations, conferences, and external learning can help employees upskill in ways that bring value to their roles and the organisation with broadened skills and knowledge.

Metrics

As mentioned earlier, the governance team should set goals to measure and manage the governance framework. Metrics can be useful for monitoring compliance with the governance framework, not just content performance. Metrics can also help determine how the processes are working, where changes are needed, and even if decisions are being made at the right time, by the right people about the right things. For example, if 'the content process takes too long', the data will reveal:

- The number of steps in the process and how long content sits at each step.
- The optional and required steps.
- Which steps are repeated, by whom, and how many times.
- The criteria for moving content from one step to another.
- The content types that flow through this process.

The team might not learn everything from the metrics, but placed against the framework, the data provides a more holistic view of why the content process takes too long. This allows the team to identify where updates are needed, whether in roles, responsibilities, standards, or the process.

Why talk about governance now?

Thinking back to the proof-of-concept project, how would governance have helped? And why talk about governance now?

For that project, establishing a governance framework to guide the proof-of-concept may have increased the odds for a successful implementation:

- The working group defined the project's purpose as 'making product documentation available through an online portal'. A governance framework qualifies purpose by clarifying **why the work is being done**. For example:

- Simplify the writing process and improve publishing times
- Make product documentation available through an online portal so customers can access information faster and easier when products are released

- By focusing on the writers, the working group overlooked inputs, processes, and outputs from other stakeholders. As a result, stakeholders like product managers, developers, and designers viewed the new system as a "writing solution" and were not interested in participating in the project. With a governance framework, the working group would have had the tools to distinguish between roles and responsibilities in the product development process versus the writing process, as well as communicating the value of the project as a business solution.
- The working group missed an opportunity to set goals for the project, as a proof-of-concept and for implementation. Communicating measurable goals from the onset could have led to more buy-in from stakeholders and support from leadership. For a documentation project like this, a governance framework would have enabled:
  - A decrease in the time required to write, review, and publish content, because the writers and reviewers would be using an automated workflow.
  - A decrease in the cost to produce and distribute printed documentation, because customers would be able to print-on-demand from the portal.
  - A decrease in the number of calls to technical support, because customers would have a first-level of support in the form of online documentation.

Hindsight provides valuable lessons. Governance frameworks clarify roles by defining who works with content, when, and how. They also specify the context for each role: do the task, consult on the task, or be aware of the task. Understanding context reduces frustration, making it easier to focus on work.

Exploring processes in detail helps us look for gaps, overlaps and areas for improvement, including ways to improve processes by changing technology. Looking at roles and processes for touchpoints helps us reconcile roles and responsibilities with the processes to make sure people are in the right role — that we're setting people and processes up for success.

Finally, as organisations evolve to meet customer and industry demands, content authors and publishers face increasing requests for more, better content — faster. Governance frameworks codify the policies, standards, and processes that enable consistent content production while achieving compliance and managing risk. Now will always be the right time to consider governance and how it can best serve your team. ■

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ISO 20607:2019

Margaretha Hopman explains in detail the ISO 20607:2019 Safety of machinery — Instruction handbook — General drafting principles standard.

In 1989, the first version of the Machinery Directive (Directive 2006/42/EC[1], the 'MD') became effective. From then on, manufacturers had to be able to demonstrate compliance with the essential requirements of the MD for any piece of machinery marketed in the European Union. One of these essential requirements concerns instructions for use; these must be supplied with every machine.

Manufacturers have complained from the start that the MD does not provide enough guidance concerning instructions for use. That is where ISO 20607 comes in: It was written specifically to help and guide manufacturers on this point.

Read on, and you will see that ISO 20607 can also be a great help to you as a technical author. I know it has helped me in the discussions I had with clients about writing user-centred instructions.

See the inset for MD basics on page 41 if you are new to this field. First, let's take a quick look at what the MD says about instructions for use.

Instructions for use (MD)

Instructions for use are an essential part for safe use or operation of machinery, according to the MD. That implicitly means that the machine is finished only when the instructions for use are finished. The MD does not tell manufacturers exactly how they are to meet the essential requirements concerning instructions for use, but there are references to topics that should be addressed. For example, the instructions must describe:

- Residual risks, and how to contain these risks
- The intended use of the machinery, but also any reasonably foreseeable misuse
- Safe use of the machinery.

In addition, the instructions must be provided in a form that is unambiguous and easily understood; it must not be excessive to the extent of overloading the operator. If the machinery is intended for use by non-professional operators, the wording and layout of the instructions must take into account the level of general education and acumen that can reasonably be expected from such operators.

Then there is the 'language requirement': instructions must be available in one or more official EU community languages. Most manufacturers are not happy about this, because it means extra costs for translations. The fact that the MD expects manufacturers to supply all instructions on paper means more expense.

An experienced technical author will probably know how to interpret the MD and will know what to include in instructions for use, but manufacturers have been waiting for years for the more specific guidance given in ISO 20607.

1. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02006L0042-20190726 (accessed 17 November 2020). The official text of Directive 2006/42/EC.

Instruction handbook (ISO 20607)

The title of this new standard implies that it is about instruction handbooks (compared to instructions for use in the MD). ISO 20607 defines an instruction handbook as 'part of the information for use provided by a machine manufacturer to the machine user that contains instructions and advice concerning the use of the machinery during all phases of its life cycle'[2].

This does not mean that manufacturers are allowed to create instruction handbooks only from now on, nor that all information should be contained in one document. In fact, the standard advises manufacturers to create one document for each targeted user group, each with its own part number or each with its own title (installation manual, user manual, maintenance manual etc.).

Apart from helping manufacturers (and technical authors) in writing an instruction handbook, the purpose of ISO 20607 is to:

- Improve the safety specifications and readability, and ease of use of the instruction handbook of the machine
- Specify requirements for the machine manufacturer for preparation of the safety relevant parts of an instruction handbook.

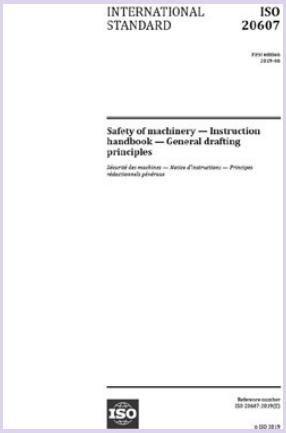
Though readability and usability of instructions for use are requirements that are implied by the MD, they become much more concrete in ISO 20607. The same applies to requirements concerning operator safety and general machine safety.

I was thrilled when I first read this standard, because it describes exactly the way we technical authors wish to do our job. What else is interesting about this standard?

Good to know about ISO 20607

ISO 20607 is classified as a Type-B standard. That means it is a generic safety standard[3].

As of April 2020, ISO 20607 is on the list of harmonised standards for the MD. That means that compliance with the normative clauses of ISO 20607 confers a *presumption of conformity* with the corresponding essential requirements of Directive 2006/42/EC[4].


INTERNATIONAL STANDARD
ISO 20607
Safety of machinery — Instruction handbook — General drafting principles

2. Instruction handbook is a subset of information for use. For more information, refer to ISO 12100:2010, 6.4.

3. Reference: ISO 12100:2010 "Safety of machinery – General principles for design – Risk assessment and risk reduction"; specifies basic terminology, principles and a methodology for achieving safety in the design of machinery.

4. List of harmonised standards https://eur-lex.europa.eu/eli/dec_impl/2020/480/oj (accessed 5 November 2020).

ISO 20607 in summary

Clauses 1 - 3 of the standard describe the usual: scope, normative reference, terms and definitions; these clauses are interesting to read, but I will not discuss them in detail in this article.

Clause 4 (Principles and general information) is where things get interesting. It offers very specific guidance for the preparatory work that a manufacturer (or a technical author) should undertake before creating the instruction handbook. For instance, a manufacturer should:

- Identify target groups/persons who interact directly with the machine and consider any specific needs, previous knowledge and educational background. Examples of target groups given are installers (system integrators), operators, maintenance personnel or technicians, cleaning personnel, dismantling personnel.
- Provide instructions for use that cover the complete life cycle of the machine
- Create a clear structure
- Identify tasks that the target groups shall perform and determine information needs per target group, and consider creating a separate document for each target group
- Use comprehensible and consistent language (short and simple sentences, logical and sequential writing, active voice etc) that is easy to translate
- Describe residual risks, and make sure that warnings and hazards stand out
- Provide information concerning IT security vulnerabilities (see ISO/TR 22100-4:2018, 10.4).

Clause 5 (Content and structure of the instruction handbook) consists of an extensive list of items to consider for including in an instruction handbook. See Figure 1 for an excerpt of the clause on fault finding/ troubleshooting and repair.

In my experience, this is exactly the type of guidance many machinery manufacturers are looking for. The standard does emphasise that the list is an example, and that manufacturers must determine which items are relevant for the type of machinery they build.

5.2.11 Fault finding/troubleshooting and repair

The instruction handbook shall include instructions and information for general fault finding/ troubleshooting and repair, such as:

— fault identification and location for repair;

— troubleshooting; and

— procedures to repair the machine and restore operation.

The fault list should be based on certain logic. For example, first faults that are easy to resolve, or the most common faults first, see Table 2.

Table 2 — Fault list example

Fault message	Fault	Possible cause or procedure for detecting the fault	Solution	Performed by (unskilled/skilled/ certified)
...	...	...	...	...
...	...	...	...	...

Where necessary, add special notes about faults, precautionary measures and safety instructions.

Figure 1. ISO 20607, clause 5.2.11

Clause 6 (Language and formulation/style guide) offers advice on language and formulation in the form of a very short style guide. Here, the MD language requirement gets a new twist: the standard advises the manufacturer to agree with the customer on the language(s) used in the instruction handbook. That makes perfect sense because many large industrial machines are one of a kind. Clause 6 also provides more guidance on how to handle residual risk information, and on how to present warnings and hazards. The basic rule of thumb given is to:

- Use a signal word, for example DANGER, WARNING and CAUTION
- Add a description of the nature or type of hazard
- Describe the possible injury or damage, and how such injury or damage can be avoided.

Clause 7 (Forms of publication) is interesting too. ISO 20607 advises manufacturers to publish instruction handbook(s) in one or more ways. Apart from paper, forms of publications suggested in ISO 20607 are electronic storage mediums, visual and/or auditory forms that are internet-based, on an external server, a website or other storage location. Information in whatever form is allowed, provided that:

- It is available with the machine at the time of commissioning
- It is in the form agreed with the customer
- It is in the language(s) agreed with the customer
- It is in agreement with legal requirements of the country in which the machine is placed on the market and/or put into service for the first time.

The last bullet point means that manufacturers will still have to supply paper documentation if they must comply with the MD.

Annex A describes the correspondence between ISO 12100:2010 Safety of machinery — General principles for design — Risk assessment and risk reduction (6.4) and ISO 20607. Every machinery manufacturer should be aware of the content of ISO 12100:2010 already.

Annex B gives recommendations for presentation and formatting. This is identical to the information given in another interesting standard for technical authors: IEC/IEEE 82079-1:2019. See Figure 2 for an excerpt.

Annex B also offers recommendations for emphasising information, use of headings, and use of colours.

Product/ information document size	Location and role of instruction	High contrast dark text on light background	Low contrast colours or white on	Complex character sets (e.g. Kanji)	Other remarks	Safety signs and graphical symbols	
						Symbols generally	Safety signs
Instructions viewed from up to 1 m distance on floor-standing products	critical on product markings	14 pt bold BE68.3 1,0QGO aeocld	16 pt bold BE68.3 1,0QGO aeocld	—	Consider using large print fonts specially developed to help people with visual impairments to read signs and labels at 30 cm to 100 cm	As applicable. Otherwise according to viewing distance from which attention needs to be attracted or the symbol needs to be recognized.	
	text	14 pt	16 pt	—		Less than 15 mm height unlikely to be sufficient for critical on-product markings	
Instructions on desk-top products, information in printed manuals or single-fold leaflets and documents intended for printing by user	critical on product markings	14 pt bold BE68.3 1,0QGO aeocld	16 pt bold BE68.3 1,0QGO aeocld	—			
	headings	12 pt BE68.3 1,0QGO aeocld	14 pt BE68.3 1,0QGO aeocld	—	Serif fonts may be used (but sans-serif preferred)	5 mm minimum height (or 14 pt) e.g.	10 mm minimum height e.g.

Figure 2. Excerpt Table B.1 - Minimum recommended text font sizes and heights of safety signs and graphical symbols according to IEC/IEEE 82079-1:2019, Table 4

Table C.2 — Sentences

Recommendation	Not preferred	Preferred
One topic per sentence.	The assembly consists of two side panels and two connecting plates which are attached with a hinge to each other and are bolted to the main panel.	The assembly consists of two side panels and two connecting plates. These panels are attached to each other with a hinge. The connecting plates are attached to the main panel with four screws.
Use nouns instead of pronouns.	It may protrude maximum 15 cm.	The load may protrude maximum 15 cm.
Omit no verbs.	Thermostat to 90 °C.	Set the thermostat to 90 °C.
Use bullets when the order is unimportant.	The control panel contains an on/off switch, a start button and a stop button.	The control panel contains the following buttons: — an on/off switch — a start button — a stop button
Use a list with letters or numbers when the order is important.	Remove the label as the carriage is retracted and open the isolation valves, then push the carriage slowly out (taking care that the other parts are not touched!), and then close the valves.	a) Pull the carriage in. b) Remove the label. c) Open the isolation valves. d) Push the carriage slowly and ensure it does not touch other parts. e) Close the isolation valves.

Figure 3. ISO 20607, Table C.2

Annex C contains recommendations for writing instructions, with examples. Apart from recommendations for drafting general instructions, there are recommendations for writing clear sentences (see Figure 3), for use of words, for use of verbs, and for writing in general. Even though it is good to have these examples, I have mixed feelings about this Annex. A professional technical author should already know about these things. For a non-professional author (for example, an engineer writing the instruction handbook), this Annex may not provide enough guidance.

The **Bibliography** lists several standards on the topic of graphical symbols, safety of machinery and another reference to IEC/IEEE 82079-1:2019 Preparation of information for use (instructions for use) of products – Part 1: Principles and general requirements.

How can ISO 20607 help you?

First, the standard will help in creating awareness among manufacturers about the need for more complete and more user-centred documentation. That will help you as a technical author to do your job.

Then there is Clause 5; it can be easily converted into a checklist that will help determine what information each user type needs. In fact, I have created such a checklist already and I have used it to get started in various projects with different clients. My clients add the completed checklists to their technical files, to document the presumption of conformity to the MD concerning instructions for use.

In the past, I have had to deal with clients who wanted to document the bare minimum in instructions for use. Now the standard helps me in convincing my clients that they need to prepare more elaborate instructions, often in more than one form, to more efficiently meet the needs of identified user groups.

The fact that the instruction handbook should cover the complete life cycle of the machine was an MD requirement already, but one that most manufacturers conveniently used to forget in the past. This standard will force manufacturers to think about, and document, for example scrapping procedures before they have even started producing the machine. From now on, adherence to ISO 20607 should result in a more complete set of instructions with every machine, and hopefully also in instructions that are better targeted at specific user groups.

Conclusion

ISO 20607 offers a wealth of information and guidance in only 24 pages. The standard will help and guide manufacturers (and technical authors) in making sure that the right information arrives at the machine user at the right time, in a form that best suits user needs.

The writers of this standard have clearly tried to include guidance concerning some of the newer publication technologies and IT issues, but have not been able to provide very clear guidance just yet. For that reason, I expect that the standard will be updated after the updated MD is published.

What you should know about the Machinery Directive

The Machinery Directive (official name Directive 2006/42/EC) was first published in 1989 and was last updated in 2006. The objectives of the MD are to:

- Promote the free movement of machinery with the single market of the European Union
- Guarantee a high level of protection for EU workers and citizens.

A Directive is effectively a *law* in all member states. The MD aims to define essential requirements (in relation to the protection of health and safety and other aspects) which products must satisfy to benefit from the free movement of products across the internal market of the EU.

EU legislation does not prescribe specific technical solutions to meet the essential requirements. The directive is just a framework, European harmonised standards specify the various technical solutions.

Compliance with these harmonised standards is voluntary, but compliance gives rise to a *presumption of conformity* with the relevant essential requirements of the MD. If there is conformity with the relevant essential requirements, a manufacturer can claim CE compliance and place the CE logo on his machine.

Currently, the MD does not take into account the latest developments in for example digitalisation (internet of things, artificial intelligence, cybersecurity). For that reason, preparatory work for revision of the MD is under way[5]. Another reason given for an update to the MD is the perceived 'administrative burden and additional costs for operators due to requirements for paper documentation'. ■

Standards and Directives mentioned in this article

Directive 2006/42/EC

IEC/IEEE 82079-1:2019 Preparation of information for use (instructions for use) of products — Part 1: Principles and general requirements

ISO 12100:2010 Safety of machinery — General principles for design — Risk assessment and risk reduction

ISO 20607:2019 Safety of machinery — Instruction handbook — General drafting principles

ISO/TR 22100-1:2015 Safety of machinery — Relationship with ISO 12100 — Part 1: How ISO 12100 relates to type-B and type-C standards

Where to order ISO 20607

Go to your national standards organisation, or order from: www.iso.org/standard/68519.html (accessed 5 November 2020).

However, I usually order standards from the Estonian Centre for Standardisation. Use this link for ordering ISO 20607: www.evs.ee/en/evs-en-iso-20607-2019 (accessed 5 November 2020).

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5. Revision of Directive 2006/42/EC on machinery: https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1561710640331&uri=PI_COM:Ares(2019)132242 (accessed 6 November 2020); check the planning document at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=PI_COM%3AAres%282019%29132242&qid=1604653303413 (accessed 6 November 2020).

S1000D – International Specification

Terry Howard delves into this standard for creating Technical Publications using a Common Source Database, and how it is used.

Introduction

The Spring and Summer 2020 *Communicator* featured a case study presented by Jenny Jansson and Mats Broberg (SSPA Sweden AB) "S1000D for the Amphibious Battalion" which discussed how to maintain technical publications for a large fleet of combat boats and support vessels using the S1000D specification. But what is S1000D and how is the specification used to manage and publish data?

S1000D – The specification

S1000D – International Specification for Technical Publications using a Common Source Database is a specification for the procurement and production of technical (and non-technical) publications. It is an extensible mark-up language (XML) specification for preparing, managing, and using equipment maintenance and operations information.

It was initially developed by AeroSpace and Defence (ASD) Industries Association of Europe for use with military aircraft. The specification has since been extended for use with land, sea, and commercial equipment. S1000D is part of the S-Series of Integrated Logistics Support (ILS) specifications.

The key business driver being to reduce the cost and complexity of technical documentation by providing a modular structure with components that can be reused for different product versions. The specification adopts ISO, CALS and W3C standards, in which information is generated in neutral format. This means that it can be implemented on different, and often disparate, IT systems. It is this feature, added to the concept of modularisation, which makes the specification so acceptable to the wider international community.

Background

The concept of this specification was originated in the aerospace sector within ASD in the early 1980s. At that time, most civil aviation projects were documented in accordance with the Air Transport Association (ATA) 100 specification. Military aviation projects in Europe were supported by documentation conforming with various national, military specifications, which shared little or no commonality.

Added to the increasing number of collaborative projects and the necessity to recognise the developments in both ILS and in information technology, the Customer and Product Support Committee (CPSC) of ASD was prompted to establish a Documentation Working Group (DWG). This group realised that their attempts to harmonise specifications and to establish commonality wherever possible had the following major advantages:

- Cost saving through information reuse and management
- Standard / simplified format for ease of data authoring and production and data exchange to exploit future developments
- Linkage to ILS concepts
- Cheaper deliverable publications
- Uniformity of standard for participants in the project
- Enhanced interoperability
- Improved opportunity for clarity — use of ASD Simplified Technical English (ASD-STE100)
- Easier and cheaper translation also possible because of ASD-STE100.

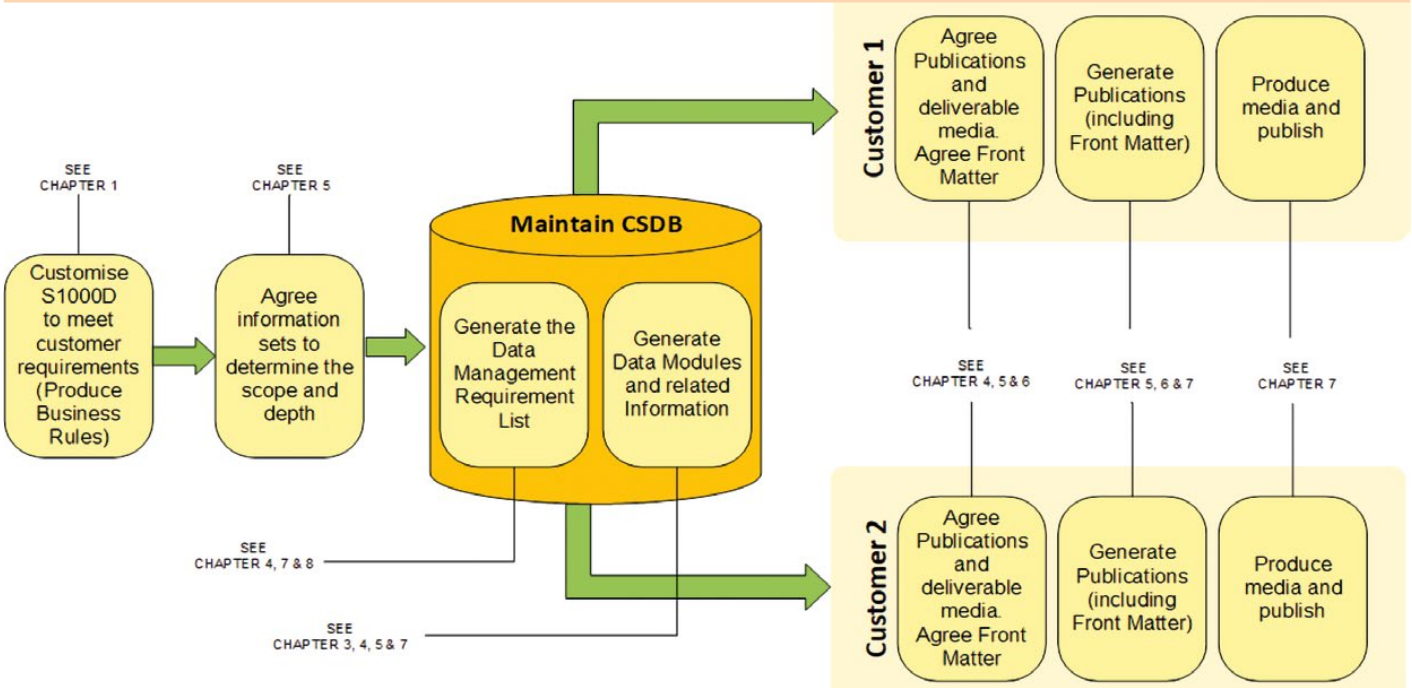

Figure 1. Basic S1000D process

S1000D - the Components

The specification has evolved continuously since its introduction in the early 1980s with the release of the most current version (Ver 5.0) available since August 2019. The specification contains more than 3,500 pages of instruction and guidance. S1000D specifications, schemas, and related documents are provided at no cost to promote the use of digital technical data: visit https://users.s1000d.org.

The specification is organised into nine chapters:

- Chapter 1 – Introduction to the Specification
- Chapter 2 – The Documentation Process
- Chapter 3 – Information Generation
- Chapter 4 – Information Management
- Chapter 5 – Information Sets and Publications
- Chapter 6 – Information Presentation and Use
- Chapter 7 – Information Processing
- Chapter 8 – Standard Numbering System, Information Codes and Learn Codes
- Chapter 9 – Terms and Definitions.

The S1000D process is a linear process (refer to Figure 1). It is defined as follows:

1. Customise S1000D to meet customer requirements:
   a. This requires understanding the specification and selecting only the content required to support the platform. Chapter 1 gives the guidance necessary to use and tailor the specification for a specific platform.
   b. Chapter 3 and 7 consider the generation of what are known as Business Rules. The Business Rules are a documented set of decisions that are made at the beginning of the authoring project to determine how the project shall be implemented. The Business Rules document Data Module is one of a set of data modules that define all of the business rules that are required to support a project (or organisation). It enables the means to capture and govern business rule decisions throughout the life of a project.
   c. There are 500+ decision points (DP) which must be documented (refer to Figure 2). The S1000D specification details the decision points that must be considered.

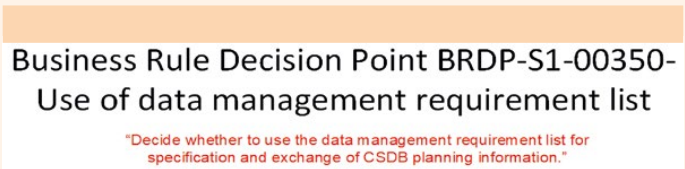

Figure 2. Business Rule Decision Point — typical example

When the Business Rules are agreed, a Business Rules Exchange (BREX) Data Module must be compiled. The BREX is retained in the Common Source Database (CSDB). The BREX is used to check that all the data contained in the CSDB conforms to the Business Rules.

2. Agree information sets to determine the scope and depth:
   a. Chapter 5 gives the information that defines the scope and depth for creation of Data Module information sets. It is based on the definitions that follow:
      i. An information set is the required information in a defined scope and depth in the form of Data Modules managed in the CSDB. A project Data Management Requirements List (DMRL) contains all the required Data Modules for that project.
      ii. A publication is the compilation and publishing of information for a customer. This can be an Interactive Electronic Technical Publication (IETP), a Paper Publication compiled from Data Modules or a Publication containing legacy data.
   b. Data Modules must be coded. The code, called the Data Module Code (DMC), ties content to Hardware/Systems and enables classification of the information type and use. It is structured as shown in Figure 3 and contains up to 41 alphanumeric characters. The minimum length is 17 characters. The DMC provides a unique identifier for each individual Data Module and is used to manage data in the CSDB.
3. Generate the Data Management Requirement List (DMRL):
   a. The DMRL is a list of all the data modules and content that must be developed for the project. Before any technical information is created, the data creator must define the DMRL and agree its content with the customer.

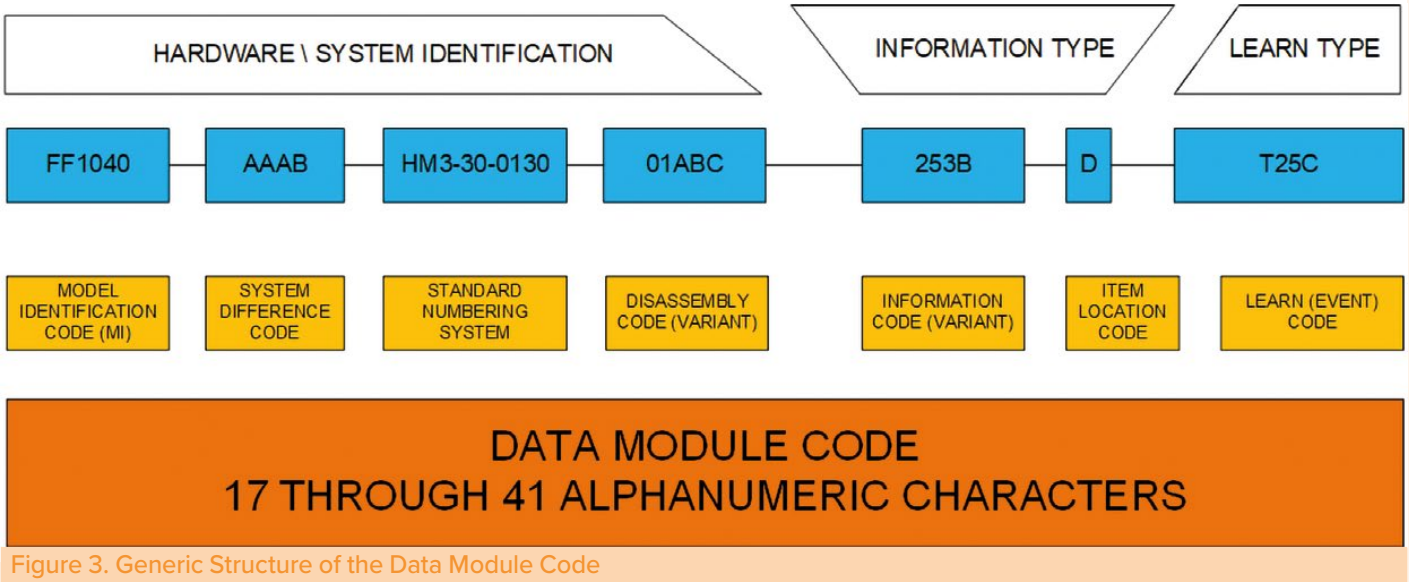

Figure 3. Generic Structure of the Data Module Code

b. This process formalises the technical planning and management process which enables accurate estimation of project scale and resource requirements. The final DMRL will contain all Data Modules to be used in the project.
c. Data Modules are the fundamental objects in the CSDB. It is the smallest self-contained information unit within a technical publication.
d. Data Modules control and contain text, illustrations, multimedia, and other data. They have defined neutral structures based on international standards. Illustrations, multimedia and other data are not directly stored inside the Data Modules but referenced from within.
e. Careful planning of the breakdown of technical information into Data Modules is important to ensure efficient data use and reuse.

4. Maintain the Common Source Database (CSDB):
   a. The CSDB is an information store and management tool for all objects required to produce the project technical publications. The primary objectives for a CSDB are to:
      i. Support the technical publication process
      ii. Support the controlled authoring
      iii. Support the QA process
      iv. Support the data exchange with partners, suppliers and customers
      v Support the delivery of technical publications on various media independent from the source storage format.
   b. The CSDB is populated in accordance with the DMRL and supports the technical publishing process by controlling the ID and Status information within each Data Module, enabling QA processes, and ensuring that the correct version of each module is published to the end user.
   c. The information objects to be stored and managed in the CSDB are as follows:
      i. Data Modules
      ii. Illustrations, multimedia, and other data associated with and referenced within a Data Module
      iii. Information Control Number (ICN) metadata file
      iv. Data management lists
      v. Comments
      vi. Publication Modules
      vii. Data update file
      viii. Data dispatch notes.
5. Generate Data Modules and Related Information:
   a. All Data Modules have a basic structure, which is configured in two sections:
      i. The Identification and Status Section: metadata which contains:

Identification Data:	**Status Data:**
Data Module Code	Security classification
Title	Responsible partner
Issue number	company and originator
Issue date	Applicability
Language.	Technical standard
	QA status
	Skill
	Reason for update.

      ii. The Content Section: contains the text and illustrations/multimedia that is presented to the user.

6. Define the Publication Module:
   a. A publication is a collection of Data Modules for a specific purpose.
   b. The Publication Module (PM) provides a framework for collecting and organising Data Modules into a publication structure.
   c. The Publication Module is formatted like a Data Module with an identifier, a status section and a content section. The content section contains the references to Data Modules, legacy technical publications or other Publication Modules in the order and the structure the publication is delivered.
   d. Data Modules can be reused in many publications by simply referencing the Data Module within each Publication Module.
   e. S1000D supports paper-based publications and Interactive Electronic Technical Publications (IETPs).
7. Generate the Publication and Deliver
   a. The publication is generated dependant on the specified deliverable. Paper based projects are normally exported as smart PDF documents which maintain cross-references, links etc. More commonly the publication is built as an IETP and displayed on a viewer.
   b. S1000D uses a file-based transfer method for compatible electronic information interchange. The file-based transfer method imposes a file naming convention to allow simple CSDB data import checks to be done without the need to investigate values inside data files.
   c. The transfer package must contain one Data Dispatch Note (DDN) which must be the first data file in the sequence for serial media. The DDN is effectively the delivery note for the job as it tells the recipient what they are getting.

Acronyms

ASD AeroSpace and Defence Industries Association of Europe.
ATA Air Transport Association.
BRDP Business Rule Decision Point.
BREX Business Rules Exchange.
CALS Computer-aided Acquisition and Logistics Support. A set of standards mandated by the US Department of Defense for technical documentation. Then AFEI (Association for Enterprise Information) which in turn became NDIA (National Defense Industrial Association) in the US.
CPSC Customer and Product Support Committee of ASD.
CSDB Common Source Database.
DDN Data Dispatch Note.
DMC Data Module Code.
DMRL Data Management (Module) Requirements List.
DP Decision Points.
DWG Documentation Working Group.
ICN Information Control Number.
IETP Interactive Electronic Technical Publication.
ILS Integrated Logistics Support.
ISO International Standards Organization. www.iso.org.
MI Model Identification.
PM Publication Module.
QA Quality Assurance.
STE Simplified Technical English.
W3C World Wide Web Consortium. www.w3.org.
XML Extensible mark-up language.

Summary

The capability that S1000D provides defence organisations, reaches well beyond that of the traditional paper-based maintenance documentation. S1000D is not a one-size-fits all solution, it is a many sizes fits many solutions: through a combination of business rules, selectable elements and customisable values, the standard is tailored to meet the project requirements. This is the power of the S1000D structure: you can use a lot of it, or you can use just the basics.

I have used the specification to produce Data Modules supporting Marine Equipment used on the Queen Elizabeth Aircraft Carrier. From an author's perspective, the structured process enables the author to focus on the content required to do the maintenance procedures rather than how the content is formatted on a page. The modular structure also helps to keep focus on only the topic being originated.

Having had much experience producing traditional paper-based documents, it did require a period of adjustment to get the mind-set right to produce modular data. When the data set is compiled as an IETP, it is rewarding to see the intelligent use of the data compared to traditional publications. The use of the Process Data Module for example, links the platform equipment monitoring systems directly with the IETP. If there is a fault in-service, the IETP uses the fault isolation data (XML Data Modules) to identify the fault. By the time the platform has returned to base, spares have been ordered, maintenance tasks are planned and prepared, and the maintainer(s) made ready to correct the fault to return the platform inservice. Just a small example of how this data can be put to intelligent use as part of an Integrated Logistic Support package. ■

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EN IEC/IEEE 82079-1

Ferry Vermeulen analyses this 'Preparation of information for use of products' standard.

It's no secret that creating information for use can be a daunting task. In fact, it's a culmination of several different skills: you need to master technical writing, designing, visualising, usability, legal knowledge and good old-fashioned psychology if you want to ensure that users can use a product safely, efficiently and effectively. The good news is that all of this has been put into one standard: the EN IEC/IEEE 82079-1 Preparation of Information for Use. The standard has been adopted by the European Committee this year and has replaced its predecessor.

The 82079 in a nutshell

The official name is 'IEC/IEEE 82079-1:2019 Preparation of information for use (instructions for use) of products — Part 1: Principles and general requirements'. The standard mentions the purpose of information for use:

"Information for use shall provide the necessary information for the target audiences to make safe, efficient, and effective use of a supported product"

It is the successor to the IEC 82079-1:2012 Preparation of instructions for use — Structuring, content and presentation — Part 1: General principles and detailed requirements. And that one is the successor of the 62079 standard. The standard has been developed by two convenors and 23 members from nine countries. Therefore, it has broad international consensus. Compared to its predecessor, it contains major updates that will be discussed in this article.

It's important to mention that it is a so-called horizontal standard: it does not apply to just a specific product or sector, but contains rules across sectors for almost all branches of the industry, from toys to medical devices and from electrical equipment to machinery. The standard gives requirements on the content, structure, quality, process, media, and format of information for use. Information for use is considered as an integral part of the supported product.

The content for 'information for use' comprises information based on three pillars: instructional information, conceptual information, and reference information. The information for use may include various information products that are selected, presented, and delivered in different media to meet the needs of different target audiences. The concept of information for use according to the standard is shown in Figure 1.

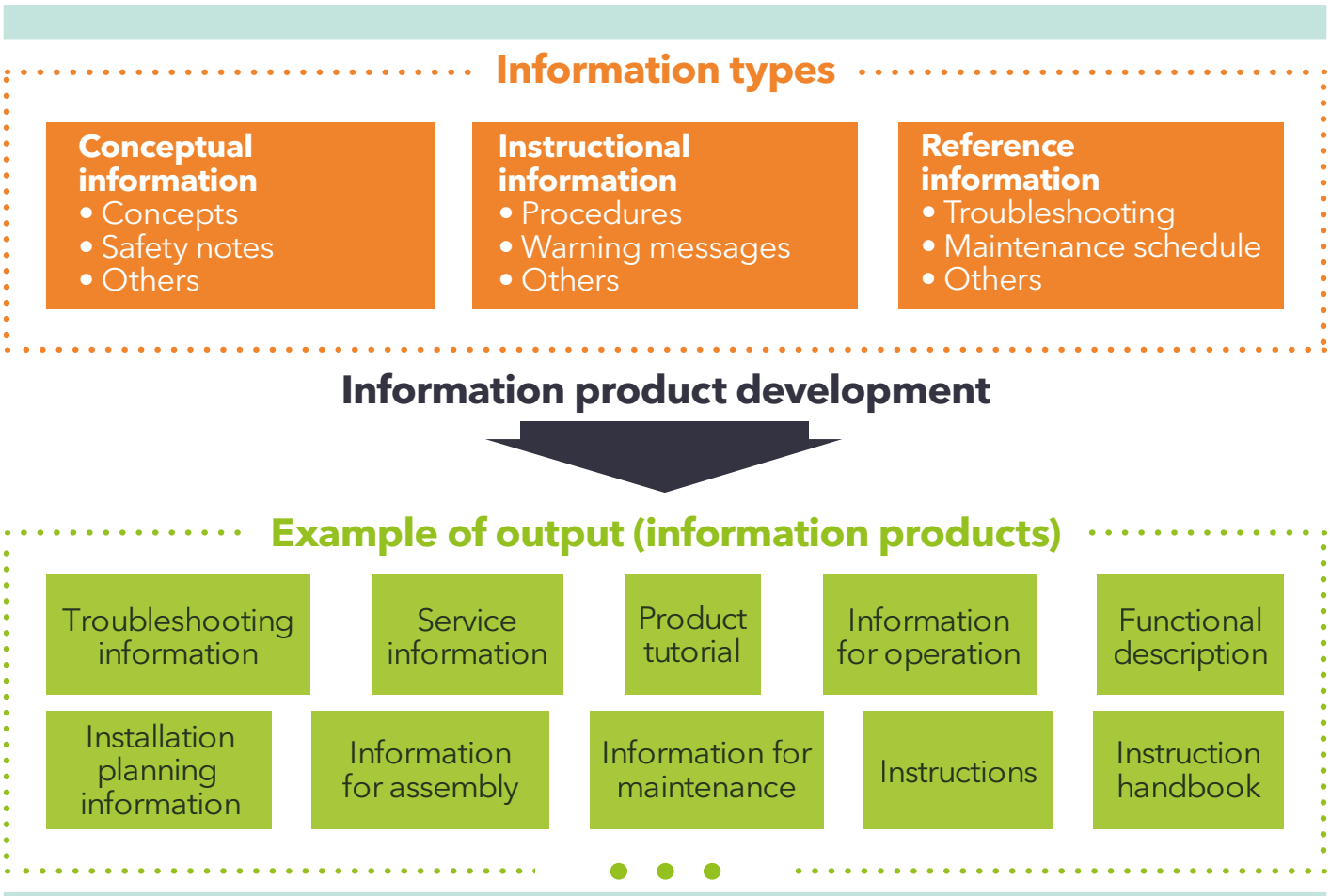


Figure 1. Concept of information for use according to the standard

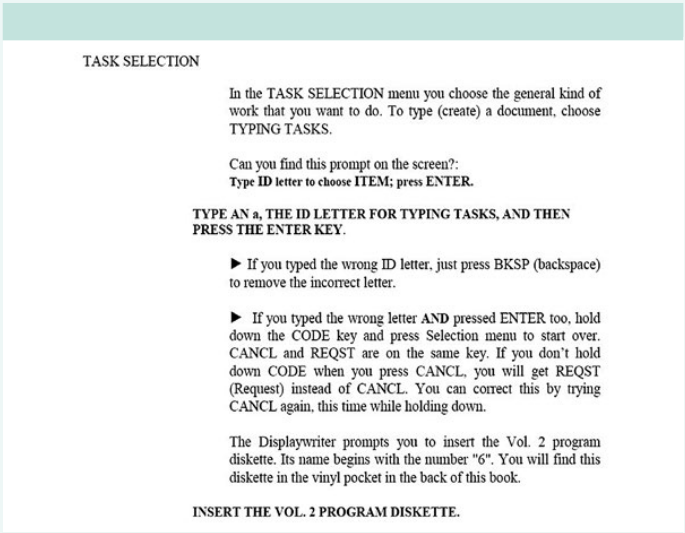
What is new in 82079-1:2019?

First of all, there is a change of title. In the new title, 'information for use' is used instead of 'instructions for use' and the IEEE has been added as the co-developer of the standard with the IEC. So why does the standard use *information for use* instead of *instructions for use*? Information for use is used to indicate that the content covers more than instructions/activities or operations to be performed. *Instructions for use* also comprises information describing the product, or reference material. That's why instructions were always too limited and kind of misleading. The content for *information for use* comprises information based on three pillars: Instructional information, Conceptual information, and Reference information.

Next, the standard's requirements are divided into requirements for *information for use* and requirements for the *information management process*. It includes a separate clause with requirements for the information management process. This clause does not apply to consumer products.

Also, the new standard describes clearly how to claim compliance, with both the requirements for information for use and with the requirements for the information management process. How conformity assessment for the information for use and the information management process needs to be followed in order to claim compliance is given.

A new clause on 'structure of information for use' is included. It contains a completely new setup compared to the former standard. It emphasises the use of leading criteria for structuring.



TASK SELECTION

In the TASK SELECTION menu you choose the general kind of work that you want to do. To type (create) a document, choose TYPING TASKS.

Can you find this prompt on the screen?:
Type ID letter to choose ITEM; press ENTER.

TYPE AN a, THE ID LETTER FOR TYPING TASKS, AND THEN PRESS THE ENTER KEY.

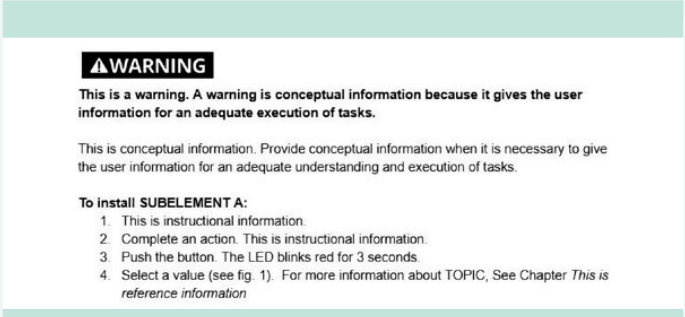
▶ If you typed the wrong ID letter, just press BKSP (backspace) to remove the incorrect letter.

▶ If you typed the wrong letter **AND** pressed ENTER too, hold down the CODE key and press Selection menu to start over. CANCL and REQST are on the same key. If you don't hold down CODE when you press CANCL, you will get REQST (Request) instead of CANCL. You can correct this by trying CANCL again, this time while holding down.

The Displaywriter prompts you to insert the Vol. 2 program diskette. Its name begins with the number "6". You will find this diskette in the vinyl pocket in the back of this book.

INSERT THE VOL. 2 PROGRAM DISKETTE.

Figure 2. Example of instruction according to the Minimalism principles



⚠WARNING

This is a warning. A warning is conceptual information because it gives the user information for an adequate execution of tasks.

This is conceptual information. Provide conceptual information when it is necessary to give the user information for an adequate understanding and execution of tasks.

To install SUBELEMENT A:

1. This is instructional information.
2. Complete an action. This is instructional information.
3. Push the button. The LED blinks red for 3 seconds.
4. Select a value (see fig. 1). For more information about TOPIC, See Chapter *This is reference information*

Figure 3. Three information types

Another new clause is the 'media and format of information for use'. This is also a completely new setup compared to the former standard. It covers the former section 'presentation of instructions for use' and more.

The new standard includes a new clause named 'professional competencies,' which tells us that the creation of information for use shall be assigned to competent persons and even gives clear requirements on the proficiency level. It also includes the competencies of translators.

When it comes to usability, there is an integration of the principles of minimalism. Minimalism is a use-centred and user-centred design philosophy. Its priority lies in supporting the usage of a product.

The last major change is the division of information for use into three information types. This is to make safe, efficient, and effective use of a supported product possible, according to the standard. These information types comprise conceptual information that the target audience needs to understand, instructional information to be followed or considered, and reference information to be consulted when needed. Conceptual information includes concepts, explanations and descriptions that enable the target audiences to perform tasks by understanding their purpose and the principles of operation of the supported product. Instructional information includes procedures and task-oriented step-by-step instructions. Reference information includes detailed information which needs to be retrieved occasionally, such as troubleshooting information, commands, or codes.

How to write for usability

According to the 82079 standard, information for use shall provide the necessary information for the target audiences *to make safe, efficient, and effective USE of a product*. The standard, basically, is all about usability.

One of the main enhancements of the 82079 standard is the implementation of the principles of minimalism. Minimalism principles adapt to the audience as much as possible. The principles and heuristics of minimalism are not rules to be followed blindly or rigorously. They 'merely' afford better designs. The four main design principles of minimalism are:

1. Choose an action-oriented approach. Users typically want to do things. This principle reflects the use-centeredness of minimalism.
2. Anchor the tool in the task domain. A tool is a means to an end. This principle asks designers to select training tasks that are meaningful for the user.
3. Support error recognition and recovery. To err is human. There are several ways to increase user competence and comfort levels in handling mistakes.
4. Support reading to do, study and locate. Designs must fit (as much as possible) the diverging needs and propensities of the intended audience. This principle reflects the user-centeredness of minimalism.

Some of the most important requirements on usability that you find throughout the 82079 standard to help you write user-friendly information are as follows:

- Make sure the information for use is usable and relevant for the target audiences with respect to their expected tasks and goals.

- Your information for use should meet the target audiences' needs for information quality by being complete, correct, concise, consistent, comprehensible, accessible and that it applies the principles of minimalism.
- Use consistent terminology.
- List and explain unavoidable acronyms, abbreviations, and technical terms.
- Make sure that information for use is easily searchable, contains convenient navigation and unambiguous content.
- Include predefined information types.
- Use consistent formatting.
- Include navigation, such as page numbering or a table of contents.
- Use text fonts, safety signs and graphical symbols that are clearly legible for the target audiences, both for print and electronic media (recommended minimum text font sizes and heights of safety signs and graphical symbols are listed in a table that is included in the standard).
- Base the media and format of the information for use on the needs of the target audiences.

What content to include

The 82079 standard states that 'the content of the information for use shall cover the needs of the target audiences for the safe, effective and efficient use of the product, applying the principle of minimalism.' So why do we see the use of minimalism again? This is because the developers of the standard generally agreed that the use of minimalism helps the target audiences avoid unacceptable safety risks, malfunction of or damage to the supported product, or inefficient operation.

Also, the 82079 standard emphasises that both the intended use of the product and the reasonably foreseeable misuse should be included.

Further, the 82079 standard mentions including the following information in your information for use:

- Identification of the information for use, the supported product, and the supplier.
- Information regarding retaining the information.
- Presentational conventions. For example, the use of a particular typeface for text to be entered by the user, keyboard keys, or menu items. The conventions can best be listed, and their meaning explained.

Figure 4. Information regarding retaining the information

- Explanation of terminology. Also, if the information for use of a complex system contains several documents from more than one supplier, you should explain the meaning of the different terms used.
- Explanation of abbreviations, technical terms, safety signs, graphical symbols, and markings.
- Safety related information such as safety signs and product safety labels, safety notes and warning messages.
- Signal words for warning messages for harm to persons (DANGER, WARNING, CAUTION) or damage to property NOTICE, BEWARE, TAKE CARE).
- Repacking information.
- Transportation and storage information.
- Installation information.
- Commissioning information.
- Modification information and/or restrictions.
- Operation information.
- Information on exceptional and emergency situations.
- All information needed during the life cycle of the supported product such as information on maintenance, replacement of parts, repair, and troubleshooting.

How to structure your information

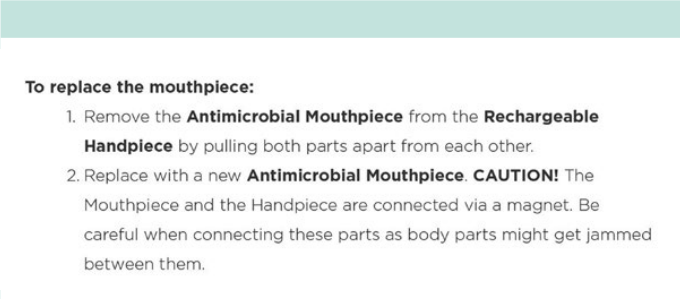
The 82079 standard emphasises that it is important to structure information for use for the sake of usability and comprehensibility. Features can be included for easy search, navigation, and unambiguous understanding of the contents. If the information for use is intended for different target audiences, such as installers, operators or maintenance technicians, it should be separated into chapters or sections.

Information for use should be allocated in its functional structure to predefined information types that include conceptual information, instructional information, and reference information. Conceptual information includes the following information about the information for use itself: a description and identification of product and components, a description of controls and displays, process description (use case or concept of operation) and directional safety notes. Instructional information includes step-by-step procedures and a warning message as part of the procedures. Reference information includes title page information, legally required information, troubleshooting information, a maintenance schedule, the table of contents, a glossary, and an index. A structuring method/information model should be used to structure information.

The standard also says that information can be structured around so-called leading criteria, such as tasks, the product life cycle, target audience and the product's functions. In order to do so, tasks can be structured by the order in which they are performed. When structured around the life cycle of the product, the product's life cycle stages, such as transporting, installing, commissioning, operating, servicing, repairing, and disposing, can be used.

How to format and present your information for use

The 82079 standard has become less strict when it comes to the media and format of the information for use and it is intended as a basis to elaborate product specific requirements for target audiences or product information. It is considered important that the media allows easy and



To replace the mouthpiece:

1. Remove the **Antimicrobial Mouthpiece** from the **Rechargeable Handpiece** by pulling both parts apart from each other.
2. Replace with a new **Antimicrobial Mouthpiece**. **CAUTION!** The Mouthpiece and the Handpiece are connected via a magnet. Be careful when connecting these parts as body parts might get jammed between them.

Figure 5. Example of an instruction with an embedded safety message

permanent access to information for use and that the chosen media are durable.

It is important to address the conditions of use when choosing the media and format. For example, in the case of low light, the medium should light up the text and speech should not be used in a noisy environment. Paper should not be used in wet environments or clean rooms. Depending on the needs of the target audience, information for use can be provided inside the packaging, on or within the product; on the packaging (but not only on the packaging), on websites or as separately provided collateral documentation.

The following are important things to consider when formatting and presenting your information for use:

- Design the pages of printable information so that they are legible.
- Make sure that downloadable information can be displayed on commonly used devices.
- Make sure that text fonts, safety signs and graphical symbols are clearly legible and follow the recommended minimum sizes.
- Maximise brightness contrast.
- Ensure graphical symbols comply with international standards.
- Use clear illustrations to enhance text.
- Ensure tables are clear, informative and have a consistent design.
- Use colours only to draw attention to particular sections of information.
- Make icons clear and their use unambiguous.

How to write safe instructions

I have already mentioned that the standard's goal is to give requirements to ensure that information for use provides the necessary information for target audiences to make SAFE, efficient, and effective use of a product. As you might guess, I want to go into further detail regarding the *safety aspects* of the standard. Many of the requirements in the standards are safety related. The 82079 standard emphasises that the intended use of the product should be included. The standard defines the intended use as an 'exhaustive range of functions or foreseen applications defined and designed by the supplier of the product'. The intended use is a safety aspect, as it sets out the liability of a manufacturer and affects the further contents of the manual. Once the intended use has been described clearly, mostly somewhere in the beginning of the user instructions, the rest of the (safety) instructions can focus on those related to the intended use only. Information for use should promote the safe installation, operation, maintenance etc of the supported product within the boundaries of the intended use. Besides the intended use, a description of the reasonably foreseeable misuse should be included.

Another aspect to writing safe information for use is to include a list of the supplied accessories, consumables, and spare parts. This is important because you want to direct your user to specific parts that are to be used within the technical lifespan of your product. Also provide information on the replacement of parts of the supported product by both non-skilled and skilled persons.

Attention must be drawn to safety-related information and warning messages must be durable and visible. However, if warning messages are integrated between the steps of a procedure, the formatting of the warning message should not distract the user from reading the information!

What should the Information Management Process look like?

The standard's requirements are divided into the requirements for the information for use and the requirements for the information management process. Clause 6 of the 82079 standard contains the requirements for the information management process. This clause does not apply to consumer products, as it makes the process of creating relatively simple user instructions too complex for this type of product. For all other products, the supplier must implement information management processes for the planning, designing, producing, and sustaining of information for use. Therefore, the following four process groups are defined:

1. Analysis and planning of information
2. Design and development (including review, editing, and testing)
3. Production and distribution
4. Sustainment (including maintenance and improvement).

Regarding the analysis and planning of information, the standard states that instructional procedures must be formulated based on:

- A market analysis, or
- An analysis of the characteristics, needs and intended tasks of the target audiences.

This analysis can include, but is not limited to, an analysis of the target audience (for example, background, skills, experience, language, tasks, working environment and available tools), media, information sources, risk management, contractual agreements and legal considerations. The development process must include, for example, preparation of information design concepts, preparation of templates, information gathering, selection of a content structure; editing and reviewing of the content, and usability testing. The production and distribution process must include the integration, preparation, reproduction, packaging and distribution of physical media or electronic copies of the information for use. And lastly, the sustainment, maintenance and improvement process includes continuing target audience feedback and the establishment of a method for receiving information on changes, updating, and making these updates available.

What skills are required?

The 82079 standard mentions that skills, responsibilities, and competencies of the persons involved in the information development process are crucial for the quality of information for use. The concerning clause states that:

"The creation of information for use shall be assigned to competent persons. Organizations should analyse their content creation process, identify the tasks to be performed to achieve the required results, evaluate the competencies which are needed to perform these tasks successfully and finally designate the tasks and responsibilities to persons who cover these competencies. Responsibilities should be assigned to separate persons where the size of the organization permits."

These competency requirements have been described in much more detail in the new standard than they were in the former one. There are three levels of proficiency indicated:

- Level 1 responsibilities include the use and application of relevant standards to define the information structure and to develop or update information.
- Level 2 responsibilities include the ability to determine the requirements for the information products taking into account the purpose and domain to which they apply.
- Level 3 responsibilities include the ability to manage the process of information creation, develop content strategies, take over responsibility of standard conformity, and to lead information development teams.

All competency requirements apply to both the persons that prepare the information for use and the competencies of translators as well. Competent translators or language specialists are responsible for the translation, including checking and proofreading. The translators should have basic competencies as stated in proficiency level 1, and they should be fluent in both the original and in the target language, should be native speakers in the target language and should be familiar with the type of product and any product-specific terminology.

How to claim compliance

Some companies want to claim that their information for use complies with the 82079 standard. A claim for fulfilling the requirements can be made for:

- The information for use supporting a particular product by fulfilling the requirements of sections 5.2, 5.3, 7, 8 and 9.
- The information management process by fulfilling the requirements of sections 5.4, 6 and 10.

In order to evaluate the fulfilment of the requirements, the standard states that for fulfilment of requirements with regards to the information for use, a comprehensiveness check, an inspection for effectiveness (desk check) and empirical effectiveness check should be used. For fulfilment of requirements with regards to the information management process, a process assessment and competency assessment should be conducted. This means that for the information for use, you should, amongst other things, make sure that:

- Fulfilment of the requirements of Clause 7 has been assessed by a suitably qualified and experienced person conducting a **comprehensiveness check** to assess whether or not the required content has been included in the information for use.
- Fulfilment of the requirements of Clause 8 and 9 for structure, media, and format of information for use is evaluated**/inspected for effectiveness** by a suitably qualified and experienced person via a desk check.
- The **empirical effectiveness** involves not only skilled experts but also persons unfamiliar with the use of the supported product and its information for use.

It also means that for the information management process, you should, amongst other things, make sure that:

- The information is evaluated to determine if residual risks from the product risk assessment have been addressed (for example, does the information for use include appropriate warnings for hazards?).
- Information for use conforms to the relevant product-specific safety standard(s).
- A separate legal check has been conducted.
- The results of the evaluation are documented, and the supplier retains records.
- Where fulfilment of requirements in this document is claimed, the supplier does retain records.

Conclusion

There is a lot to say about the 82079 standard as you can see, and this article only covers the most important aspects. I think it is a great standard and by applying it, you don't just create compliant information for use. Your instructions will be incredibly user-friendly as well and your audience will simply love using your product along with those instructions. ■

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Content design at Sage

After a year of change with content design at Sage, Robert Scott-Norton reviews how things have gone.

The team keeps growing

At the start of the year we were a team pulling together into a new organisational structure. Each of us had been at Sage, largely as technical writers, for many years. In January, we were forged together into a new content design unit responsible for many products.

As we reach the end of the year, our team has expanded. We've gone from a team of seven to a team of 13. I've been at Sage for 23 years and never seen so much commitment to content.

We began this recruitment in August and it feels different to when I last recruited two years ago. Then, I had two content marketers and two technical writers apply for one content design position. It felt challenging to get across what we were trying to accomplish with content design at Sage. In hindsight, if we'd have advertised for UX writing candidates, we'd have done a lot better.

Now, we're getting candidates with the right skills, and although experience is limited, the quality of work produced for interview tasks was superb. Candidates were also younger and their confidence and enthusiasm for content design as a discipline in its own right was evident.

And Sarah Richards (now Winters), from Content Design London was mentioned a lot. https://contentdesign.london

Existing processes questioned

With a team of seven who were used to working together, we could get away with muddling through the work. At the start of the year, we were a little unsure of how we should be working with the larger Experience Design organisation at Sage. The larger organisation knew we existed, and would do their best to make sure we were included, but processes were not written down and we were still (sometimes) justifying our position.

As our team grew, so did the Experience Design team. New solution designers and UX designers joined our division at Sage and the process for how we would work together was formalised. Content was where it needed to be, right alongside the solution and UX designers at the start of any new workstream.

Since then, we've done our best to keep to this process but it feels that the ratio of content designers to other disciplines may not be quite where it needs to be. For some workstreams, we're right at the beginning, for others we might get involved when there are designs to review.

This isn't anyone's fault. It's just a question of demonstrating the value of content consistently so it becomes more noticeable when we're not involved at the start. As the team is growing and we're able to allocate more people to workstreams, I'm hopeful that we can improve this picture.

Standards are considered part of the global design system

Sage has an updated design system and content is set to play a key part. We've had our own internal style guides before of course, and in the first version of the Sage Design System we had a reasonable amount of content to support content designers. But what we're aiming to do with Sage Design System version 2 is provide true value to content designers globally across Sage.

It's a big task. We operate in 24 countries and serve millions of customers. But we still want to bring some unity to the experiences we provide. Just this week, we set off with four new workstreams to flesh out the content parts of the Sage Design System.

Content design is in even more demand

There is no shortage of work for content designers at Sage. Our remit includes: UX writing, help topics, help videos, and lots of other things that I'm going to group together as content strategy.

Historically, our remit consisted solely of writing help topics but if we were to throw that away now, there would still be too much work for us to do. It seems news is spreading that we have good content designers who can contribute to other products and aspects like our website.

This demand for our team is pushing us to revisit our requests for work process. We're well past the stage where email is an acceptable way to request our time so we're trying out a few different things.

We're making more use of Microsoft Teams with the Support team. Support have a preference to use the same feedback mechanism that we offer to customers on help topics because it's simple. It's also messy and requires us to process the feedback so we can easily see what's come from colleagues and what's come from customers. Teams allows us to implement the Lists app which gives us a simple change request form. It's handy for Support as well, as they get to see what else has been logged.

Deciding where to focus is difficult

The team has a somewhat fuzzy boundary. There is a list of products that we need to provide content support for, but how much content support each gets is largely down to our discretion. For development teams I imagine it's a lot easier when deciding what work to do. They have a backlog and the product owner determines the priority. When you're spinning plates across multiple unrelated projects, having a single product owner to determine priority becomes nonsensical.

We're working through this, but it might be as simple as being very honest and open with each project's stakeholders as to how much time we're spending with their projects, and what actual work is being done for them. As projects move on, we will get feedback as to how well we're doing.

No time to sit still

As we prepare to enter a new calendar year, it's reassuring to me that content design hasn't lost any of its impact at Sage. We might not be quite where I'd like us to be as a discipline but tangible progress is being made to bring the rest of the business along with us. It's still a good time to be in content design. ■

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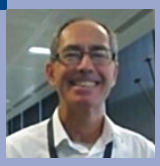

Real-life dilemmas

Professional development

Warren Singer invites you to discuss true dilemmas encountered by today's technical communicators.

Life's really like that! Technical communicators often have to deal with personal issues at work and find solutions to dilemmas for which their education or training may not provide easy answers. These stories provide examples of real-life problems encountered by today's technical communicators.

What would you do in their situation? After reading their story, let us know how you would solve their dilemma. The best responses will get published in the next issue of *Communicator*.

Professional development

Dave and Emma discuss how best to further professional development during the lockdown and talk about the benefits of ISTC membership.

Dave: "The Coronavirus lockdown has actually been an opportunity for me to think about my career as a technical communicator and how best to develop it. I have been so busy the last few years rushing between contracts that I have hardly had time to consider what I could do in terms of further learning. But now, with lockdown, I have had more time to think about areas where I am lacking and how to strengthen my skills and improve my career prospects."

Emma: "I am fairly new to technical communications, as I only started my career two years ago, but I have found ISTC membership to be invaluable. It has helped me to develop my network of connections with fellow technical communicator colleagues and I have learnt much about the profession from talking to colleagues at local events, reading Communicator and attending the annual conference as well as having the opportunity to be mentored by an experienced technical communicator."

Dave: "Agreed. When I first decided to join the ISTC, I was looking around for a professional body to be associated with. I think it is really essential, if you are serious about your career, to be engaged with other like-minded professionals."

Emma: "One hundred percent. Especially when you are starting out, that extra support that you get by being part of a professional association is invaluable. What made you decide to join the ISTC?"

Dave: "I looked at both the STC and ISTC, and in the end, I chose the ISTC because I felt that it was local and more representative for a UK/EU technical communicator. We have local member groups and local events and conferences, and topics are of local interest. So that's why I chose the ISTC. What about yourself?

Emma: "I joined the ISTC because I'd heard good things about it from a colleague, who recommended I join. Luckily, my company was willing to sponsor the membership fee and attendance at conference. I think their investment has been well worthwhile, as I am a much more productive and informed technical communicator as a result."

Dave: "To be honest, one of the key reasons I joined the ISTC was the opportunity to network with other colleagues in order to find work and project opportunities. And actually, I have found quite a few contracts through my ISTC membership, so the membership fee has more than paid for itself!"

Emma: "I feel much more confident at work, knowing I have the experience and backing from being an ISTC member. I really enjoy the opportunity to read Communicator and attend the local area groups. I also enjoy the annual conference. As a newbie, the mentoring scheme, has been invaluable. I've gained so much from talking to my mentor. My mentor works in a different industry and I've learnt so much that can be applied to my job situation. So, through my ISTC membership, I have actually learned and gained tremendously!"

Dave: "I also find I get the most benefit from being actively engaged in discussions, in the ISTC Facebook group and on LinkedIn."

Emma: "The profession is changing so rapidly, with the pace of technology, there is a constant stream of new tools, and new ways of working. Keeping abreast of developments can be challenging. That's where I find being an ISTC member helps, especially when another member can summarise some of this in an article or point you in the right direction to find out more.

Dave: "Agreed. There's only so much you can learn by yourself, so being able to reach out to someone who has had experience in an area you may be lacking in, is really beneficial."

"Are you aware there is a publications and resources section on the ISTC website, with some great resources?"

Emma: "No, I wasn't aware of this."

Dave: "You should check this out on the ISTC website. I'd recommend as a start listening to the podcast about Reginald Kapp, who founded the ISTC in 1948. Listening to the concerns he had at the time makes one realise that the same concerns are still very much relevant today. It also helps to put the ISTC in historical context and show what a rich historical heritage it has."

Emma: "I will definitely take a look. Reginald Kapp you said? What else do you suggest?"

Dave: "Actually, reading is just one aspect of professional development. There will be a series of new podcasts starting in December 2020, so look out for those. And there's the UK Technical Communication Awards where you get your work reviewed by experienced judges as well as having the opportunity to be recognised for your work. There's always the opportunity to volunteer to help out with ISTC Council activities. I am going to be volunteering to help out. Personally, I find I get the maximum benefit of my membership by being involved in these types of activities.

Emma: That sounds like a good idea. I will definitely think about it. Who should I contact to find out more?

Dave: "You can contact any of the ISTC Council members directly, or send an email to Chantel who runs the ISTC admin. Take a look at page 13 for all your ISTC contact information."

Dilemma

What is your approach to professional development? What do you see as the benefits of ISTC membership? ■

Real-life responses

Working from home during lockdown

Due to the limited space available extracts from the responses are provided here.

Readers' letters in response to Maria and Kevin's dilemma, described in the Autumn 2020 issue of *Communicator*.

Summary of Maria and Kevin dilemma

Maria and Kevin, two technical communicators from different backgrounds, discuss working from home during the Coronavirus (COVID-19) epidemic lockdown. Technical communicators in many industries are currently in jobs where they are able to do the majority of work remotely and being onsite is not essential.

Dave

I've found working from home to be a tremendous advantage. The main benefit for me is not having to travel into the office each day. You cannot believe how much time this saves me (over 15 hours a week!). I can start work earlier, finish earlier, and have more time to spend outside work, with family and friends.

Gerry

I am sort of okay with working from home, but I find the lack of interaction with colleagues to be quite isolating. I miss the face-to-face interaction and camaraderie that you get in an office environment. Even if it is just the opportunity to have a chat in the kitchen or pop over to someone's desk, or go out for a quick cup of coffee or walk with a colleague at lunchtime.

I also find the lack of distinction between work and life outside of work to be a problem. I used to enjoy the way my day was structured when going into an office. The period travelling into work by train was actually quite relaxing, I could read or just doze in my seat and think about the day ahead. Then on the way home, during that transition period, I could slowly put thoughts of work aside and switch off.

When working at home I can't really switch off.

Paula

I enjoy the increased flexibility I have to organise my work day around family and home life. I do miss the chance to meet up with friends, however, we catch up every day over Microsoft Teams for a chat.

At first, one of the main issues was finding a suitable area in the house where I could study without being distracted by demands for attention from my children and partner.

In the end, we reorganised the loft room and that has now become my main office. But it is a very small space, not always the most comfortable and the WIFI signal here is not great either.

Sandra

Our company has adapted remarkably well to lockdown. We have daily meetings on Microsoft Teams, and we have also used a tool called Remo for company-wide conferences, which has worked well. So yes, I think, on the whole, people are happy to work at home during lockdown. However, the younger members in the company are keen to get back into the office. Some colleagues have complained to me about the lack of space at home to work properly. This is a real issue – when you are renting or living in shared accommodation, or you have a young family who demand constant attention, then working from home is not ideal.

Editor's notes

The Coronavirus epidemic and ensuing lockdown has posed some significant challenges for many of us.

On the one hand, the opportunity to work from home has meant we can still continue to work and earn a living.

On the other hand, managing the balance between work and home life can be tricky when there is no clear separation between work and home. Family relationships can also be affected by the lack of space or changes to routines and the way we interact with family members.

On the whole, the opportunity to work from home has been a beneficial and emancipating experience for many of us. But we should not forget the impact of potential isolation in the home and lack of opportunity to go out on mental health and wellbeing. See the Reference section for further details.

Over to you

Tell us about your approach to professional development. The next issue of *Communicator* will feature your responses.

If you have a dilemma you'd like advice about, write to us in confidence.

Note: To protect the identity of real people, all names and places are fictitious.

ISTC references

All references accessed 22 November 2020.

CPD: istc.org.uk/cpd

ISTC Facebook group: www.facebook.com/groups/istccommunity

ISTC LinkedIn group: www.linkedin.com/groups/1858546

Mentoring: istc.org.uk/mentoring

Technical Communication UK (TCUK) annual conference hosted by the ISTC: technicalcommunicationuk.com.

UK Technical Communication Awards (UKTC): uktcawards.com

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The Health Foundation 2020 *Emerging evidence on COVID-19's impact on mental health and health inequalities*. Available online at www.health.org.uk/news-and-comment/blogs/emerging-evidence-on-covid-19s-impact-on-mental-health-and-health (accessed 15 November 2020).

Mental Health Foundation *Coronavirus: Mental Health in the Pandemic*. Available online at: www.mentalhealth.org.uk/our-work/research/coronavirus-mental-health-pandemic (accessed 15 November 2020).

Unison 2020 *Coronavirus and working from home*. Available online at: www.unison.org.uk/coronavirus-rights-work/coronavirus-working-home (accessed 15 November 2020).

Variables within XHTML code

Matthew Ellison pushes the boundaries with one of Flare's most useful features.

Variables provide an extremely effective way of ensuring that we use consistent terminology, and many of us make frequent use of them within the content of our Flare projects. The fact that we can redefine variables in targets is an added bonus, meaning that we can customise variables such as product names, phone numbers, or document types for specific outputs.

The scope for using variables within a Flare project has broadened with successive new releases of the product; we are now able to use variables not only within content (such as topics, snippets, master pages, and page layouts), but also within a variety of project files. For example, we could define and use a 'DocumentName' variable to specify the file name of our PDF output.

So variables are great – I'm sure you already knew that! However, what I had not realised until quite recently is that it is possible to use variables in a slightly different way within the *XHTML source code* of content files. This is an advanced technique that requires you to edit within the Text Editor tab (where the underlying XHTML code is exposed). However, it adds a very useful new way of using variables to control the visual aspects of content. For example, you can use variables to specify the class (style) of a paragraph, or the source file for an image, thus making it easy to change these items for different outputs by changing the definition of the variables.

Syntax for variables

When you insert variables into content using the XML Editor in the normal way, the resulting code is of the following form:

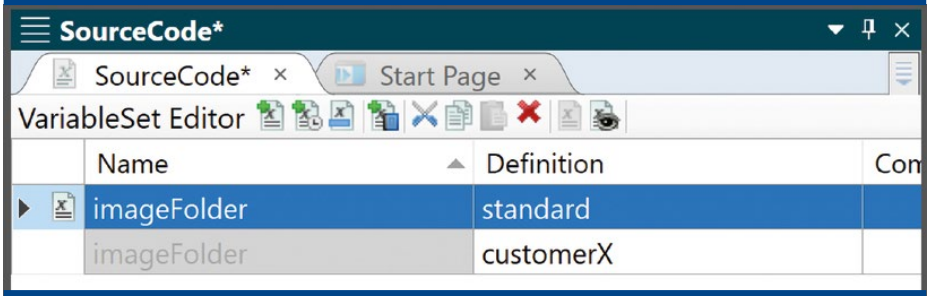
```
<MadCap:variable
name="VariableSetName.
VariableName" />
```

However, when you use variables to represent source XHTML code the syntax needs to be of this form:

```
[%=VariableSetName.VariableName%]
```

This is the same syntax that you may already be familiar with in various fields within the Flare interface. For example, you are probably using `[%=System.LinkedTitle%]` as the label for some or all of your TOC entries, which links them to the related topic title and causes them to show in blue in the TOC Editor.

Figure 1.



Variable with alternative definition

Putting it into practice

For the remainder of this article, I will focus on an example that illustrates the potential power of using variables in source XHTML code, and I'll explain how to replicate the techniques within your own projects.

Switching source images

Suppose that you have two sets of screenshot images with the same file names in two different folders within your project. One folder contains the standard screenshots that most of your customers should see, and the other folder contains a bespoke set of screenshots that have been customised for a major individual customer.

One way to handle this situation would be to insert two images (standard and customised) whenever you add a screenshot, and apply conditions that enable you to include only the required screenshot in the output.

Using the Variables approach, however, we could insert a single image reference and use a variable as the folder name in the path to the image file (used within the src attribute of the `img` element). We could then set the definition of the variable to the appropriate folder name in each of our targets.

To do this, we would first need to create the variable that we will use for the folder name. I recommend creating a new variable set to contain all the variables we will use within source code. This variable set might be called –'SourceCode'. We can add into this a variable called 'imageFolder' and defined as 'standard' , and then add a new variable definition of 'customerX', resulting in the variable shown in Fig 1.

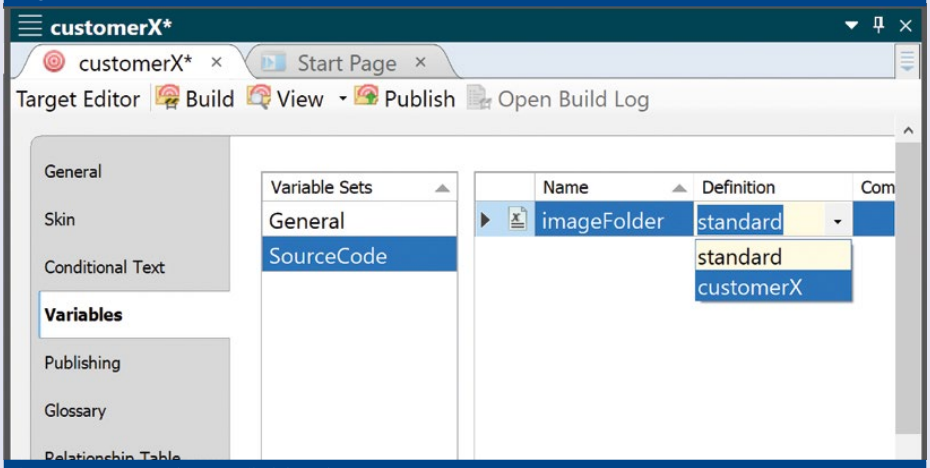
We can then use this variable in the source code for our image references. The easiest way to do this is to insert the image from the standard folder in the normal way (perhaps by dragging it into the topic from the Content Explorer), and then replacing the folder name of 'standard' with our new variable by editing the code in the Text Editor tab. The resulting source code for one of the images might look like this:

```
<img
src="Resources/Images/
[%=SourceCode.imageFolder%]/
screen1.png" alt="Main screen" />
```

To change the image displayed in the output for the major customer, we would open the Customer X target, and (on the Variables tab) select the alternative definition 'customerX' for the imageFolder variable, as shown in Figure 2.

A downside of this approach is that Flare's XML Editor does not recognise and process this variable correctly: when editing the topic, you will see a grey box containing the words "Missing file" where the image should be. You will need to preview the topic in order to see the standard version of the image. For that reason, you may be reluctant to use this technique, despite the fact that it avoids the need for conditions.

Figure 2.



Select alternative definition in target

Chapter-specific formatting

You can extend the approach of using variables within XHTML code by incorporating Flare's system "chapnum" variable within class names. If you then define different classes within your style sheet, each incorporating a different number (1, 2, 3, 4, etc.) within the name, you can have chapter-specific formatting. For example, you could have a different background colour of the chapter heading for each chapter. Or, as I have done, you could have a tab containing the chapter name that changes position for each chapter within a decoration frame on the right-hand side of your Page Layout. In this case each of the numbered style classes would need to have a different margin setting. Do feel free to contact me if you would like more details on this technique.

Post script on Flare 2020 r2

On the subject of variables: with the recent release of Flare 2020 r2, you can now associate formatting with each of your variables (as long as they are used in the conventional way within content, and not within source code as described in this article). You can set up a default format that is inherited by all variables, and then override this for specific variables. For example, you could set all variables to show in bold font, and two specific variables also to have distinctive coloured backgrounds wherever you insert them. For more information on this new feature, see https://bit.ly/36WdwyT. ■

Related reading

Ellison M (2016) 'Customised re-use in MadCap Flare' *Communicator*, Winter 2016: 64. istc.org.uk/index.php?pda_v3_pf=/_pda/2020/03/Comm1612Web.pdf#page=64 (ISTC login required). Accessed 10 November 2020.

Ellison M (2019) 'Using CSS variables in MadCap Flare 2019' *Communicator*, Autumn 2019: 52-53. istc.org.uk/index.php?pda_v3_pf=/_pda/2019/08/Comm1909Web.pdf#page=52 (ISTC login required). Accessed 10 November 2020.

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A picture tells a 1000 words...

Knowing your audience helps you to convey your information in the most suitable way, as Jean Rollinson explains.

...or does it?

We are all in the business of communication and we are all aware that everyone is different and requires different aids to help them understand.

The germ of an idea for this article came from a friend who was erecting a greenhouse and needed help interpreting the instructions. When I saw the instructions, I was amazed. Bearing in mind that I am not a visual person — I often find diagrams difficult to follow and my son was better at the pictorial Lego instructions than I am before he turned 5 — it seemed astonishing to me that the instructions for constructing the greenhouse were all words, no illustrations.

This meant that there were lengthy descriptions for each instruction to ensure that the user found the right part. Even to me this seemed fundamentally flawed. For a practical project like this, surely diagrams are better. So I wondered how we decide when to use images.

Obvious uses of images

To me, it is obvious that for a construction project, such as the greenhouse, diagrams are extremely useful. If a lengthy description is needed to find the right part, then a picture will always help — assuming it is accurate.

Images can also be useful for instructions or documents that are going to be used in many countries, such as those that come with IKEA products. Limiting the use of words saves on translation costs and the risks of mistranslation, however, these images still need to be appropriate and accurate.

Many years ago, I had a contract to prepare some English documents for translation where the originals had been cobbled together by a secretary. The diagrams, which were extremely important, were just scans of the engineers' 'back of an envelope' sketches, so to my mind were not appropriate or user friendly.

Despite the fact that I find them hard to follow, diagrams and images are very useful in instructions for practical projects and for toys such as Lego where the end user is likely to be a small child who may not have all the language skills required to follow written instructions.

> *Limiting the use of words saves on translation costs and the risks of mistranslation.*

Unnecessary uses of images

I once inherited a help text file where all the pages had images of the screen they were describing with labels for the different areas. To me this seemed unnecessary. If a user were looking at the help file, then they would also have the screen open and (most of the time) the help page opened when the user pressed F1. Each different area of the screen had a heading, so I thought the area could easily be referenced by the heading and the field names used in the instructions. It also meant that the first thing the user had to do was scroll down past the image to find the instructions they were looking for. The justification for doing this, I was told, was the reassurance it gives the user that they have found the help text for the right screen. There may be some who agree with this approach, but it seemed to me to make the pages cumbersome and the overall help system was huge. As I was a sole author, I took them all out – no-one complained.

I have also seen manuals where it looks like the images have been randomly added to make the book look more interesting or useful. I have heard the argument that images give the users' eyes a break. But images do still need to be useful and informative; if they are not or if they cause confusion, then they shouldn't be there.

Words and images

In many cases both words and pictures are required to provide all the necessary information.

However, I think it is also important to bear in mind that if you use an image, you must reference it in the text otherwise it serves no purpose.

It is also important to ensure that the image is consistent with the text. When I edited academic papers, I often had to change the text to make it consistent with the diagrams (text is easier to change), or ask for diagrams to be changed so that they used consistent wording across the paper. As we all know, consistency of language helps with clarity and the avoidance of confusion, particularly where the audience is likely to be non-native English speakers.

Images should also be of the same quality as the text. They should be professionally produced and reviewed with as much scrutiny as the words they support.

Conclusion

In conclusion, as with many aspects of technical writing, your decision on using or not using images will depend on the circumstances, the product you are writing about, budgetary constraints, your perspective etc.

I do find it interesting that sewing patterns are mostly pictures whereas knitting patterns are all words. During lockdown, many of my friends who know that I knit have asked for help with basic knitting instructions because they didn't know what to do — most resorted to YouTube videos because they were easier to follow. So perhaps that is also something that we need to consider in our technical communication — there are many people who prefer to learn by watching rather than reading. ■

Jean Rollinson FISTC

Jean is an experienced technical author, editor and proofreader. When not gainfully employed, she plays the clarinet in an amateur wind orchestra and attends aerial hoop classes.
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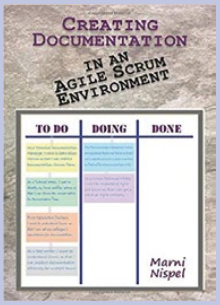
Creating Documentation

In an Agile Scrum Environment

Marni Nispel

Rating: ★★★★



"A real on-the-ground view of Agile."

By **Marni Nispel**.
U.S. 2018. Paperback 150pp.
ISBN 978-1535231749. £23.90
Reviewed by **Helen Harbord FISTC**.

As a technical author who has been working in an Agile team for several years now, I was excited to hear about a whole book dedicated to this topic. I've tried a few things along the way and have pretty much settled on a system that works for our team but there's always room for improvement and I was keen to find out if there were other options that we hadn't considered.

I remember well the first time I learned about Agile. I sat through a two-hour presentation, waiting for the moment when user documentation would be mentioned... but it never was. I left with more questions than I had arrived with and eventually realised that I would just have to make it up as we went along. I have since discovered that this is exactly how most authors first encounter Agile and it's comforting to read straight off that Marni Nispel says nothing different.

The book is split into two parts. The first explains Agile and is worth reading even if you already know about it because it lays out very clearly but briefly how everything fits together. The second part looks at how documentation fits in and builds on the information in the first part.

Nispel has also included a good bibliography with suggestions for reading further into related aspects of Agile such as writing good user stories or finding ways to make retrospectives interesting.

One thing that authors struggle with is deciding whether or not they should identify as part of the Scrum team. Nispel suggests that we can consider ourselves as part of two distinct teams; the Scrum team in which we document the features that are written by the developers, and our own Information Engineering team in which we do all the non-feature related writing such as architecture guides, style guides, training content, marketing content etc. She suggests that we set up our own Scrum team within the Information Engineering team and use the concepts of Agile to organise this work.

With regards to feature-related work, Nispel proposes three ways of working:

- Sprint behind with a separate user doc story
- Same sprint with a separate user doc story
- Same sprint within the developer story

She points out that you are not limited to a single method and goes on to list the pros and cons for each option, making it clear which type of work suits which option. She also gives suggested responses for any objections. This was my favourite part of the book. It's a very clear approach and would be extremely helpful for anyone who is in the process of deciding how best to work with their development team.

Spoiler: Unsurprisingly, there are many more cons for the 'same sprint, developer story' option, than for the others!

A large chunk of the book goes through each of the Scrum elements and discusses how you can approach these as a writer, both in the Scrum team and in your Information Engineering team. It's useful for suggestions on creating customised fields in your planning software.

There are three things that I particularly like about this book:

Firstly, I really like the engaging writing style. It takes a fairly hefty subject and makes it light and easy to read. I never found myself skipping sentences because I couldn't bear to drag myself through them, as may have happened in other books about technical writing (OK, it definitely has).

Secondly, I like the fact that Nispel does not create a 'them-and-us' approach towards the rest of the Agile team. Many of the articles I have read written about Agile by technical authors are somewhat derogatory and dismissive of the developers they work with and this rather misses the essential point of working in a team. It's normal for each person to focus on the work they do and generally there are more developers than technical authors so naturally the focus goes one way more than the other. But it's a team effort to decide how to incorporate user documentation into the overall process.

Thirdly, I like the realistic approach. Nispel is telling us how Agile works in reality and not just in theory. She uses words such 'usually' and 'generally' and is brave enough to point out that "No company is completely Agile!" I think this is important because it removes any fear of doing things wrong and rather shows us that all teams need to work out the best way for them. One often reads that Agile teams should be co-located but Nispel points out that "It is more likely that at least some members of your team will live and work all over the country or even all over the globe". This is a real on-the-ground view of Agile, and it's the most helpful kind. ■

About the author

Marni Nispel is a veteran of the documentation field. This book is her first book. She has a master's degree in Technical and Professional Writing from Northeastern University, USA.

Docs for boats

Will Evans provides some insight of working for an Oxfordshire based boat builders.

What with being a busy engineering and manufacturing firm, the office is generally a hive of activity by the time I arrive for an 8 am start. Logging into Microsoft Teams is generally the first task. Use of Teams was not initially widespread throughout the organisation, but what with recent social distancing measures requiring a large percentage of the workforce working from home, its adoption increased quite rapidly. This demanded a steep learning curve for all and in a short space of time. We predominately use Teams for all internal communication leaving much of the external communication via email. Teams can be a great tool in that you can keep many people informed about project progress or collaborate on ideas without creating that intimidating inbox waiting to be opened for you each morning. Teams can also easily become a slightly less useful tool, in that if not adequately managed, can become cluttered with too many channels making it difficult to find that document or a conversation you had a few weeks ago with a colleague.

As we have a busy production line and tight build timescales, any attempt made to create a plan for myself for the day can easily break down before the first hour is over. This is due to production staff's regular ad-hoc requests for documentation and technical information. This can be anything from a work instruction, engineering drawing, to checking the placement of a component in CAD assembly models. I, therefore, tend to keep my schedule somewhat fluid for the day, and only schedule blocks of time towards the afternoon for deeper work.

With the urgent engineering support tasks addressed, I then look to working on some of the longer lead items of work such as authoring content for owner's manuals. As our boats are luxury products, we prefer to provide our owner's manuals as a high-quality colour print booklet. Whilst also providing the facility for customers to download a digital version in PDF from our main website if required. Thankfully, an external graphic designer handles much of the heavy lifting in terms of graphic design, page layout and translation within InDesign. This leaves me to concentrate on writing easy to read, technically correct content. Having experience with using InDesign myself does, however, facilitate ease of exchanging written content and illustrations. A pre-printed colour print owner's manual certainly does not come without its downsides. Products change and develop over time, both in visual appearance and how they are operated. And so, with this, the documentation needs to keep up-to-date and reflect these changes. With this requirement to keep docs up-to-date, and a purchasing department keen to order large quantities to retain volume pricing, ensuring the owner's manual directly reflects the product it is shipped with can be a real balancing act! A working knowledge and understanding of relevant ISO standards also plays a key part in this area of the role. For instance, ISO 10240 Small Craft — Owner's manual, specifies requirements for the information which should be included in a manual to enable safe operation of a small boat. I have found standards such as this provide an ideal document outline should you be starting a document from scratch.

Another key part of my role is the production of internal work instructions. These involve going out onto the production floor and watching SME's, engineers in this case, complete a stage of production. This could be anything from laminating glass mat to produce the hull of the boat to installing a GPS navigation system on the driver's helm. During this time, I will be looking to gather as much content as possible. Either by jotting down each assembly step and part numbers used, photographing each stage, or even recording a short video for more complex tasks. Upon returning to my desk I outline the key components of the task before reading through my notes and writing out each detailed step for the final document. Again, I use InDesign due to its flexibility and power in creating structured textual layouts incorporating many images, diagrams, or illustrations.

Much, if not all, of this written content is unstructured, predominately due to the needs of the business not currently requiring this. Although, with the increase in requests and overall volume of documentation, I hope to change this soon. To increase my knowledge and skills in structured authoring and technical writing, I generally try to spend a few evenings a week reading a book on DITA/XML standards or just practising writing in Simplified Technical English. Signing up for the ISTC Mentoring Scheme has provided an invaluable opportunity to discuss industry matters with more experienced authors and gain feedback on STE writing tasks as mentioned above.

I try to get things wrapped up and leave the office by 5 pm. This ensures I have enough time in the evening to get some exercise such as a walk as well as get some downtime in preparation for another day. ■

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