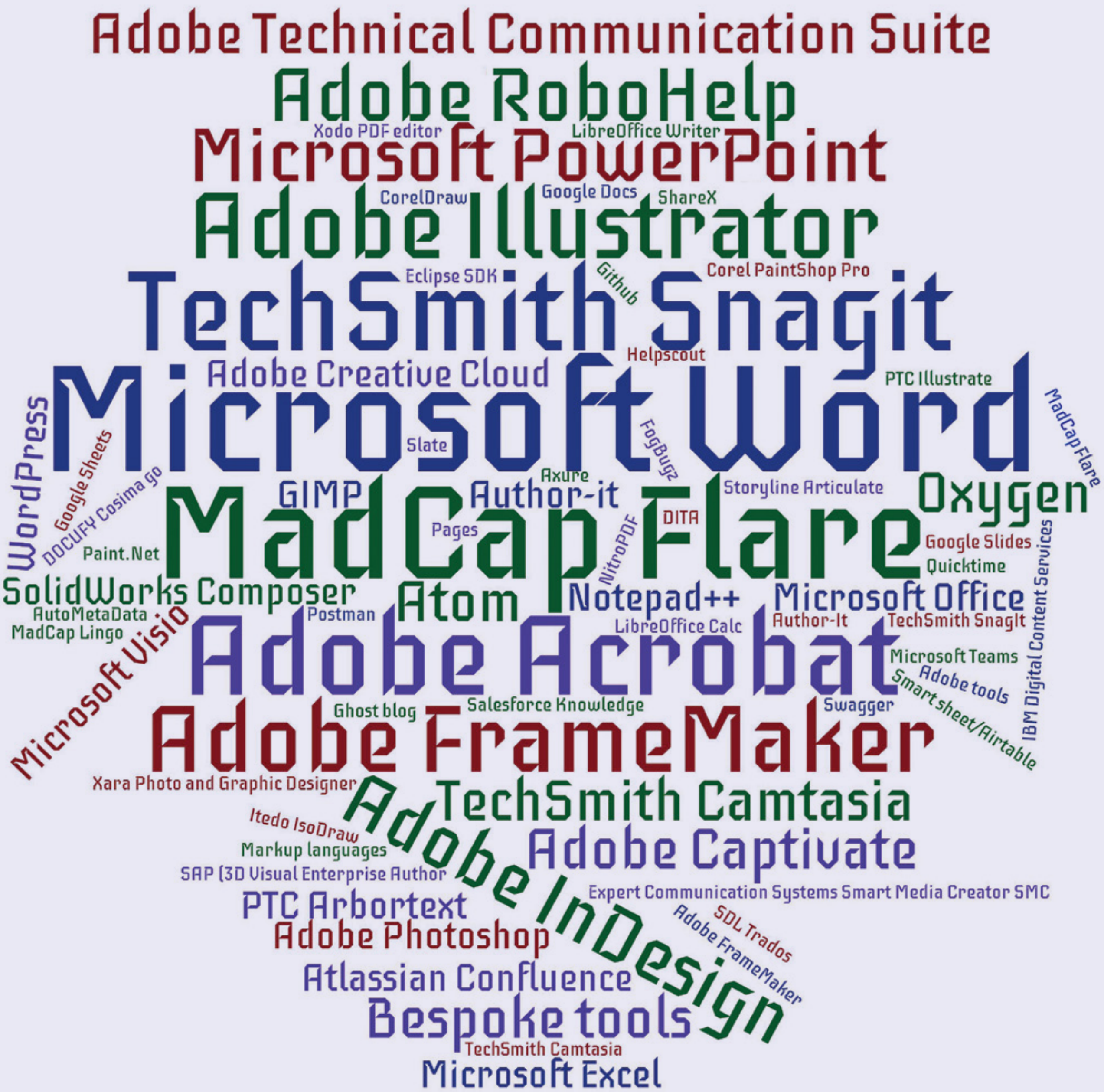
Discussing which soft skills you need

Working from home

Communicator

The Institute of Scientific and Technical Communicators
Summer 2020



Move your learning online

Read a product review about Layerise

Learn about IR35

Create content for conversations

cover

Word cloud created from the ISTC Survey 2020.
www.wordclouds.com

ISTC news

Regular columns

Communicator
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From the editor

Welcome to the Summer issue

At the time of writing, the UK is in lockdown. It's a very different time for many with people working from home, social distancing, home schooling children as well as doing daily exercise. During this time, it can make or break a relationship, it can draw others closer through Zoom, WhatsApp or other social media. Many have had to change their working patterns and lose their social opportunities for networking with others at their usual place of work.

With a change in lifestyle, there's the opportunity to learn a new skill, sort out belongings, or spend time catching up on some of those things that you don't normally find the time to do. Whatever you're doing, be it extra time with house members, juggling working and schooling or enjoying the sunshine and nature coming to life, then find some time to sit down and enjoy the summer issue. You'll find tips for working from home, ways to improve e-learning, guidelines for designing content, advice for structuring machine conversations and more.

Summer themes

Soft skills
There are several articles that cover soft skills. Maxwell Hoffmann shares his many years' experience of working from home by effectively collaborating with others. From a different angle, CJ Walker looks at which soft skills are desirable for those working from home. Whereas Mark Monaghan examines why knowing your audience through empathy and experience are important soft skills. And, Claire Walsh divulges her day working from home.

Methodologies
In his MadCap tips column, Matthew Ellison looks at MadCap Flare and which methodologies it supports.

Helen Hill helps you consider how to move your learning online by using e-learning methodologies.

Talking about conversations is something that Toni Ressaire discusses in her article about chatbot design, while sharing her methodology for doing this.

Elsewhere in this issue

Jenny Jansson and Mats Broberg conclude their case study about S1000D. Warren Singer delves into the depths of IR35 with a comprehensive guide to the legislation. Plus the Ethical Dilemma Responses column shares replies to Spring 2020's IR35 dilemma.

There's a case study about Layerise, a Product Assistant solution, by Philip Larsen.

Joaquim Baptista shares his career reflections by giving sound advice to new technical communicators. Jyotika Mehra reveals the guidelines she uses for designing and developing technical content. And, if you're starting out as a technical author you could join the ISTC's mentoring scheme, see page 9.

Finally

The UK Technical Communication Awards 2020 are open for entries. Details about entering can be found on page 8.

As part of the awards you can vote for your favourite *Communicator* article from Autumn 2019, Winter 2019, Spring 2020 or Summer 2020. Find out more on pages 12-14. Every vote counts, so make sure you vote!

Enjoy reading the Summer issue. C

Katherine

Katherine Judge FISTC
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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.

Jenny Jansson and Mats Broberg's article

Terry comments:
I wanted to provide you with some feedback regarding the article "S1000D for the Amphibious Battalion" published in *Communicator* Spring 2020. I really enjoyed reading the article and get to understand the process that the SSPA has had to consider to covert legacy documentation into S1000D for a defence maritime platform. I am involved in very similar work.

The article is very focused on how the SNS was originated based on the MIMI. What the article could have explained was how the SNS was compiled into the Data Management Requirements List (DMRL) which is configured in the Common Source Database (CSDB) which is used to manage all the data for the specific platform.

Darren writes:
The IR35 Ethical Dilemma's article, in *Communicator* Spring 2020, was great info and well written. I have enjoyed previous work scenarios and the responses. The emoji article was thought provoking not least as I wondered if the Dummies series of books use emojis or icons.

Jamie Nickerson's emojis article

Editor's note: For more information on IR35, read the article on pages 42-46 in this issue.

To have your say, email communicator@istc.org.uk

President's view

Since writing the President's View for the Spring issue the world has drastically changed. In the space of a few months the whole world has gone into lockdown as we try to tackle the spread of Covid-19. It is frightening to see how quickly this virus has spread and how much it has affected everyone in some way. Not only are people losing loved ones, but they are unable to say goodbye to them, to hold them one last time, or even give them the funeral that they wished for. Every day, I read or hear a news report that brings me to tears.

Writing this article in April, midway through the UK lockdown, it's difficult to see when this will end and more importantly what the world will look like once it does. I believe it will be a different world and we will have to get used to a new normal. But the question is, what will that new normal be?

Will there be a change in the perception towards remote working and working from home? Remote working is a hot topic in most organisations and the attitude towards it does vary. Where it is possible to work remotely, some organisations really do frown upon it unless absolutely necessary while others are happy for staff to work remotely once they follow the organisation's guidelines. Even if your organisation allows remote working, in a lot of cases it can come down to whether your line manager or even your work colleagues are on-board with it. There are pros and cons for remotely working, some feel that you won't be as productive if you are not in the office as you will be easily distracted by a home environment. Whereas others feel you are less distracted in a home office because work colleagues cannot just pop over to your desk to ask you a question that takes 20 minutes to answer. As someone who works from home regularly I can honestly say I'm much more productive at home as I can focus more easily on the task at hand without the office distractions.

Since the UK lockdown started, anyone who has the ability to work remotely has been forced to do this. For a lot of my work colleagues, this is the first time they have tried it. There have been some glitches along the way, but on the whole our working life hasn't changed that much.

The biggest change I have seen is an increase the amount of time I have spent talking to my colleagues via the phone, email and instant messenger! This is down to the fact that with everyone working from home, isolation and cabin fever is a big fear. The more you interact with your colleagues, and keep working as normal, the easier it will be to adapt to isolation.

"The more you interact with your colleagues, and keep working as normal, the easier it will be to adapt to isolation."

Will family time and self-care become more common and acceptable in this new normality? Before Covid-19, in our household, as soon as the alarm went off we were up and getting ready to do the nursery drop and get ourselves to work. We barely had a chance to say good morning and we only ate meals together on a Sunday. Contrast that with now; I'm working from home with no commute. For the first time in what feels like forever, we are eating every meal together. There is no pressure to catch a train or drop the little one at nursery.

We have found a new routine that works for us in this situation. It has given my family a chance to slow down and appreciate what we have. While the circumstances that have forced us into this situation are not great, the silver lining has been this extra time we get to spend together as a family.

With no commute, it has become a lot easier for me to grab 10 or 15 minutes during the day to meditate. This is something that I have been trying to do for a long time. I actually have it in my calendar and every day when my reminder goes off, I used to switch the reminder off and go back to work saying oh I don't have time for that today. Nowadays, I pay attention to that reminder. As soon as it goes off, I move away from the computer and just take the time to breathe and be grateful for what I have.

ISTC news

During this time of lockdown, it has been so lovely to see members and non-members reaching out to each other on the ISTC Facebook group. Liz Gregory, one of our Council members, set up an ISTC virtual quiz night which was well attended and enjoyed by all. The ISTC are also running virtual area group meetings to keep members of the community in contact with each other. If you want to know more about these virtual meetings then contact your local area group leader or the ISTC office.

Call for volunteers

The ISTC is always looking for members to volunteer to help run this organisation. There are lots of things we would love to do for our members, but we need volunteers to step forward and help out in various areas. If you are interested, then please get in touch with the ISTC office.

TECHNICAL COMMUNICATION UK METRO

TCUK Metro

As most of you are aware, this year is the first year of the TCUK Metro, a one day conference to be held in the Hallam Conference Centre in London on September 29th 2020. The day will consist of talks from those within our profession, a possible workshop as well as the ISTC AGM and the UKTC Awards presentation. At the time this journal goes to press, we still intend to go ahead with the event as planned. Given the current global situation with Covid-19, this of course may change. We are keeping an eye on government advice and if this changes, we will relook at our plans for the conference.

Like everyone, we hope a form of normality will return by September and we will be able to go ahead with TCUK Metro as planned. We are

> *It has given my family a chance to slow down and appreciate what we have.*

entering uncharted waters with TCUK Metro and while we cannot guarantee it will be a success, we are very excited about trialling the format this year. I hope that it will give those that have been unable to attend TCUK in the past, a chance to experience it. For more information about the speakers, and the format of the day, please see the TCUK website and various social media channels.

UKTC awards

A reminder that the UKTC Awards process is now open for entries. These awards recognise the value of clear, concise and effective information products. The quality of the entries we receive increases 10-fold every year and I for one am looking forward to seeing what entries we will receive this year. For more information on how to enter, see the UKTC Awards website. The closing date is 31st July 2020. C

Stay safe
Carol

References

TCUK website
http://technicalcommunicationuk.com.

UKTC Awards
https://uktcawards.com.

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Your ISTC directory

** ISTC Council member*

The Institute of Scientific and Technical Communicators (ISTC) is the largest UK professional body for people engaged in technical communication. The ISTC encourages professional development and standards, provides research resources and networking opportunities, and promotes technical and scientific communication as a profession. To join the ISTC, change your grade, or get involved in what we do, contact the ISTC office by email istc@istc.org.uk or phone +44 (0) 20 8253 4506.

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UK Technical Communication Awards 2020

Spend your time at home wisely by using it to find a suitable project to submit for a UK Technical Communication Award. Linda Robins explains how you can enter.

This could be your opportunity!
Many technical communicators are working differently at present; those experienced at working from home are probably wondering what the fuss is about. Whenever 'normal service' is resumed, there are sure to be changes in our ways of working going forward with different methods of communicating and collaborating with colleagues and clients alike.

With my mind on the UK Technical Communication Awards 2020, I invite you to reflect on your recent and current projects (before you look ahead). Please consider your own projects, those of your colleagues and your collaborations as prospective entries.

Remember that entry is open to all; we encourage entries of all types, from traditional documentation to those demonstrating technical innovation — anything that displays, encourages, or helps the production of high-quality technical communication.

Awards background

The annual UK Technical Communication Awards recognise best practices and outstanding contributions to technical communication. Each year we invite entries from individuals or teams (or their sponsors) so we can recognise and reward the best examples.

The UK Technical Communication Awards are open to any individual or team, whether employed, self-employed, contracting, volunteering, permanent, temporary, full-time, or part-time.

There were six winners of the awards in 2019 with one of these declared overall winner. Details of these entries and their authors are given on the website: https://uktcawards.com/winners-2019.

Submit your entries

Submit your entries for the UK Technical Communication Awards 2020 via the dedicated UKTC Awards website: https://uktcawards.com.

Certikit accepting their UKTC Award 2019

Reminder

Closing date for entries: 31st July 2020. C

References

UK Technical Communication Awards https://uktcawards.com.

UK Technical Communication 2019 Award Winners https://uktcawards.com/winners-2019.

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Heard about the ISTC Mentoring Scheme?

New technical communicators could have a mentor, and experienced technical communicators could share their knowledge as Mark Swaine explains.

If you are a junior ISTC member and you are looking for advice and guidance with technical communication skills, then why not consider taking part in the ISTC Mentoring Scheme?

Alternatively, are you a Member or Fellow and looking to share some of your knowledge and experience with junior members? Then why not consider signing up to become a Mentor. This can form part of your CPD.

So how does the Mentoring Scheme work?

The ISTC's Mentoring Scheme matches up Junior Members who are just starting out in the profession of scientific and technical communication with experienced technical communicators for advice and guidance. The goal of the scheme is to provide a framework for the professional development of ISTC Junior Members.

The ISTC Mentoring co-ordinator arranges an introduction between a Junior Member and a Mentor, and provides general advice about the scheme, including a series of sample forms that a Junior Member and their Mentor may use to keep a record of their interactions and a log of discussions and actions.

After the introduction is over, it is then up to the Mentor to arrange meetings with their mentee. You both decide on the frequency of your meetings and how, when, where, etc and for how long you want the mentoring to last.

Mentoring and CPD

Continuous Professional Development (CPD) gives Members and Fellows the opportunity to evaluate their professional activities through attending courses or conferences, learning new skills, mentoring others, or reading / contributing *Communicator* articles. The Member or Fellow decides how important each activity is for their professional development.

So how is this relevant to Junior Members? Junior Members who take part in the mentoring scheme are encouraged to keep a CPD record of their career progress. This demonstrates a commitment to a technical communication career and can be used as evidence when applying to become a Member of the ISTC.

Get involved

Progress your career as a Junior Member by taking advantage of the

PROFESSIONAL DEVELOPMENT & RECOGNITION

Mentoring Scheme. Experienced technical communicators can share their vast knowledge and experience through mentoring. It's good for everyone's professional development.

In addition, you could volunteer for the ISTC by supporting an area group, helping promote the ISTC or joining the ISTC Council in the future. C

Resources

For more details, go to the ISTC website: www.istc.org.uk/professional-development-and-recognition/mentoring-scheme.

Mentoring scheme information for Mentors. www.istc.org.uk/wp-content/uploads/2018/11/Mentor-Information_for_Mentors.pdf.

Mark Swaine FISTC
Technical Documentation Manager co-ordinates mentoring for the ISTC.
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ISTC Survey 2020

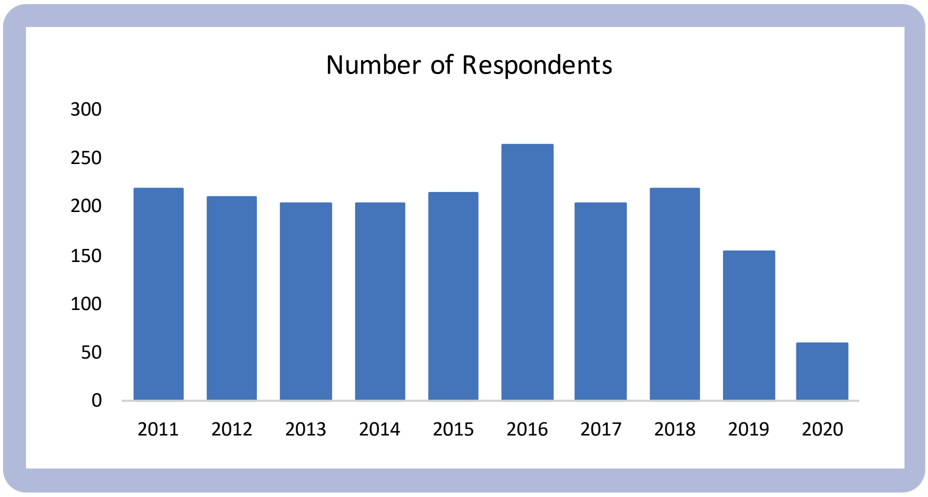
The ISTC runs an annual survey, and Alison Peck looks at the responses we have had this year.

The ISTC has been running annual surveys for a long time now. Peter Fountain, our treasurer, used to carry out regular salary surveys, and the survey in its current format has run every year since 2008.

> *…the response rate has dropped dramatically…*

The results of the surveys from 2011 onwards are available to members on the ISTC website (in the 'Publications and Resources' section). Don't forget to log on first or you won't see the Surveys option.

The survey is open both to ISTC members and to technical communicators in general. Anyone who takes part is entitled to a copy of the results, and the ISTC office will send them to non-members on request.



The response rate

Over the years, the response rate has varied, but has been within the range we've expected internally. The level of response you can expect from a survey depends on a lot of factors, including how the survey is delivered, the age range of the respondents, whether there is an incentive to complete the survey and so on.

This year, the response rate dropped dramatically, and I'm wondering why. We advertised it in the same way that we usually do — it was mentioned on Twitter, in a President's email and in the renewal emails that were sent out. If it had taken place in March, I would have put the drop in numbers down to the changes people were having to make in response to the pandemic — but the survey was over before that became an issue.

Maybe, in our attempts to respond to people's requests to 'ask about X', we've made the survey too cumbersome? It's taking up too much of your valuable time? Or are you simply not realising it's taking place? It's difficult to know. I would be interested in your feedback. If you didn't complete the survey, why not? Did you feel it was too intrusive? We can cut the number of questions down, if that would help. Obviously, the less we ask, the less we potentially know — but in terms of statistical relevance, getting 250 responses to 5 questions would be better than 58 responses to 24 questions.

Were there any significant results?

This really depends on what you mean by 'significant'. In a statistical sense, no. The number of respondents is too small. But there are a few 'interesting' bits and pieces.

There was only one 'new' question this year, and that related to the software we use to do our jobs. Not the 'supporting' software (chat applications, Outlook, time-tracking systems and so on) but the tools we use to create our content. I deliberately didn't give a list to select from, as I felt I couldn't possibly know the range of applications you might use. As a consequence, to get anything meaningful from the responses, I've had to combine some responses (ignoring versions, for example).

Of the 57 people who answered this question, three people only used one application (Microsoft Word, Adobe InDesign or Arbortext Editor) and three only used two applications (MadCap Flare and FogBugz used by one person; Microsoft Word and Adobe Acrobat by the others). Everyone else listed at least three applications, with some enterprising people putting two in the same box. I've taken that to mean that they were used equally frequently so the individual couldn't decide. 😊

A full breakdown is in the survey results on the website, but for now, I'm sharing as a word cloud on the next page.

Do you share everything from the survey?

No. We share most things, but have to be careful that we don't share anything that could identify someone from something they have written in a comment.

We also don't share the answers to the final question, which asks for comments on the survey. The majority of these are suggestions for changes, notifications of errors or requesting clarification. We do, however, take notice of these where it's possible to do so.

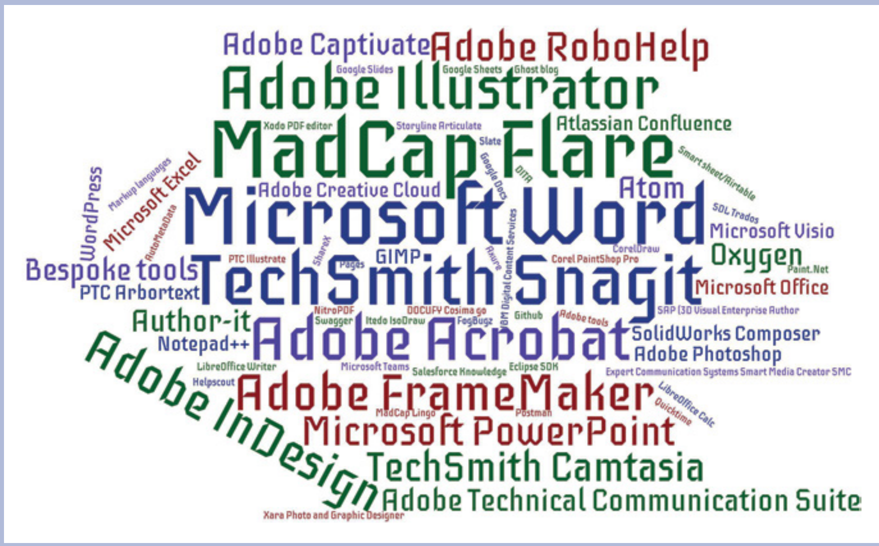
Are you going to have a survey next year?

Yes, probably. We've gradually refined (and increased) the number of questions as people have suggested other things we might want to capture. The problem is that not only does this make the survey longer to complete (and therefore less likely to be done), it also means that a lot more time is spent analysing the results.

We use Survey Monkey and although we can get a quick-and-dirty PDF download of the results, time is spent in tidying this as it is meaningless without some human input. Even after tidying, its usefulness is limited, and the results on our website now have taken a full day to 'lick into shape', replacing some of the auto-generated output with more meaningful charts and removing superfluous details (such as the date and time of responses).

We also get a full download of all the responses in a spreadsheet, which is much more useful from an analysis perspective (assuming we get a few more responses next year).

From the PDF, we can see how many people have selected each option but there is no correlation between the responses to each question. For example, it's impossible to tell if there is a difference in salary depending on the industry/sector or geographical location in which people work. This information can be obtained from the spreadsheet but it is a laborious task to sift through it all.



Proposed changes

I will review the wording of some of the questions to make things simpler. I am also considering other changes for next year — and again, I'd appreciate feedback. These are:

- Changing Q2 (which currently asks what the subject of your highest qualification was), replacing it with a simple four-option multi-choice question to find out whether this qualification is in technical communication, in a related subject, in a technical subject relevant to the area in which you work, or unrelated to the work you do now.
- Removing Q23 (which asks about using MISTC and FISTC after your name). It was added for the ISTC Council to find out whether this was something that was valued or not. We can add it back in at a later date, if necessary.
- Reviewing the wording of all questions in an attempt to make them more straightforward. I would particularly appreciate feedback on this point. As you can probably imagine, it all makes sense to me — but that's not the point.

How you can help

The survey is meaningless if we don't get enough responses to identify some significant elements. Even at the times of peak response, there weren't really enough responses for us to claim any statistical significance — but at least the most commonly selected option stood out. Even that has been difficult this year.

The year that we had the most responses was in 2016. That was before I became involved with the survey, but I have been told it was because one person sent the link to every technical communicator he or she knew. The personal touch is one of the biggest factors in getting responses, and although the ISTC can send out the link in various ways, nothing beats it being endorsed by someone people know and trust. With your help, hopefully we will get a bumper response next year.

Finally, I've already told you about a couple of changes I'm planning. Although I don't want to increase the length of the survey at all (if anything, I'd rather decrease it), I am open to suggestions of questions that you think may pique people's interest. C

Reference

ISTC Surveys (ISTC members only, login required) www.istc.org.uk/publications-and-resources/surveys-2/surveys. (accessed 19 April 2020).

Alison Peck FISTC is the member of the ISTC Council with responsibility for Books and Surveys. She manages Clearly Stated Ltd, and is a technical author in the company.
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Vote for your favourite *Communicator* article 2020

In the past year, what have you enjoyed reading? Katherine Judge explains how you can vote today for your favourite article.

The UK Technical Communication awards have a category for the ISTC Communicator Journal Article of the Year Award, published between Autumn 2019 and Summer 2020.

Which articles can I vote for?

There are two parts to the voting.

1. Vote for your favourite three articles. These are the two column articles that are in the middle of *Communicator*. The winner will be the article which has the most votes.
2. Vote for your favourite regular column. These are the columns at the back of *Communicator*.

How do I choose which articles to vote for?

You can read the print versions of each issue, online PDF versions are available for all ISTC members or you can purchase the PDF.

How to access Communicator articles

Print

As an ISTC member you will already receive the print version.

For non-members, you can subscribe to the print version: www.istc.org.uk/subscribe-to-communicator or you can join the ISTC to receive a print version: www.istc.org.uk/join-the-istc.

PDF

For ISTC members, the PDF version can be found on the website. Login to www.istc.org.uk then from the menu, select *Publications and Resources > Communicator > Archive of Communicator issues.*

For ISTC members, you can also access the PDFs through the indexes (login required):

- **Issue:** www.istc.org.uk/article-index-by-issue
- **Surname:** www.istc.org.uk/article-index-by-surname
- **Topic:** www.istc.org.uk/article-index-by-topic

For non-members you can purchase the PDF: https://sites.fastspring.com/istc/product/communicator. At the checkout, use the code FAVOURITE for a 50% discount during June 2020.

How to vote

To vote, please use the online form: https://bit.ly/Favourite2020

For more information visit https://uktcawards.com/awards/categories

When does voting close?

Vote closes **Friday 31 July 2020**

Main articles

Here's a list of the main articles in alphabetical order per issue.

Autumn 2019 issue

Back to school: tips and tricks for authors!
Bernard Aschwanden, Autumn 2019, Product review
Imparting tips when using Adobe FrameMaker and RoboHelp 2019 to make the best use of metadata possible and prepare your content for the future.

Colour is at the core of accessibility
Carrie Cousins, Autumn 2019, Accessibility
Exploring types of colour blindness with best practice tips and tools to ensure everyone can understand your message.

E-learning: capturing your audience
Helen Hill, Autumn 2019, E-learning
Helping you maximise your e-learning output to meet the needs of your audience.

Grid-based layout and refined typography
Yateendra Joshi, Autumn 2019, Design
Using Microsoft Word for grid-based page layout and refined typography.

I'm just a technical writer. Or am I?
Ant Davey, Autumn 2019, Technical communication
Reflecting on his past career, the author shares his experiences and what's involved in his current role.

Information 4.0 tools – comments
Neil Perlin, Autumn 2019, Information 4.0
Following on from the article in Communicator Summer 2019, the author discloses the responses he received.

Is ours even a profession anymore?
Derek Cooper, Autumn 2019, Technical communication
Sparking debate, this provocative article opines on the current professional status of technical communication in the UK.

PerfectIt 4 - product review
Alison Peck, Autumn 2019, Product review
Appraising the latest version of PerfectIt, a tool that integrates with Word, and discovering whether it can improve the quality of your work.

Structure and semantics for context
Maxwell Hoffmann, Autumn 2019, Intelligent content
Discovering how content becomes intelligent, flexible, and capable of scalable personalisation through structure and semantics.

Working together with content and design
Nithya Krishnan, Autumn 2019, Content and design
Explaining how the product experience can be shaped together using content and design.

Winter 2019 issue

Excellent UI text
Katja McLaughlin, Winter 2019, UI
Advising technical communicators how they can improve user interface text.

Inspire with comics
Joaquim Baptista, Winter 2019, Comics
Describing why and how you could use comics within technical communication.

Intelligent customer experience
Maxwell Hoffmann, Winter 2019, Customer experience
Listening to customer data and matching structured content with real time, contextually relevant content.

Part 1: Overview of mobile technology
Warren Singer, Winter 2019, Mobile
Introducing the technology behind modern mobile phone networks and their relevance to technical communicators.

Social media: an ally in ticket deflection
Alice Otero, Winter 2019, Social media
Telling the story of how she used blog posts and a community to reduce the number of customer tickets for her product.

Team collaboration in Paligo
Craig Wright, Winter 2019, Product review
Taking a look at the new review and contribution features in Paligo's latest release.

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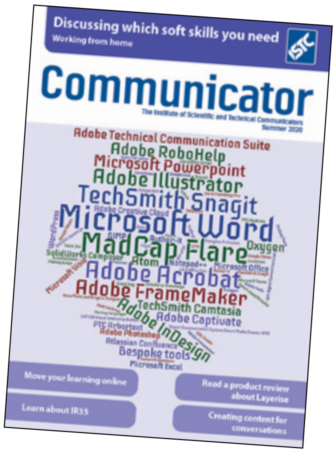
Communicating tips and explaining how soft skills differ when you work from home instead of going to an office.

Working from home with success
Maxwell Hoffmann, Summer 2020, Remote work
Sharing many years of experience, this article includes tips on how remote work can be very rewarding, and how you can develop transportable skills.



Regular columns

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The articles are sorted by regular column, then issue.

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Bernard Aschwanden, Winter 2019, Adobe tips
Bridging the gap between ideal workflows and the tools we have.

What is content design?
Robert Scott-Norton, Autumn 2019, Content design
Starting the first regular column on content design.

Playing nicely with the wider team
Robert Scott-Norton, Winter 2019, Content design
Explaining the author's process for creating designs.

Does Content First matter?
Robert Scott-Norton, Spring 2020, Content design
Planning content as one of the stages of your product.

Designing with the right terminology
Rob Scott-Norton, Summer 2020, Content design
Ensuring you and your colleagues use consistent terminology.

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Jean Rollinson, Autumn 2019, Editing
Reflecting on the English language.

Synonyms
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Pondering why we have synonyms and what use they are.

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Using apostrophes correctly.

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Recapping the tenses and giving examples of when you can use them in technical communication.

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Warren Singer, Autumn 2019, Ethical dilemmas
Finding things to do during quiet periods when there is little or no work to do.

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Thinking about the skills needed to make a good manager.

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Deliberating if a self-employed contractor should switch to a full-time permanent job.

Real-life dilemmas: Coronavirus (COVID-19)
Warren Singer, Summer 2020, Ethical dilemmas
How can the dilemma be managed in these troubling times?

Using CSS variables in MadCap Flare 2019
Matthew Ellison, Autumn 2019, MadCap tips
Discussing the benefits of CSS variables and how to use them.

New drag-and-drop support in Flare 2019r2
Matthew Ellison, Winter 2019, MadCap tips
Discussing the one of the author's favourite new features in the latest Flare release.

Learning about your users with Central
Matthew Ellison, Spring 2020, MadCap tips
Exploring the new Analytics feature of MadCap Central.

Information types and structured content in Flare
Matthew Ellison, Summer 2020, MadCap tips
Analysing how Flare supports different methodologies.

Arrays, arrays and more arrays: part 4
Mike Mee, Autumn 2019, Word VBA macro tips
Concluding arrays.

At the VBA crossroads… where next?
Mike Mee, Winter 2019, Word VBA macro tips
Deciding what topic to cover next.

Please vote by 31 July 2020 using the online form: https://bit.ly/Favourite2020. C

Good luck to all contributors.

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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.
To get involved, contact the relevant organiser, or istc@istc.org.uk.

Area groups

Cambridge
Organiser: Deb Stevens
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in Cambridge Technical Communicators

East of Scotland
Organiser: Holli Hamilton
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in Technical Writers (East Scotland ISTC)

Irish
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Irish Technical Writers
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in Irish Technical Writers--An ISTC Area Group

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in Thames Valley Area Group

Yorkshire
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✉ yorkshire_areagroup@istc.org.uk
in ISTC Yorkshire Area Group for Communication Professionals

Area groups manager

Tom Dumic
areagroupsmanager@istc.org.uk

Online groups

ISTC member discussion forums:
www.istc.org.uk/our-community/discussion-forums

in Institute of Technical and Scientific Communicators

f ISTC Community

Online presence

www.istc.org.uk
www.eventbrite.co.uk/o/istc-495786380
Podbean: http://istctechcomm.podbean.com
iTunes: https://itunes.apple.com/gb/podcast/the-istcs-podcast/id1345913619

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www.uktcawards.com

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Member news

as at 15 April 2020

New members

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

Member — Certified Member

Catherine Challoner	Lincolnshire
Anne Currie	Leicestershire
David Devine	Borders
Meghan Devlin	County Tipperary
Christopher Ellyatt	London
Thomas Harrington	East Sussex
Andrew Rouse	Lincolnshire
Michael Thompson	Shropshire
Peter Wales	Hampshire
Ceri Wilkinson	London

Junior

Bill Florence	Aberdeenshire

Associate

Laura Tofts	Surrey

Transfers

Congratulations to all on your new membership status.

Member — Certified Member

Andrew Elliot-Williams	West Midlands
Alice Gardiner	Yorkshire
Imogen Scott-Chambers	Yorkshire

Rejoiners

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

Member — Certified Member

Judy Kvedar	Ireland

Working from home with success

Remote work can be very rewarding, and you'll develop transportable skills. Maxwell Hoffmann shares 20+ years of lessons.

Introduction

Through happenstance, I've worked remotely from a home office for 22 of the past 25 years. When I returned to commuting to a downtown office a few years ago, my productivity dropped about 25-30%. I was often pulled into many 90-minute project meetings simply 'because I was there'. While taking notes for these unnecessary meetings, I often resorted to creating plot outlines for my next project in the margin to minimise wasted time.

In my various previous employment, I was (a) the only remote member, (b) part of a small remote team that interacted with a large base of in-house staff, (c) an employee at a distributed company in which virtually all employees worked remotely, and (d) a daily commuter to a large office with 200+ staff that worked with a handful of remote workers. Thus, I've experienced remote staff issues from various viewpoints.

Over time I've learned many things that can make remote workers more effective and productive. Just as there is no 'one size fits all' in clothing, there is no single formula for success that applies to all flavours of remote work. When doing remote work for the first time, you must try sensible guidelines and sculpt your patterns to fit you.

This article focuses on a team member point of view, rather than how to manage remote staff. This article assumes that your company has some sort of cloud-based project management and at least rudimentary Digital Assets Management (DAM) that can be accessed remotely as well as content creation tools with collaborative features. Mutual access to team member calendars is also essential to success.

The basics for creating a home-based workspace

Regardless of your situation, there are certain basic requirements for working effectively from home. These hints were drawn from a variety of sources, as well as my own direct experience.

1. Try to work within your usual business hours to be available to co-workers and customers. Negotiate a temporary, alternate schedule if you need blocks of uninterrupted time for heavy lifting in content creation.
2. Establish a proper workspace, with a dedicated room if possible. If your living space is small and your workplace is a corner or alcove, use a room divider, curtain or even a beach towel with thumb tacks to 'close' the office when your workday is done.
3. Working adjacent to a window with natural lighting can reduce eye strain and mental stress.
4. If you have family members in a small living space while working from home, find a 'focused' headset that minimises ambient noise. If you must work in a room with a TV set, try to find wireless earphones for family members to watch in silence.
5. If you have other people in the household during business hours, try to shut the door, or find a way to sequester yourself for team calls with customers. If all else fails, use the bathroom.
6. Remember to take periodic breaks. In a typical on-site office environment, you do a lot more walking than you may have realised. Take regular breaks from your computer at home. Take coffee breaks at the kitchen table, or in a different room. Take a 5-minute walk (even around your house) once an hour.
7. Avoid distractions like television, streaming video or social media diversions that make your mind wander away from the work at hand. You may be in your own home space, but during business hours your immediate environment needs to become a workplace.
8. Maintain healthy rest and sleep habits: Never, ever work in the bedroom or in your sleeping space. Keep digital work devices out of there. Naturally, it's sensible to have something at hand at bedtime for jotting down ideas if you wake up in the middle of the night with an epiphany.

Achieving some measure of life/work balance

Besides maintaining productivity and efficiency, you are establishing 'life balance' boundaries between work and private time.

You will also be avoiding a sense of claustrophobia and isolation. Naturally, if you have family at home, this may be less of an issue. If you live alone, a sense of isolation may be more of a challenge.

Adjusting to your new landscape

During a daily commute and while you traversed your physical onsite office, you had a great variety of visual stimulation. Faces on the train or tube. Billboards, interesting buildings. And all the 'landmarks' in your traditional office, like the supply room, break room and even the restrooms. None of us have a home living space that expansive or with that much variety in terms of visual stimulation.

When working remotely, you have lost that wider geography of commute and traditional office. Since you are in the same home space all day, your perception of the passage of time may change. Remember that when working in an office, part of your mind was always anticipating the trip home. Well, now you are at home. So, you may need some daily signposts to delineate separation between work and personal time.

Some of the activities recommended further in this article will help create these daily milestones to divide up the day and create a sense of movement. Periodic meetings and online contact with co-workers will also help to break up any sense of isolation.

Eliminating communication gaps

More messaging, less email

The primary communication tools for remote workers will be email and a messaging tool like Slack. (More specifics about Slack later.) A messaging tool can be employed with an occasional private message to ask, 'Am I missing anything?' in regards to new initiatives or a change in direction you may have missed.

In a traditional workplace, you were physically visible, and you also picked up a lot of important information via osmosis. Even if your entire team is remote, there is a danger of being overlooked with the 'out of sight, out of mind' syndrome. You can occasionally post some generally useful miscellaneous resources to a messaging channel to maintain visibility. Obviously, use your discretion doing this.

Time management and scheduling

Set expectations with shared calendars

Shared calendars: When teammates have access to one another's calendars, a lot of communication gaps can be eliminated. You can mark sensible blocks of time as 'unavailable/busy' to avoid unnecessary cycles of meeting invites.

You can also send subtle signals to your team by labelling the type of activity you have scheduled. Use labels like 'research', 'interviews', 'video editing'. Co-workers will tend to request meetings that are not right after an intense session on your calendar. Remember to schedule some brief breaks on your calendar. These essential time slots to recharge can easily slip away if you are working with 'waterfall' work rhythms.

Messaging rhythms

A messaging app (like Slack) will prove more effective than using email as your primary communication tool. Slack is visited on an 'as-needed' basis. Desktop or mobile notifications will appear when your initials are used. (for example, '@MH'). To help establish work/life balance, you can set times for Slack to go to sleep and not deliver notifications to you.

- Slack 'channels' can segregate communications for projects, departments, or common employee interests. You may pin an emoticon to a message to acknowledge that you've read it.
- Keep it brief: in most instances you want to swiftly convey a message and hope for a short answer. In contrast to email, everyone can see that a Slack query has been answered, and multiple replies don't ensue from a crowded 'cc' list.
- Make Slack channels for some 'break time' interests like 'cute pets' or 'favourite books'. This also prevents trivial 'FYI' messages from polluting your business-critical threads.
- A new app for Slack called 'Hallway' schedules breaks for your teams to connect in timed video chat 'break rooms'. They allegedly feel just like hallway conversations.
- Retire Slack channels when they are no longer needed.

Trimming and taming email

A few years ago, email was widely predicted to be gone by 2020; obviously it is here to stay. Some people have developed the habit of broadcasting whatever they've done to an unnecessarily broad audience. As with Twitter, a flurry of unwanted and unnecessary replies may ensue. Long email threads with multiple replies from a large 'cc' list become pronounced time killers when you're working remotely, and can't jog past a few cubicles down for clarification.

Over the years I've developed the following email habits to save time:

- Use email more *intentionally*, for messages or signals that need a persistent record. Use a general audience email for announcing FAQs or other items that must be frequently referenced.
- Compose emails that display the main point in the first screenful of a handheld device: this ensures reader retention and a full grasp of intended action items.
- Make the subject line short and to the point. When appropriate, have first characters of the subject line be a project number to ease search and temporary sorting of messages.
- When the discussion in an email thread changes, alter the subject line in your reply. Only reply to parties who are on a need-to-know basis. The first line in the body of the email message can be something like: … '*Where are the conference notes?*' This starts a new thread and eliminates irrelevant people from the cc line.
- Use 'SNIP' to cut out pages of email threads, and use '… SNIP …' to replace the deleted text; only keep the relevant portions of the

original threads. Make the short section of the remaining thread be indented and/or italic. Note: If you are relentless in correcting emails in this matter, everyone will adopt this new methodology.

Handling meetings with video and screen share

Your company may use Zoom, Skype or a similar streaming conferencing tool. Such meetings can be recorded (Zoom can create an automatic transcription.) You also have the option to display everyone's live video 'face' in a grid of boxes. Live streaming of participant faces is very much an acquired taste. Each participant can toggle the display of participants on or off.

Always have a pointer or selected area to indicate *where* participants should focus their attention. This is especially important when doing a screen share of 'busy' content like spreadsheets. Enlarge the view when appropriate. Avoid visual distractions or any elements that are irrelevant.

Remember to set slides to 'presentation mode'. Otherwise, there will be a strip of slides previews to the left wasting space and making the main slide significantly smaller. If sharing a user experience prototype that has no zoom, make some screen captures ahead of time that you can display and zoom individually.

Making remote meetings more effective

Come prepared. If you must share minor milestones from a project, have at least a bulleted list to read from. Avoid 'thinking out loud' in the audio — in most cases, co-workers can't see your face, and they miss nuanced communication.

If using slides, don't 'read from the slides…' say a shorter, summary version of what is displayed. Focus on the take-away points.

Team members who are new to working remotely may lack a comfort zone for meetings that are voice only, with no team members physically present to signal reactions with facial expressions — it can take a while to recognise subtle nuances in voice patterns to determine participant reaction.

Some people are a bit self-conscious if they are on camera, even if they are not the speaker. Give members the option to not display video of their faces.

Remote staff meetings tend to be shorter

In some on-site workplaces, engineers or QA staff who are tied to their keyboards for long hours will subconsciously sense that a long meeting in a comfortable conference room chair is a sort of 'break'. Such staff may have more questions or issues than necessary to stretch out the meeting. I experienced this when I was a product manager with on-site meetings that involved the QA team and programmers.

When participants are reduced to voice only, or the occasional screen share, they tend to take less time making their point. Since remote meetings can be *recorded* (usually with voice and a transcript) some of your more opinionated team mates may thankfully become a bit more circumspect.

Collaborative content creation

This is one of the strongest ways to overcome the lack of 'people' contact that employees sensed whilst in a conference room with a physical whiteboard. It is also far more efficient than many of the patterns we pick up when doing team project development in person in a conference room.

- With Google docs, Word or authoring tool of choice, set permissions to allow several SMEs to make edits and comments simultaneously.
- Use screen share in Zoom or other meeting tools so everyone can see the changes being made. Group editing can eliminate a couple of rounds of 'comments.' Collaborative sessions, will go faster than trying to transcribe post-review marginal comments from individual PDF documents.
- *Group editing* can cut hours out of edit/review rounds when you use this technique early to eliminate weak content.

Be creative with your remote isolation

There are a number of effective content creation techniques that are easier to do when you're not in a cubicle where you would tend to be self-conscious about how you look or sound.

If you run into the 'blank page' syndrome (can't get started) sketch a storyboard to tell your story in pictures. This defines a plot in more primal terms and can get you into wordsmithing more quickly. This also helps you to convey your message in a logical sequence. Don't worry about your artistic talent. Post-it notes on graph paper enable you to move elements around.

Why not do this on a computer screen instead? When you have hands-on with physical media (for example, paper) early in content development, your creativity is more uninhibited. You are exercising a different portion of your brain.

Try 'dictation'. Google docs, Word and many apps for iOS or Android do an impressive job of text to speech transcription. Try dictating portions of the first, rough draft of some content. Your sentence length will be shorter and easier to digest. Obviously, doing oral dictation would be challenging or awkward with co-workers nearby, especially if you are creating classified content.

Avoid social media quicksand

Although tools like Twitter and Facebook are often necessary for research and data mining, try the following hints to avoid falling into a rabbit hole of cat videos. Bookmark social posts of personal interest that you can revisit later. Delete bookmarks after consuming content to avoid clutter.

If you have notifications for Twitter and Facebook on your phone or desktop, disable those alerts during business hours. Or, if all else fails, put your smartphone face down on your desk. I have found it very helpful to disable desktop notifications for social media during business hours.

Keep your sanity: maintain solid personal boundaries

Do a couple of small, physical things to 'feel' different when the workday is over. You used to have a commute and different buildings/furnishings to establish demarcation between workday and private time. I switch to an analogue wristwatch that has no date display when my day is over. I occasionally change shirts or some other article of clothing; anything that makes me 'feel' different because I'm no longer at work.

When using your laptop after work, try switching the colour scheme and desktop images. This may sound silly, but it helps create a mental 'shift' if you are new to working and living in the same space.

Never ever use work-related digital devices in the bedroom within 2 hours of when you go to bed; it destroys sleep. If you must read in bed, try a paperback or magazine. Your brain shifts gears when you go to paper instead of pixels. A pink light bulb or LED lamp that adjusts to warm colours also helps with your circadian rhythms and promotes better sleep.

In conclusion, you are not alone

Although you may be physically isolated working remotely, you are not really alone. Your teammates will gradually assume new online personas through different communication rhythms, even using humorous emojis in Slack messages.

While working remotely, you will probably have more time for primary research, or revisiting stale assets that need refreshing. Over time your collaborative skills, practiced remotely, will become keener and more effective.

It takes a bit more effort to maintain team bonding without physical, face-to-face interactions, but you will get better at it. You can use apps for Slack like Hallway.chat or have three to four teammates commit to have a watercooler chat thrice weekly.

These skills are transportable

If you return to on-site work in an office environment, you will find that all these work and communication rhythms work well even when your team is all under one roof. Boundaries, 'alone time', and shorter, more focused meetings make everyone productive, regardless of their location. If you move back into on-site office work, your co-workers will appreciate your brief, unambiguous communications, and your thoughtful participation in meetings. C

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Move your learning online

Helen Hill helps you consider what to include in your e-learning content by using e-learning methodology.

Learning models: how the learning content is created

Learning theories: how the learner learns

Learning methods: how the content is delivered

In the rush for companies to create an online presence during the current world-wide pandemic it is evident that an industry that is significantly hit are those who normally deliver traditional classroom-led training. Not just schools, but those who deliver first aid training, coaching, process training, work-based learning and any topic that usually requires a physical presence or practical skills.

A lot of companies have quickly adapted to using Zoom to run sessions, but are now looking for a more sustainable and practical way to create online courses as a long-term plan. Or to create a blended learning program.

With the odd exception, most topics can be converted into e-learning. There is often a misconception that creating e-learning or online training is just a matter of transferring a PowerPoint presentation into an authoring tool, clicking publish and it's done. Leave the learners to it and move onto the next project.

However, to create a successful learning experience which transfers knowledge to learners, creates behaviour change and engages the audience requires much more input and understanding of the concepts and theories of learning, and more specifically e-learning. Classroom training provides a type of interactivity and engagement that is difficult to replicate online, so we have to find other ways to recreate this.

This is where methodology comes in.

Methodology is a huge topic that cannot be covered in one article, so here we will look at a brief introduction for those who may be looking to transfer their products and services into a digital learning experience. The focus is on understanding what we are referring to by the term methodology in relation to e-learning, and the basic tips we can take from it to transfer face-to-face or classroom training into an online presence.

What is methodology?

If e-learning is the use of computer and technologies to create a learning experience which drives improvement and behaviour change, methodology is the underpinning models, systems, theories and methods which guide how best to approach the development to maximise the impact for your learners.

By understanding the users' needs and wants, pain points, environment, prior knowledge, and other factors which can influence how effectively the learners engage with and take on board the learning.

When should we use methodology?

In short, throughout the whole project.

Methodology is quite a catch-all phrase which covers all phases of a project from scoping and briefing, to design, development, delivering, assessing and evaluating. It will help you identify learning needs and the best way you can help the learner to achieve those needs.

Using methodology helps the designer and client to:

- Analyse whether e-learning is the correct solution, or whether it could be included with other methods to create a blended learning experience
- Understand what is needed to develop the learning (people, materials, tools, systems, etc)
- Develop the content using appropriate learning theories
- Identify authoring process and the tools used
- Understand the development process
- Include testing and QA methods
- Carry out evaluation
- Promote their courses
- Facilitate the learning.

Why is methodology important in e-learning?

Though online learning usually has similar goals to face-to-face learning, due to being carried out in a remote environment it brings in a range of different considerations which need to be accounted for in the design and delivery.

With online learning the trainer is far removed from the audience, often unlikely to know them or the situation in which they are learning at all, unless the training is created for staff of a specific company or controlled situation. So it is more difficult to establish prior learning, to keep motivation high and to be able to problem solve any issues that occur during the course of the learning. There is no opportunity to make it up as you go along, online (I am allowed to say that as an ex-teacher who often did this).

Therefore e-learning has processes and methods of its own which need to be considered in order to effectively reach that end goal and demonstrate the learning outcomes. Factors such as engagement, storytelling, technology, use of media, accessibility and other specialist skills come into force and the correct (or incorrect) choice can have a huge impact on learning.

Three key areas of methodology

When in the phases of designing and developing content there are three key areas of methodology which come into play for the designer: models, theories and methods. These areas will help you to get into the mind of your audience and their needs, and start to put some of the pieces together.

There is crossover between these fields, as some do not fit neatly into one category (plus it is not necessarily important to pigeonhole them into one column). The easiest way I categorise the areas is:

- Learning models guide to how we create the learning content
- Learning theories relate to how the learner learns
- Learning methods are how the content is delivered.

Table 1 has a few examples.

There are fundamental differences between an adult learning compulsory on the job training and, for example, a secondary student combining e-learning with a formal classroom education. Methodology helps us to understand these differences, and to account for them in our design process.

Let's use a fictional example to show how this works:

Betta Pet Foods wants to deliver Health and Safety training to all staff, with a focus on those who are part of the production line. The staff are a mixture of ages and abilities, and there is a high percentage who are non-native English speakers.

So using this example we may make the following decisions.

The design company regularly uses the popular ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model of development to guide our process of creating the content. This model provides an iterative structure to the development, where there are continual refinements and checks from start to end. This allows the client and SME to continually check the level of content and make sure that it has not been altered too much in ensuring it is accessible to the audience. It will help to create carefully structured content with well-chosen integrated media and activities.

Adult learning theory would be highly relevant here to guide our decisions and understanding of the audience. This theory tells us that an adult learner is likely to have the needs shown in Table 2.

Knowing the needs, shown in Table 2, can then help you to select appropriate learning methods for the audience's skill level.

Online training will provide the opportunity for them to learn at work or at home, and be able to do it at a time that works with their tasks. It can be broken down into small chunks so that they can do small sections at a time, which is much easier to fit into their day.

Within the e-learning module we may also include:

- Instructional videos and step-by-step diagrams, to aid those with a low level of English as they can more easily interpret the visual demonstration than written language. It would also be advisable to include subtitles and the ability to pause and rewind the video
- Downloadable resources that can be kept for reference
- A glossary of terms to refer to if any unfamiliar terms appear
- Activities and quizzes that will give them the chance to test their understanding in a safe environment, before putting it to practical use
- Clear navigation that uses icons and words to indicate directions and features, for example the previous and next buttons should include the wording plus the relevant arrows
- The use of case studies and characters to make the learning relatable and show how the knowledge was applied in a range of circumstances.

As you can see, methodology helps you to start building a plan and help your learning take shape.

Table 1. Three key areas of methodology

Learning models	Learning theories	Learning methods
For example, ADDIE Rapid learning Adaptive learning Instructional Systems Development ARCS Motivational Design Theories	For example, Adult learning theory (or Andragogy) Gestalt Behaviourism Constructivism Humanism Cognitivism	For example, Problem-solving Service learning Gamification Games based learning Experiential learning Blended learning

Table 2. Adult learner needs

Needs	Why?
Flexibility so that they can learn around other commitments and dependents, plus a busy work life	They will need to learn around their role in the factory, preferably in short bursts of time so no-one is taken away from production for too long
To understand why they are doing the learning and the outcomes they expect to be able to achieve	They need to understand that the training is necessary to ensure the safety of them, the products and their colleagues, as well as to comply with legal obligations
An ability to put the learning into practice as soon as possible	They need to be able to immediately see the relevance to their day-to-day role and see where it is relevant
To be able to demonstrate their learning for appraisals, CPD and legal implications	Successful completion of the course is in their job description and failure to complete it may result in disciplinary action or an inability to receive wage increments

What else can we learn from methodology?

Process of creation

There is a process of creation which involves many stakeholders other than the designer project managers, SMEs, accounting, quality assurance, and so on. Methodology will help you to understand who comes in where. This will also make sure you have a realistic view of the time needed.

As I stated earlier, creating online learning is not (or shouldn't be) just a case of uploading a PowerPoint presentation and a handout online. It takes time to do a proper job; write activities, source case studies, write the content into a story with flow, and to build and to carry quality checks. And that doesn't include many other factors like SME feedback and making amends.

As a general rule, a smoothly running, 60 minutes long, level 3 course (see the description below) will take around 2 months start to end if done properly. So plan accordingly.

Levels of learning

From a basic level 1 to all singing-all dancing level 3, methodology will help you to decide which level is right for your learners and your budget. It will help you look at how to get the most out of whichever level you go for and how to ensure it works for your audience.

To break it down simply:

- **Level 1** — This type of learning is very simple with a lot of 'click and reveal'. It is the no-frills option when you have small simple content or a small budget that will not allow for increased development costs. It will usually use stock imagery and icons.
- **Level 2** — This brings in a little more interactivity, but is still quite heavy on the click and reveal. It allows some personalisation, but not the building of bespoke pages, or those requiring a lot of development. It increases the level of interactivity for the learner and adds a little more variety in the way information is presented. Levels 1 and 2 usually provide customisation so you can add branding elements and change colours, but they are quite restrictive.
- **Level 3** — This is the all singing-all dancing option, which allows for the creation of bespoke activities and games, additional resources, videos, case studies, animations, controls, illustration and more. It provides the highest level of interaction and engagement, but it will come at a heftier price and longer development time.

Tools required

If you want to have a go at doing it yourself there are many authoring tools out there such as LearnDash, Podia, SquareSpace, and Heights Platform. Or you could use a website such as Udemy. These allow you to create the learning online and publish to their website, or use a plugin or members area on your website to upload to. Generally, the highest level of learning you will create with these is level 2.

To create level 3 learning an authoring tool such as Articulate Storyline or Captivate is needed, which would allow the level of bespoke design required. This tool allows everything to be created from scratch (though it still also provides templates if you wish). However, unless you have some solid software skills already and can pick things up very quickly you will need to hire an instructional designer to produce this for you. And you will also need a Learning Management System (LMS) of some sort to upload the learning to.

Adding interaction

Consider how you can help the learner to feel engaged, lead them through the learning, make the learning conversational, and try to pre-empt their questions.

The more the learner interacts with the content, the more it is likely to be taken in. So look at how you can take the text and break it up into activities, dialogue between characters, quizzes, animations and anything else that feels appropriate. Just because it is in written form, it doesn't have to be formal and full of jargon. Which brings me onto my next point…

Make it easy to read

Write as you would speak, that is, in plain language. Just as you would with face-to-face training. Make it conversational. Make it feel like they are being guided, but have some autonomy and control. Get rid of technical terms and jargon as much as possible — or make sure you explain the terms well and/or put them in the glossary if one is available.

In short, make it enjoyable! Don't make them feel like they are being set homework or assignments, or that they are not good enough.

Be concise

This goes hand in hand with the point above.

When you turn a day's, or even an hour's worth of face-to-face learning online, that is a lot of content for someone to go through alone, and often there are added bits and pieces that the learner doesn't *need* to know. If your learner is anything like me they will struggle to keep focus working through large amounts of content (especially if it is text-heavy) on screen.

The often cited approach is to cut the content in half, then half again. Think of it this way — what do they *need* to know versus what is *nice* to know.

If there are extras that you are struggling to cut out, consider whether this information could be signposted in the resources section, so those who want extra context can have it. If in doubt, and you are too close to the content to cut it down, get input from others.

Use of media

How can you vary your methods of presenting the information through text, icons, animations, videos, audio files, infographics, diagrams, challenges, games, downloadable resources and more.

Ensure there is something for everyone, and that your choice is appropriate to the audience and the information you are putting across. You can read my previous *Communicator* article about 'Using Visuals in e-learning', see the References section.

Intersperse knowledge checks

Even if you have an exam at the end of the learning, intersperse your course with learning checks throughout. This allows the learner to test their knowledge without fear of failure. And mix the activities up, don't just use multiple-choice questions. They can be a great tool to use, but learners can easily just randomly click on these without thinking so they are not the best test of knowledge. Use them sporadically. Level 1 and 2 learning will usually limit you to multiple-choice, drag and drop and matching exercises. For the more fun stuff, you need to go to level 3.

Include accessibility features

Legislation means that a certain level of accessibility should be included on all new websites. Though the legislation doesn't quite specify e-learning as a must have, it is best practice to ensure accessibility to at least WCAG level A. This means including subtitles, alt text and some other 'basic' accessibility features.

If you fully understand your audience and want to provide the best service for all there are a number of accessibility features that could be considered. This can include keyboard navigation, subtitles, transcripts, colour use, screenreader integration and so many more. It is a minefield of possibilities and an area that is definitely worth getting some advice from someone in the know.

Finally…don't go it alone

Understandably, a lot of this list might sound intimidating and it can be very daunting to create a course in a system that you are not familiar with, but there are people out there with lots of advice to give. There are people out there to help you and to save you endless time researching some of these points. Either in doing the work for you or providing some advice, many of whom are happy to have an informal chat to see which options could work for you.

Conclusion

Finally, if you want to learn more about methodology in depth, I can recommend starting with '*E-learning methodologies A guide for designing and developing e-learning courses*' by Beatrice Ghirardini, Instructional Designer at FAO. C

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Udemy. www.udemy.com

Acronyms

ADDIE. Analysis, Design, Development, Implementation and Evaluation. It is an instruction design methodology.

CPD. Continuous Professional Development.

LMS. Learning Management System.

SME. Subject Matter Expert.

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Empathy and experience

Mark Monaghan discusses how empathy, experience and knowing your colleagues and audience can improve your documentation.

What's this about tomatoes?!

Hard skills are tangible assets. They likely landed you your job. Soft skills are what sets you apart from everyone else.

It's a soft skill for me to know that elsewhere in *Communicator* someone has written about soft skills in the workplace, about communication, teamwork, adaptability, and about how you can better leverage your own skill set.

Perhaps someone has said something along the lines of 'hard skills are knowing that a tomato is a fruit, soft skills are knowing not to put one in a fruit salad'.

So, I'm going to try and put a different spin on the topic.

Hard facts and soft skills

Hard skills are teachable and measurable. You likely have a list of them on your CV with a few certificates to back up your claims. In reading this you are exercising a hard skill. It is easy to understand what they are and how to get them.

If you search for soft skills on the internet you will get lists of varying lengths (for example, 'the 2/π/5/7/10 top soft skills of successful succeeders'). Trying to catalogue soft skills goes against their essence, so I prefer the dictionary.com definition:

"Desirable qualities for certain forms of employment that do not depend on acquired knowledge: they include common sense, the ability to deal with people, and a positive flexible attitude."

That definition implies a lot of wriggle room in the interpretation of what a soft skill actually is and seeing as I can't cover them all, I'll cover a few examples that I like.

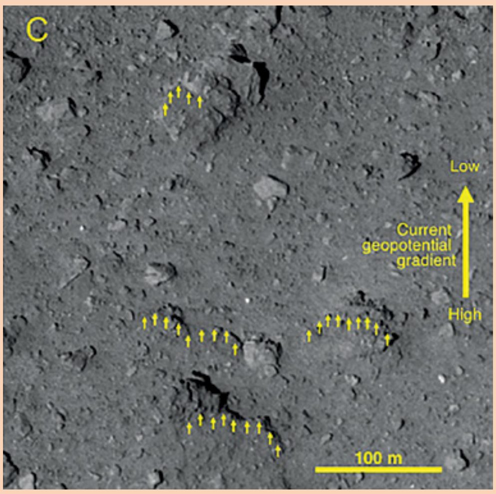

Figure 1. Ryugu analysis image C (Sugita et al.)

Science done softly

Information saturation has truncated attention spans and the impact of a story can be measured in mere days. This is demonstrated well on newslifespan.com, so give that a look if you have free time. We can lament this but it's not going away, and we may as well face it down.

Of particular interest to me is how stories about politics and science differ.

Politics has the appeal of juicy gossip and people align themselves along party lines, like tribes. Science doesn't benefit from this effect, at least not in the eyes of the public (internally it can get as just as tribal - #TeamLoopQuantumGravity).

Stories of the first image of a black hole broke in April 2019 (and chosen by the journal Science as the top scientific breakthrough of the year). I changed my avatar to this image in a few places (it is admittedly unimpressive out of context, but nerds must). However, this monumental achievement was soon forgotten as the news cycle spun on, at least that appeared to be the case at the time of writing.

Politics has the benefit of spin doctors moulding a message to appease and hold interest. Science typically doesn't have a filter between the experts and the audience. Papers and press releases are therefore often dense and not fun to read, even to other experts.

What can be done about this? Well, as you could have predicted, that is where good communication skills and the ability to read a room come in.

I regularly attend the UK Astronomy Technology Centre (UKATC) lecture series held at the Royal Observatory of Edinburgh (ROE). These talks are targeted at the public, but don't hold back on the technical aspects of their topics.

One of these, titled 'New Horizons in the Solar System (or very far and very near)' by the delightful, part-retired astronomer John Davies (UKATC, ROE) had a great example of how to take subject matter expert jargon and make it understandable.

The lecture included content based on a paper by a group from the Japan Aerospace Exploration Agency (JAXA) describing some work done by the Hayabusa 2 mission to the asteroid Ryugu (S. Sugita et al., Science10.1126/science.aaw0422 (2019)). (See Figure 1).

S. Sugita et al.:

"Asymmetric regolith deposits on imbricated flat boulders on the northern slope of the circum-equatorial ridge of Ryugu. Small yellow arrows at the edges of regolith deposits indicate the direction of mass wasting. The large yellow arrow indicates the current geopotential gradient from high to low. The direction of geopotential gradient is consistent with the mass wasting."

This same information was interpreted by John Davies as:
"Stuff rolled downhill."

This is a facetious example, to be fair, but it gets the point across (and was very well received in the lecture hall). It was comforting to see that this very experienced professional also dislikes this sort of jargon. How he delivered this information demonstrates the soft skill of knowing when you can use humour to bridge the gap to understanding, provided the audience is willing to receive that humour.

Fighting assumptions

We've likely all seen a design discussion that inevitably has something along the lines of the following pop up: 'Do we need to MAC that? How about the one for VIPs?'

Sometimes acronyms like these make their way into a document as-is. Maybe you don't know what that means but assume it to be common knowledge in your industry. Provided everyone who will ever read it understands those acronyms you may think this is fine.

However, if I may appropriate a concept from the podcast moderator Kyle Bosman, every document is somebody's first document.

It's a soft skill to know that even if the vast majority of the people who read your document know what they mean, it takes you a moment to explain that in this context MAC means message authentication code and VIP means visually-impaired person. It would take a novice substantially more time to find that out because neither of those results are coming out of an internet search without knowing a few more contextual key words.

You've shared your knowledge and made the onboarding of a new employee a little bit easier. Maybe the more experienced among your audience will roll their eyes, yet secretly be glad of the refresher.

Visitations

This one is a bit more difficult given the national lockdown, but sometimes getting the information you need means you have to go have a bit of a chat with someone at their desk or catch them at the coffee machine. I know a manager who is great at this, popping out in a flash like a spider on a web whenever they spot their quarry wandering into the kitchen.

Most communication, at my workplace, is done through email and instant messaging. It may seem that some people are great at ignoring these but to be fair, there are people in every organisation who are well-intentioned but forgetful.

The reality is most likely that everybody is busy.

Video calls can be a middle ground, but we've surely all noticed the eyes of colleagues darting between the Skype call window and whatever article they loaded up prior to the call, or that vitally important email about an upcoming change to Adobe terms and conditions that is suddenly enthralling because it provides an excuse to check out of the conversation.

Popping up at their desk is a powerful tool - but just be sure your colleague isn't genuinely busy with something incredibly important. Check their calendar if you can. Bring a coffee, the smell will help you gain attention.

The human brain is a mysterious organ and it usually won't let us dismiss an actual physical entity in front of us with much ease. Your colleague will usually be happy to see you, because now *you* are the distraction from the tasks on the screen. And if you are an inconvenience and they want to get rid of you quickly they'll email you that information you have been waiting days for right there and then just to get you to leave. I call that a win!

For the remainder of lockdown, you'll have to practise this on whatever other living organism inhabits your home, be it a family member, a pet or, like in my case, an aloe vera plant named Allan.

Charisma is the ability to sell the tomato-based fruit salad

Soft skills come from empathy and experience. I am told that charm and charisma help too.

But there's no guarantee of effectiveness with soft skills. Sometimes you will have to suck it up, admit you were wrong, or apologise for an offence you inadvertently caused.

Sometimes no matter how many approaches you take, workshops you attend, or skills you throw at the problem, you may have to admit defeat.

And therein lies yet another soft skill.

This is a great time to tag out to a teammate if you can. My charm and willingness to speak in public has often been leveraged by teammates throughout my career, as have my planning, teaching, language, and leadership skills.

Knowing when and being able to do the same with others has, for me, been the most difficult soft skill to gain. C

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Content modelling for conversation design

Toni Ressaire takes you through the process of structuring unstructured human-machine conversation.

As technical communicators, we have vast experience in modelling content intended for linear consumption. Conversational interactions and interactive experiences do not lend themselves to such a methodology. Human conversation is complex. Modelling content for automated and interactive experiences—an exchange between humans and machines—requires a multidimensional approach.

In the last few years, we've seen a significant rise in the use of voice-activated devices such as Amazon Alexa and Google Home. Siri has long been a personal assistant to iPhone users, and Google has been keeping pace by developing tools for voice and chat.

Apple, Google, and Facebook are not the only companies designing chat and voice interfaces. In a recent survey of the recruitment agency Glassdoor, I found 10 companies hiring a conversation designer over a period of 30 days in the month of March 2020.

A conversation designer designs and develops content for users to interact via conversational text chat or voice.

A conversation designer generally designs and develops content for systems in which users will interact via conversational text chat or voice. Today's systems may be driven by artificial intelligence or rule-based systems.

In the chatbot sector, consumers have created a demand for chat and voice-based interfaces. A report by Juniper Research found that "consumer retail spend through chatbots will reach $142 billion by 2024; rising from $2.8 billion in 2019. This represents average annual growth of 400% over the next four years."

Why is this important for technical communicators? A $142 billion spend represents an awful lot of content.

A content design mindshift

Designing content for machine-driven systems requires a new way of thinking about content design. In the job listings I mentioned above, top companies are looking for conversation designers with experience in designing for chat and voice interface. Generally, they are developing conversational or digital assistants to help users find information or perform some sort of self-service for the business products. Other emerging technologies, such as Augmented Reality (AR) and Industrial Internet of things (IIoT) require machine-driven content.

Knowing that machines rely on structure and hierarchies to operate, how do we apply the structured concepts of content modelling and content architecture to unstructured human language and content delivered via these emerging technologies?

In this article, I share the methodology I've been using to model content and provide an information architecture for use in automated conversational design. The entire process will vary depending on whether the system is using a rule-based model or natural language processing (NLP) to determine user intent, but the basic modelling steps are generally the same. The process follows four sequential steps.

1. Define the use case.
2. Define content types.
3. Define taxonomies.
4. Design conversation flows.

1. Define the user case

The purpose of an automated conversational assistant is two-fold: improve user experience and provide a significant return on investment (ROI) for the organisation.

Starting with that purpose, you can begin planning the design for an automated conversation, considering these questions.

- What is the primary reason users are interacting with your product?
- What are the user's pain points?
- What tasks prevent users from successfully using your product?
- What are the questions most frequently asked?
- What are the organisation's pain points?
- What problem could an automated assistant solve?

Some common user pain points may be related to account questions, access, or how to perform an operation. Organisational pain points may include customer support overload and cost reduction.

For the purpose of this article, I'll rely on an imaginary company that has defined two pain points.

- Customers frequently have questions regarding their accounts and how to move funds.
- The company is over-burdened in the live customer service department, using phone and live chat to support clients.

The company decides to develop an automated conversational assistant (chatbot) with a narrow scope. The assistant can help users with account questions and moving funds. The conversational assistant will have access to user accounts to deliver personalised services.

Once you've identified the use case, it becomes easier to identify content types and develop a high-level content model.

2. Define content types

You may be familiar with the Conceptual Content Model. It's a high-level map that describes categories into which your content will fall. These categories are called *content types.*

Content types are typically internal descriptions of content related to your product. When designing for conversational assistants, content types are used externally and should be named with words users may input.

For this imaginary company, we can define the following domain-specific content types.

- Accounts
- Deposits
- Withdrawals
- Transfers.

Because a user should have the option to change context at any point in the conversation, the content types become persistent (always in view) or non-persistent (hidden, but accessible) menu items within the conversational assistant. At any time, the user could type 'deposits' and get a response such as "Sure, I can help you with deposits." The conversation then reverts to the menu, which includes the content type Deposits.

In addition to domain-specific content types, you'll need prompts so that the automated assistant can move the conversation along. These include questions (to determine user intent) and transitional phrases. We can identify this content type as Phrases. Here's an example interaction in which a chatbot uses a transitional phrase "Sure, I can help with that."

Chatbot: What type of transaction are you making?
User: I need to change my password.
Chatbot: Sure, I can help with that.

You'll also need a variety of content types referred to as greetings, or salutations, and other phrases that the conversational assistant can use when it does not understand a user's intent. These are known as fallbacks in the conversation design world. We can add two more content types: Greetings and Fallbacks.

Figure 1 shows the basic content model. It's not much different from a traditional content model, except that all content types circle back to the main menu. That's the content flow, but we'll get to that shortly.

3. Define taxonomies

A taxonomy classifies elements and their relationship to other elements, in our case, content. In a traditional content model, taxonomies describe the relationship of content to other content, to a delivery type, or a user interface type. In a model for Web design, a taxonomy may show the relationships as content for the Home page, the footer, or other UI elements.

In conversation design, a clear taxonomy helps an automated assistant search and retrieve appropriate information based on user input.

Figure 2, shows the relationship between content about passwords, pin codes, account balances, and email as belonging to the content type Accounts.

In preparing taxonomies for conversation design, user analytics data are gold. In a recent project, I had access to several years of live chat conversations between users and live customer service agents. Using business intelligence software, we determined the most common keywords (for taxonomy) and the way users structured requests (to use as training data). This is an ideal scenario. We didn't need to guess at what users would request or how they would phrase their requests.

It's also important to consider user pain points as you define taxonomies. You'll usually find these terms in the most frequently asked questions. I'm not referring to the FAQ page of the product website. Gather user analytics to determine the actual questions that users ask most often. You may identify the following types of user requests.

- How do I reset my password?
- Can I update my email address?
- I forgot my pin code.
- What's my account balance?

As you can imagine, users can phrase requests in a variety of ways. It's important to train a conversational assistant to recognise all varieties, especially if your system lacks robust NLP.

Training data can be gathered or created to 'teach' the machine the variant phrases associated with change password. An automated system will capture the user input "change my password" and search for relevant content.

If you lack such analytical data, Nancy B. Duan in Designing Conversational UI with Information Architecture, recommends looking for user patterns via Google analytics, tags in

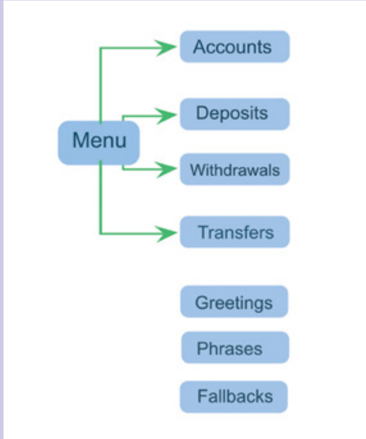

Figure 1. Content types

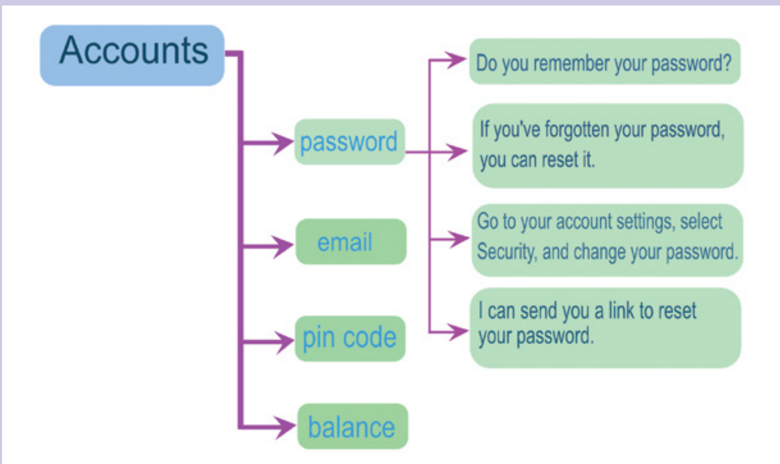

Figure 2. Conversation design taxonomy

your current content, most frequent hits in a knowledge base, or usage data for devices.

An automated system works best within a narrow scope. I suggest creating a taxonomy around the top three to five user pain points.

An analytical-based taxonomy will help the machine search and retrieve information based on typical user inputs.

4. Design conversation flows

Starting with the Conceptual Content Model that defines content types, design the conversation flow. Traditionally, this may be called a Design Content Model, which includes content types, attributes, and relationships.

In conversation design, the relationships are extended to conversation flows. To put it simply, when the user asks a question or the automated assistant offers options, where does the conversation go next?

While it's not necessary to write all content at this stage, I find it helpful to write some example content to help define conversation flows. This is another point at which user analytics, pain points identification, and some human psychology become critical. In designing conversation flows, you'll want to consider all potential paths users may take in the conversation.

Figure 3 shows a conversation flow in which the automated assistant starts with a Greeting (content type), and based on user input, moves to the content type Accounts to access the content related to password. We've designed the architecture so that the conversational assistant jumps to a transitional Phrase before moving on to the Accounts content.

In traditional content architecture, we design hierarchies. We determine how information will be formatted and what information becomes a subset within the content hierarchy.

A hierarchy may not be an applicable term in conversation design. By nature, a conversation will be non-hierarchical and multidimensional. What do I mean by that?

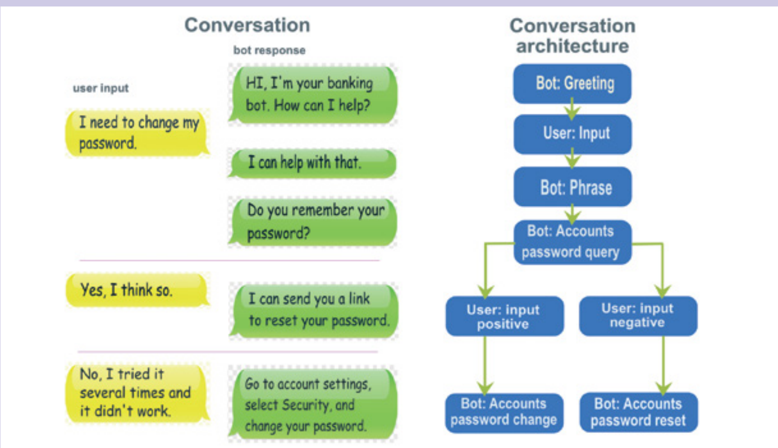

Figure 3. Conversation flow information architecture

Humans move from context to context in natural conversation. While most machines won't be able to follow context jumps as accurately as humans do, and you may provide some sort of structure to the conversation as a guide, you still want to offer the user options. Don't dictate the flow of conversation. Guide the user with choices. In that sense, a hierarchy is not really applicable, although you may include an adaptive structure.

The goal of a content architect for conversation design is to focus on user language in content models and to create relationships (conversation flows) that allow for a natural and meaningful exchange.

If your conversational assistant relies completely on search and retrieval of information using NLP, there will essentially be no hierarchy. A content model and taxonomy remain essential. You still need to define phrases such as greetings, transitional phrases, and fallbacks.

Once you have a content model and architecture in place, you're ready to start writing conversational content.

Conclusion

Content modelling for conversation design shares elements with the traditional content models. One difference is that content types and taxonomies need to be driven by user inputs, rather than internal naming systems. The reason is that machines will search content based on user inputs.

In traditional content architecture, information is linear. Even web navigation follows a relatively linear model. Conversation architecture is multidimensional and contextual. The user drives the conversation, with some guidance from the automated assistant.

For automated conversation design, you may use the same content model and add new flows to the architecture as you improve or expand the conversational assistant. But a new conversation design, even for the same product, may require a new content model. For example, you may have one conversational assistant that handles user issues with accounts, while a separate assistant addresses technical issues related to a product. Each requires a new content model and architecture. C

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Glossary

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Soft skills in the virtual workplace

How do soft skills differ when you work from home instead of going to an office? CJ Walker shares her tips about working from home.

Remote team working has gone mainstream following the Coronavirus COVID-19 outbreak and may be here to stay. CJ Walker, founder of Firehead, a digital communication recruitment and training agency based in France, outlines the soft skills that are needed to make virtual teamwork a success.

The coronavirus pandemic has given office workers all over the world the ultimate opportunity to work in virtual teams. Whether you love working from home (WFH) or hate it, its day has arrived for mainstream office workers. At least for now.

Employers who see the benefit of cost efficiencies will now view working from home as a viable option.

The situation may be temporary, but I strongly believe that this sudden, widespread use of distance working may be here more long-term. Employers who see the benefit of cost efficiencies will now view WFH as a viable option for situations they hadn't considered before, not just for freelancers but core workers, too. If the tools and the teams are in place and functioning well, and deadlines are met, WFH will positively affect bottom lines as businesses move away from the large overhead costs of having employees on site.

It's a big 'if', however. Working effectively in virtual teams requires a separate set of skills from going to the office. It has its own challenges and complications. It is a whole lot more than just a conference call and, as with any new form of human communication, can easily go wrong.

As someone who has worked from home for the best part of 30 years, in technical communications and digital communications, while raising a family, and with a team that is spread out across the northern hemisphere, I'd like to think I have learnt a few things about how to do it well. And how to avoid some of the pitfalls.

Technical communicators may be brilliant at explaining how things work, but a lot of us are introverts or prone to hiding behind our computers or used to working alone. Now that our clients and co-workers are also working from home, we are on the spot. No matter how good you are at your job, the fundamental thing you need to oil the wheels of remote teamwork at an organisation level is good soft skills.

What are soft skills?

It is an irony of the 21st century that we have more communication channels than ever before, and yet, we're still having trouble communicating. Soft skills may not need to be prioritised in office settings, partly because they come naturally in face-to-face communication, but they are fundamental to successful distance working.

Soft skills involve those personal traits that enable people to navigate their environment, work well with others, perform well in teams, and achieve their goals with their hard technical skills.

The Collins English Dictionary defines them as "desirable qualities for certain forms of employment that do not depend on acquired knowledge: they include common sense, the ability to deal with people, and a positive flexible attitude."

Because they are so subjective, soft skills are hardly assessed by most recruiters and employers. They aren't well defined as criteria in the workplace because they are by their nature amorphous — although assessments such as if someone is "easy to work with" or a "good manager" are often based on these very criteria.

While seeking them out in a person may be hard, we can certainly spot soft skills by their absence.

When a colleague lacks soft skills, it affects everyone around them — resulting in anything from misunderstandings to outright avoidance. Someone who is highly technically competent, but lacks good communication skills can be read — rightly or wrongly — as incompetent in their work, or at the very least, dismissed as someone to avoid because they are "not a team player".

When soft skills are missing in a team leader or manager, the results can be destructive for morale, motivation, cohesion and output, and leave subordinates feeling as if they can't speak up or that their work isn't valued. Problem-solving and decision-making may be affected, and the work may stall.

Soft skills are anything but soft when they hit the bottom line.

When soft skills are missing in the workplace, the potential for things to go wrong is real and well documented.

When the workplace is a virtual one, the effects are amplified thanks to additional issues: the lack of face-to-face cues, wrangling new technology, online team etiquette, motivation when working in isolation, concentration when working from home, and a multitude of other issues.

Valuable soft skills for virtual working

So what are the skills that you need to tap into to help make remote working run more smoothly? Having worked from home and in distributed teams for nearly 30 years, here are my top 10 soft skills for working together virtually:

- **Strong communication** — speaking, written, presenting, listening and being a good team player. At a distance, we may not get verbal or visual cues so be flexible and forgiving of others — and don't hog the conference call!
- **Courtesy** — good manners, business etiquette (introductions, making sure people are heard), tolerant of others' working styles, respectful voice, make eye contact on video calls.
- **Flexibility** — adaptable, willing to adjust to new requirements, lifelong learner, teachable.
- **Integrity** — honest, ethical, trustworthy, high morals and personal standards, doesn't cut corners, follows through to deliver verbal promises.
- **Interpersonal skills** — personable, kind and interested voice, sense of humour, friendly, empathetic, has self-control, patient, approachable, offers to help others using own strengths to nurture the team dynamic.
- **Proactive** — optimistic, enthusiastic, encouraging, confident, willing to commit to project requirements.
- **Professionalism** — business-like, commits clearly to tasks, hits deadlines, doesn't complain behind others' backs.
- **Responsible** — accountable, reliable, gets the job done, resourceful, self-disciplined, invested, conscientious, uses common sense.
- **Teamwork** — cooperative, gets along with others, agreeable, supportive, helpful, collaborative, inclusive, able to give constructive criticism.
- **Work ethic** — hardworking, willing to work, loyal, takes initiative, self-motivated, punctual.

Optimising soft skills for a virtual team

Soft skills come in sets. There isn't one that rules them all. If you have strong communication skills, but no integrity, your project is not going to succeed. If you are kind in your dealing with others, but don't follow through on what you promise, the project results will still be lacking. All of the above skills come into play if you want your virtual project to be a success.

In the communications field, we have so many ways to bring our soft skills to the table. But there is a hierarchy to be aware of when choosing which form of communication.

The simplest way to transfer a message from one person to another is face-to-face. Your voice, with eye contact, and body language allow clarification, questions and instant confirmation. The next best way is by telephone because voice transfers so many clues to a person's attitude. Then email for collecting written information for records, and then video conferencing comes in — although how well this works often depends on if the attendees know each other in person from the office or real life.

Optimising communication in a virtual team often starts with the choice of channel.

Questions for collocated team set-up

Figuring out your tools, technology and work processes will be key to communicating fluidly at a distance and helping establish a real connection with remote colleagues.

Some questions to ask yourself when setting up a collocated team might be:

- What will you use for teleconferencing?
- What project management system will you use?
- What permissions will the various team members have?
- When do you meet and how often?
- Where do you store your documents and other deliverables?

Define clearly what each channel will be used for, and how various categories of information are communicated.

People can listen to you in your meeting online, and then forget to keep their commitments when they don't see you again afterwards.

- What channel do you use to communicate first? in what order? Email, Dropbox, the content management system, telephone, text, video chat?
- What are your standard working hours?
- What is your policy about how long radio silence is acceptable from one of the team members?

Setting up a collocated community involves a whole lot of initial decision-making. I believe it's the project leader's responsibility to be undemocratic and make the decision about what channels to use, define clearly what each channel will be used for, and how various categories of information are communicated. If this is part of the project planning up front, it will save a lot of rework from confusion or miscommunication later on.

When remote working goes wrong

Isolation, miscommunication, lack of team identity and lopsided workloads are all potential pitfalls of virtual working.

Remote working is impersonal and can make workers feel isolated, even if they are working in the same organisation as others. People can listen to you in your meeting online, and then forget to keep their commitments when they don't see you again afterwards. It can leave a teleworker with a sense of being forgotten or unimportant to the team. Policies need to be made to handle this at the project setup stage. For example, make use of free group chat apps, like WhatsApp or FaceTime, to have informal conversations. For some teams, a monthly off-topic virtual tea break or happy hour is a great way to build that sense of belonging. Since the pandemic, we've been having a lot of virtual coffees "just because" at Firehead.

Miscommunication often happens when people don't employ their soft skills. Not getting back or not following up on meeting actions is common when working virtually. People may think they have been heard or listened to, but remote working adds an additional layer of distance, and resentments can easily build up if commitments aren't kept. A year ago, an important project I'd done a lot of work for was cancelled because of a series of miscommunications and confusion over roles and expectations. This can be a costly experience for businesses and particularly painful when lack of soft skills is the reason.

Finally, beware of an uneven workload developing in virtual teamwork. A lot of people are new to online collaboration and communication tools and may be nervous to use them. For example, if your employees use team collaboration tools such as Dropbox, Google Hangouts, Google Docs, Confluence, or Asana, you need to make them comfortable to share what they know instead of waiting for the more technically skilled members of the team to take most of the workload.

Similarly, with video conferencing software, be careful to make sure everyone is introduced to build team identity and also that they get a say. For example, you may have to show them how to 'raise hands' in larger meetings where muting by the host happens. And don't stress about small talk before or at the end of a meeting. Virtual workers who do not build relationships with colleagues are unlikely to build relationships with their customers and clients. Plus, they are more likely to struggle with new processes and more likely to change jobs often.

In summary

We are all working in a new landscape with entire organisations now working from home. The technology and communication tools are here. AI is here and revolutionising communication channels. And the coronavirus outbreak is changing our relationship with work — not just now but for the foreseeable future.

Ultimately, it is the human factors that are going to make the difference as we adapt to these new and challenging conditions.

Give your team time to adapt when introducing new tools.

And take a moment to think of the human-level soft skill that the current distanced work environment brings to future projects, work opportunities and careers. C

Let's get to work!

Questions for team leads to help create a digitally nimble workplace.

Goal-centric thinking
Have the project goals been clearly defined, including how communication will take place among the members?

Open-mindedness
How willing are the team members to adapt to a new way of working?

Teamwork skills
Have the members of the team worked together before? Do they know each other from the office?

Learning skills
Whose skills are strongest in what areas? How will the team members with stronger skills help/mentor the other members?

Collaboration skills
Do all members of the team know how to use the new communication tools? Do you know each other from the office?

Problem-solving skills
Who will team members turn to if they have technical difficulties with the new communication tools?

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On becoming a technical communicator

Joaquim Baptista shares his beliefs and experience with a class of professionals studying to break into technical communication.

I had the privilege to teach structured writing at the first edition of the Postgraduate Course on Technical Communication at ISCAP (Portugal), sponsored by APCOMTEC, the Portuguese association for technical communication.

The seven students were working professionals looking forward to change or improve their careers. I was surprised when these students started to question their ability to break into the field, because they will be better prepared than I was when I started. I found myself advising the students by sharing my experience in Portugal and elaborating on my deeper beliefs.

Show everyone how technical communication can help a company.

Why will a company hire you?

The 2008 global financial crisis did wonders for Portuguese companies. I saw traditional companies focused on the internal market being forced to seek customers abroad, often for the first time. I believe that companies delivering projects also started to create products.

Portuguese companies were used to communicating with customers through sales pitches, meetings between experts, and occasional documents. These communication practices started to fail when products grew in complexity to accommodate an increasing diversity of remote customers.

When communication failures become a problem for the business itself, the company wakes up to its growing knowledge problem and, eventually, considers hiring a technical communicator (Baptista 2015).

If you join a multinational company, you can easily become part of a small business unit struggling to grow and survive in the context of the overall business.

Why did companies hire me?

I'm a Portuguese technical writer, currently working at Farfetch. I write help and documentation in American English, after gathering information in Portuguese or English. How did I start my technical writer career?

The first company that hired me (Baptista 2014) had the developers write online help for the software. Since the first customer was in Brazil, the developers wrote in Portuguese. Later, the company asked another employee, a native English speaker working in Marketing, to translate the help. The result, however, was to have unclear Portuguese sentences translated into even more confusing English sentences.

The same company asked a large UK technology company for a plan to write the missing manuals. The large UK technology company quoted one person-year to create two 150-page manuals focused on the two main audiences. What doomed the project, however, was the fact that the software was evolving every few months.

Another company developed custom solutions for each customer using outsourced staff, but was trying to create a core product that could be configured to serve several customers. Instead of project-based deliverables, the company needed extensive documentation to transfer knowledge between teams.

A different company needed to figure out the value of knowledge base articles written by support staff as a response to customer needs. These articles had to be articulated with the official company documentation.

Farfetch developed software to support a platform of fashion retailers. When Farfetch allowed other partners to integrate with its own software, Farfetch felt the need to collect and communicate the knowledge dispersed among hundreds of engineers and operations people.

What will the company expect from you?

If you are the first technical writer in a company, you will probably walk into a mess. You will discover a backlog of work accumulated over years, together with the expectation that you will magically make that backlog go away. You, or the typically understaffed new group of writers, will probably require a few years to tame the backlog.

Your first task will be to understand the knowledge problem and show the company how you might untangle the underlying mess. You will be condemned to do a poor job if you try to tackle the whole backlog at once, especially if you don't quite understand the reasons for the underlying mess. Instead, pick something small that will make a visible difference and do it well.

This small achievement will show to everyone how technical communication can help the company, buying you both allies and time. It will also allow you to learn what it takes to do good work at the company, enabling more realistic plans.

What did I do first?

I joined the first company when the next minor product release was a few months away. As the sole writer, it was clear that I had no time to learn a complex product and create any manual within that time. Instead, I created extended release notes that explained the new features. It took a few years of creating small manuals focused on parts of the product before we had the first complete documentation.

When I joined another company, I started by documenting a complex configuration file in Confluence pages. Using Confluence meant that the engineers could easily collaborate with me and that the upcoming documentation was immediately available to engineers in projects.

When I joined Farfetch, I started by adding to the infrastructure put in place by developers, continuing the documentation where they had stopped. This gained the respect of developers and made the initial documentation immediately findable by everyone that needed it.

Technical writing is just like nursing: all you have to do is care about the user.

How will you make a difference?

There are few University courses in technical communication. Instead, the profession attracts people from many other areas. The backgrounds of the seven students at ISCAP included translation, marketing, journalism, geographic information systems, and veterinary, and their ages were between 26 and 60 years.

SIGDOC/IPCC'88 in Montréal was my first technical communication conference. In the conference banquet, I found myself seated between a former nurse and a former insurance salesman. The nurse said something that I never forgot: 'Technical writing is just like nursing: all you have to do is care about the user.'

While 'care about the user' seems like an obvious thing to do, assuming such a point of view makes all the difference.

Under typical business scenarios, developers will struggle to solve a problem to the point of being happy to get anything to work at all, while quality assurance will try to ensure that at least the major problems are identified and addressed. Writers are often the first to look at new features from the point of view of their users, and wonder:

- Will this feature make sense to the users?
- How will users solve their problems with this feature?

Often you will find that the new feature is less than ideal, perhaps because the feature is too hard to use in practice, or because the feature does not quite solve the user needs. You will strive to explain how the user can use the feature, while advocating for the user needs across the company. The reception to your suggestions will range from the sceptical to the enthusiastic, depending on the company and the team. One company has been known to value these suggestions more than the documentation itself.

It is through our unique point of view that we add value to the company, by doing things that others at the company fail to see.

A side remark reminded the class of the importance of one's point of view. As the class was considering what would be needed to organise a conference, a student with marketing practice referred to the conference sessions as 'the entertainment part of the event'. While an attendee will hopefully attend the conference because of the sessions, an event organiser may need to focus on facilities and coffee breaks.

Are you solving the right problem?

Even with the benefit of the right point of view, it is often easier to tackle a larger problem that includes the problem under consideration. In particular, the fixed constraints of the smaller problem that thwart your efforts may become variables in the context of the larger problem.

I heard a story about the two major Portuguese brands of beer at Universidade Católica de Lisboa. Both Sagres and Super Bock saw themselves as beer brewers, fighting for the top spot and for the supremacy of beer over other drinks. Then both companies realised that their market was not selling beer, but quenching thirst. Both companies acquired water and soda brands, thus turning their former archenemies into parts of their own offers. Today, the companies even sell cider and wine.

On the other hand, constraints can be liberating. For example, Hughes Aircraft explored the constraints imposed by typewriters and the separate reproduction of drawings to impose a two-page format that enabled sophisticated negotiation of complex proposals (Tracey et al 1999).

The presentations in technical writing meetups in Lisbon have shown how each company evolves a unique solution to its documentation needs. Each company conducts business in a unique way, influenced by external forces and internal capabilities that shape a unique ecosystem. The balance of forces and capabilities shapes the documentation processes and deliverables of each company.

You will have to figure out what works and does not work in your company and adjust the accepted wisdom as needed. If this seems too much for you as a new writer, remember the advice of Russell Ackoff (1994:107): 'doing the right thing poorly is much better than doing the wrong thing perfectly', because improving upon the wrong thing will only get you wronger.

Or, as Mark Twain said, 'You're never wrong to do the right thing'.

How did I pick the right problems?

I will offer two examples where a change of perspective changed the documentation.

The first company that I joined sold a product suite that integrated with a variety of customer systems. Each customer would have a specific architecture and configuration of the product. The documentation fought to explain all the possible variations in an understandable way.

I decided to always include the users in all system diagrams. That decision forced a change of perspective in several parts of the documentation, by forcing writers to explain how each part of the system impacted users. Eventually we crafted families of drawings that helped us explain how the architectural variations of the product impacted users.

At Farfetch, I was hired to document the public APIs. Within a year, while listening to a CEO presentation, I figured out that the real mission was to document the platform, namely how partners can conduct their business through the services offered as Farfetch APIs.

Will you like the work?

As you work to fill the gap between what the user needs and what the company has created, you will often find yourself in a fuzzy middle-ground. In a sense, your work starts where others have chosen to stop. You may find yourself:

- Explaining business needs to developers, while simultaneously justifying the current technological limitations to the business.
- Explaining how users can use the product, while arguing how the product could evolve beyond some limitations.

Your tasks can range from simple and predictable to arbitrarily hard. Phillip Armour (2000) explains the difference in orders of ignorance, that is, how much we ignore about the task.

- **0th Order Ignorance**: We know everything about the task, and we just depend on ourselves to do it. For example, English editing of a known author. Usually we can estimate these tasks accurately.
- **1st Order Ignorance**: We know how to do the task, but we must ask a few details. For example, document a simple software panel. Usually we can estimate the effort accurately, but calendar days may slide if someone takes time to answer our questions.
- **2nd Order Ignorance**: We have a process to follow, which will uncover the details of the work. The real task is discovering what we don't know. For example, document a deceptively simple software panel, where one of the input fields requires explaining a company process and a decision procedure. We often fail our estimates when the task surprises us.
- **3rd Order Ignorance**: We have a problem to solve, but no process to follow. Sometimes, we start with a known process, but we keep being surprised again and again until we conclude that the process is not really working. The key to solve these problems is to understand them better.

How hard can it be? Once upon a time I was part of a small team of writers that had been working together for ten years. When we started to document a new major release of a product, we made no real progress for two months. Later we realised that the whole company had hit a new wall of complexity. The product required years of work to reach the market.

If you limit yourself to the simpler problems, you may find the work rewarding yet monotonous, but you may still enjoy interacting with others. However, when you learn to do the simple tasks faster, you free up time to tackle the harder problems, and you create the opportunity to grow professionally.

Technical communication can be quite challenging... but then again, nothing quite beats the satisfaction of breaking the back of a hard problem. That moment of inspiration when you look at the problem with a fresh light, and see the new simplicity hiding in the middle of the former complexity. Embrace the challenge, and your work will never be boring. C

When you learn to do the simple tasks faster, you free up time to tackle the harder problems, and you create the opportunity to grow professionally.

Embrace the challenge, and your work will never be boring.

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6 Cs of technical documentation

Jyotika R Mehra provides an overview for using the guidelines to design and develop technical content for software/hardware manuals and related guides.

6 Cs of Technical Documentation
1. Clarity
2. Correctness
3. Comprehensibility
4. Conciseness
5. Completeness
6. Consistency.

Document Development Life Cycle (DDLC)
1. Requirement analysis
2. Designing phase
3. Developing the content
4. Editing / proofreading
5. Publishing
6. Maintenance.

In the world of information technology, 'documentation' is the key! It is as significant as the serving bowl is for any delicious dish — giving the information a structural presentation, holding it perfectly, and making it rather useful!

In my decade of experience as a technical communicator, one thing I have learnt is — 'no matter what the development team does behind closed doors, nobody ever knows about it unless and until the processes/products/services are described in black and white'!

My intent with this article is to present an overview of the fundamentals of documenting technical content, which I learnt at the beginning of my career. It covers the basics for all the writing-enthusiasts who are naive in the field of technical communication, especially those whose responsibility is to develop content for software/hardware manuals and related guides. Nonetheless, it is good if the stakeholders of documentation (Research and Development Team, Operation Engineers, Service Personnel, and so on) are also aware of these guidelines.

Popularly known as the '6 Cs of Technical Documentation', these guidelines encompass the golden thread that ties the A-Z of content. Also, they constitute a major part of the Document Development Life Cycle (DDLC).

Each of these Cs triggers a question, in the answering of which, a technical communicator certainly conforms to the 'Best Practices of Technical Documentation'. Being a Technical Communicator, or Information Engineer, it is essential to pose these questions not only to yourself but also to the concerned Subject Matter Experts (SMEs), as and when required.

No matter how complex the processes may be, or if you feel confused with the gathered information, these 6 Cs will always ensure that the purpose of your documentation is rightly achieved.

So, let us begin…

1. Clarity

'What is the information about?'

The first and foremost question is, 'What is the information about'? This is the first step in the first phase of DDLC, that is, 'Requirement Gathering'.

It is essential to have clarity of information about the purpose of the documentation. Here are some sample questions, which you can ask of the SMEs:

- **Q**: What is the information about?
- **A**: The information is about XYZ software.
- **Q**: Who is my target audience?
- **A**: All users of the XYZ software — End-users, Administration users, Support team.
- **Q**: The given information should be documented in how many manuals or guides?
- **A**: User Manual, Installation Guide, Troubleshooting & FAQs Guide, Administration Manual.
- **Q**: How many releases do we expect for the XYZ Software?
- **A**: Two annual releases.

Once you have the clear picture of the purpose and scope of the documentation, you are good to proceed! After completing the documentation, and before the peer review process, you should self-review the documents to ensure that all information includes clear procedures and is unambiguous.

2. Correctness

'Is the information accurate?'

The next question is about the correctness of the information — syntactically and semantically.

It is expected that you will receive accurate information from the SMEs; but at any point if you feel sceptical about the content, it is good to pose this question to them.

Sometimes, it may happen that you unintentionally change the context meaning. Therefore, after the language editing is done, send your copy for technical review and confirm with the SMEs that the information still makes sense and is in alignment with the intended purpose.

Here is an example:

Original content by SME: *'The severity-check state machine is responsible to send the messages.'*

Edited content by Technical writer: *'The severity-check state is responsible to send the messages.'*

Did you notice that just by omitting the term 'machine', the entire meaning of the context changes, and hence becomes inaccurate! Here, the original content is about a specific hardware that sends message signals, however, the edited content mistakenly refers to the software. The information thus becomes totally misleading!

Make sure that the information processed by you refers to the right subject, and is also grammatically correct.

Other important elements to be checked are references and hyper-links used in the documentation. Ensure that they navigate to the correct pages. A peer review process is helpful here.

3. Comprehensibility

'Is the information easily understandable?'
Documenting complex processes is not an easy task! You need to eliminate all the technical jargon and describe the processes in the most understandable way. This is where your 'attention-to-detail' skills come into play. And how do you do that…?

By placing yourself in the position of your target readers, you evaluate all those tiny little elements of communication that might get missed otherwise. Imagine how users will interpret the information you've written for them.

If you are writing for the end-users of a software application, it is necessary to gain their perspective. Therefore, it becomes essential for the technical writers to play around and test the software completely before documenting it in the manuals.

Comprehensibility is also a result of the correct usage of grammar and punctuation; hence one must be aware of the effective writing principles. Here are three most effective rules:

- Write in the 'Simple Present tense'.
- Use 'Active voice' over 'Passive voice'.
- Avoid the '-ing' forms. For example, 'for creating' should be written as 'to create'.

4. Conciseness

'Is the information well expressed in fewer words?'
Conciseness refers to the brevity of content. It is strongly recommended this guideline is followed not only because it improves the 'documentation' process but also the 'language translation' process.

Consider writing the information in as few words as possible without compromising on the completeness of the content. Make sure that your message is conveyed in the necessary language and is to the point. This not only increases your target audience's interest in reading the content but also makes your documentation time-efficient.

Consequently, time-efficient content facilitates cost-efficiency with respect to the translation process; fewer words cost less and hence this adds to a beneficial business proposal.

Here are a few tips:

- Adopt a topic-based style of documentation, for example, DITA (Darwin Information Typing Architecture).
- Make common topics 're-usable' for relevant chapters.
- Ensure that there is no duplicated content.
- Use bullet points instead of big paragraphs.
- Use infographics, illustrations, diagrams — they are self-explanatory.
- Use tables for data display or lists.

5. Completeness

'Is any important part missing from the information?'
Documentation may be clear, correct, comprehensible and concise but if it is not complete, it may not be useful for your target audience.

Completeness of the information adheres to the principle of covering all the necessary details from A-Z in your manuals and guides.

For example: you may have described the 'what' of a topic, but the 'how-to' section is missing; or you have described the 'how-to' section but the relevant references, diagrams, and hyperlinks are missing in that procedure.

To ensure that your documentation includes complete information, first create a 'check-list'. To do this, it is recommended that you create the most significant parts of any document, that is, 'Table of Contents' (TOC). It gives you, as well as the concerned stakeholders, a clear view of where the information begins and where it ends. A standard TOC includes the basic progression of all the chapters as well as sections such as 'Glossary', and 'Appendix'.

6. Consistency

'Is the information well aligned and purposeful from the beginning till the end?'
Finally, 'Consistency' is that essential element which binds all your documentation into one golden thread and enhances its face-value.

Consistency in documentation refers to following one common style across all the manuals and guides, for example using:

- Similar formatting, and font style for headers, paragraphs, and other similar elements
- Similar writing style, for example, following the MSTP (Microsoft Manual of Style for Technical Publications), DITA, or STE (Standard Technical English)
- Similar colour and design scheme.

It also refers to the alignment of content such that it makes sense and creates meaning for the target audience. For example, the sequence in which the TOC is designed could be followed so that you write the 'How-to' chapter after describing the 'Introduction' chapter.

In the end, I would like to state that 'technical documentation' is direct, factual, and simple. Unlike fiction or creative writing, it is based on factual knowledge. With constant practice and adhering to these 6 Cs, you can certainly gain technical documentation expertise. C

Three writing rules:

1. Write in the 'Simple Present tense'.

2. Use 'Active voice' over 'Passive voice'.

3. Avoid the '-ing' forms.

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About the article
The article, '6 Cs of Technical Documentation' is a compilation of the author's knowledge and understanding gained at technical writing workshops during the initial days of her career. The given examples are based on her experiential analysis.

Documentation as a Product Assistant

Philip Larsen explains how MATE reinvented their product documentation using a Product Assistant solution from Layerise.

Layerise is a cloud-based SAAS service designed for creating technical documentation. However, it represents a paradigm shift as the service nudges authors to create content that is smart, always adaptable and user-friendly. And what makes Layerise really powerful is the content delivery as it's not accomplished through a knowledge-base, a PDF format, or provided in print. Instead, the documentation is delivered through a tool called Product Assistant.

As a brand that has its design, manufacturing, distribution and customer service facilities across the world, the MATE organisation is very experienced in documentation management. Yet, with a truly global customer base and high product variation, we were challenged by the ineffectiveness of the conventional user manual as the vehicle to provide clear guidance and support to our customers. We concluded that the capabilities of the 'conventional' documentation build-up do not live up to customer expectations nor do they utilise available digital technologies. To solve this we turned to Layerise. Throughout this article, I will give you an end-to-end explanation of how we reinvented our documentation with a *Product Assistant* solution from Layerise.

Product Assistant introduction

Before I get into the individual Layerise features, I want to explain what makes it stand out from any other authoring solutions that we have looked at. This explanation will make it easier to understand the powerful documentation solution you can achieve from your content when using this service. Layerise introduces a concept called *Documentation as a Product Assistant*. While the *Documentation* part of the tool encapsulates the content, visuals and different formats, the *Product Assistant* provides the intelligence and the UI to display the content. As the terminology suggests, a *Product Assistant* is an always active and present assistant that the customer can initiate at any point directly from their mobile device either by a link, QR-code, NFC-chip or through the dedicated *Product Assistant* app. Regardless of the route the customer uses to engage with the *Product Assistant*, the UI will adapt to offer the best possible interface:

- Responsiveness is handled automatically and the customer will be presented with the best possible UI and UX depending on the device used.
- Auto localisation is based on smart customer language preferences. Instead of asking the customer to select a language, the *Product Assistant* will determine any localisation necessary.
- Accessibility is built-in and provides support for text-to-speech, navigational-assistance and the ability to increase the font size to aid legibility.

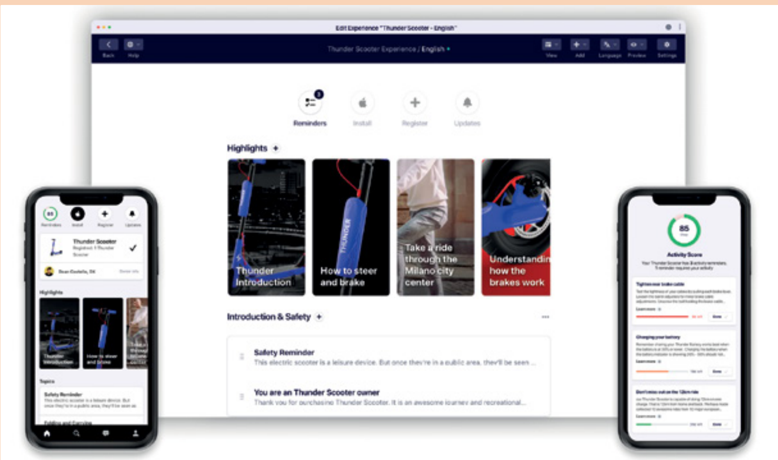

Figure 1. Editor and Product Assistant

Getting access to actionable data

The challenge of not understanding how well the documentation performs, or whether it is read at all, is a challenge that we at MATE had to find a way to overcome. But we are not unique as this is also a challenge I believe many brands have, and many documentation creators find it an important problem to solve. Without the empirical documentation scrutiny we, as documentation creators, are not able to improve our material and thus are not able to move the needle on customer product experience and satisfaction. With *Product Assistant* from Layerise (see Figure 1), data is a first-class citizen, and it is embodied in all aspects of the assistant experience. *Product Assistant* encourages customer engagement by incentivising them with advanced features to register their purchased product. In return, this provides the cornerstone for data aggregation, as with customer registration, Layerise renders the ability to determine documentation performance on a much deeper and more precise level. Not only will you (the product manufacturer) be able to understand the customer patterns and learn how your content is being consumed, but you will also be able to convert your findings into actionable updates and push them out to any extant *Product Assistant* live and within seconds. At this moment it is not possible to similarly push out a notification to customers when specific documentation has been updated. However, according to Layerise, this is a feature that is coming later this year.

OTT features

The *Product Assistant* provides a lot of over-the-top features that aren't normally considered to be part of the documentation apparatus. In my opinion, these features are comprehensive and provide several services including customer product ownership, customer support and customer communication.

As customers are able to register their products, the *Product Assistant* automatically becomes the base of their customer product ownership data. This incorporates a customer profile that provides product ownership overview down to the unique product serial number and gives direct access to the available documentation. With the diverse product line we have at MATE, this feature comes in very handy for customers since it provides one place for all of their product ownership data and grants them quick access to any documentation. For customers, this provides a very favourable experience, since the way that they engage and navigate through the *Product Assistant* and thereby the documentation is as intuitive and empowering as their other daily digital drivers.

In addition, the *Product Assistant* also supports direct *Chat* support (see Figure 3). Providing customer support (CS) normally begins with several requests for clarification that the CS-representative needs to cover before commencing to support the customer. The goal here is simply to understand who the customer is and what device (model and serial number) is being reported. The *Product Assistant* solves this issue more elegantly, which is both to the benefit of the CS-representative and the customer. At the point of the customer reporting an issue or requesting additional support, the *Product Assistant* will automatically share the product and customer details with the CS-representative, allowing the CS representative to focus immediately on the support matter. One additional key feature here is that the customer can share images or videos of their troubleshooting directly through the *Product Assistant*, allowing them to minimise any lengthy and difficult explanation of the issue.

Finally, the *Product Assistant* also provides support for customer communication where all GDPR-related matters both for data ownership, data acquisition and communication are covered. Note that Layerise does not at this moment allow you to reach out to the individual customer before the customer has reported an issue.

Creating documentation

The experience of creating documentation with Layerise feels more like that of a content creator process instead of the traditional authoring workflow. There are two major reasons for that. The first is that Layerise looks at content with the 'digital-first' lens. This results in the displaying of content types and formats, but also content creation features that are very different from traditional authoring services. The second reason is provided by the data and *Insights* made available via Layerise's data tracking abilities (see Figure 2). Instead of focusing on finalising content, with no empirical way of determining how well it performs, Layerise provides features that allow content to adapt and improve over time and with great speed. This could be by use of a better visual, a better product introduction or a better how-to section in Spanish. These two factors, digital-first thinking and speed of improvements driven by empirical data, have for us at MATE been significant in providing better documentation to our customers.

Topics and Highlights

Layerise uses the term *Topic* as a descriptive label for text-heavy documentation pieces. If

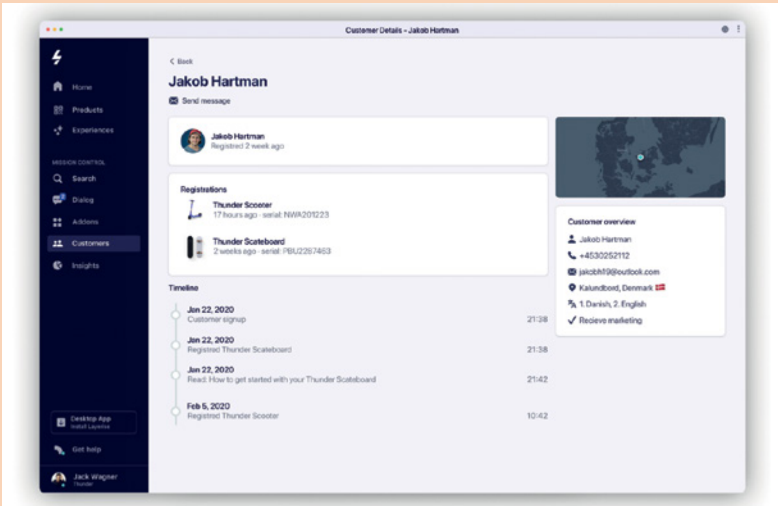

Figure 2. Insights

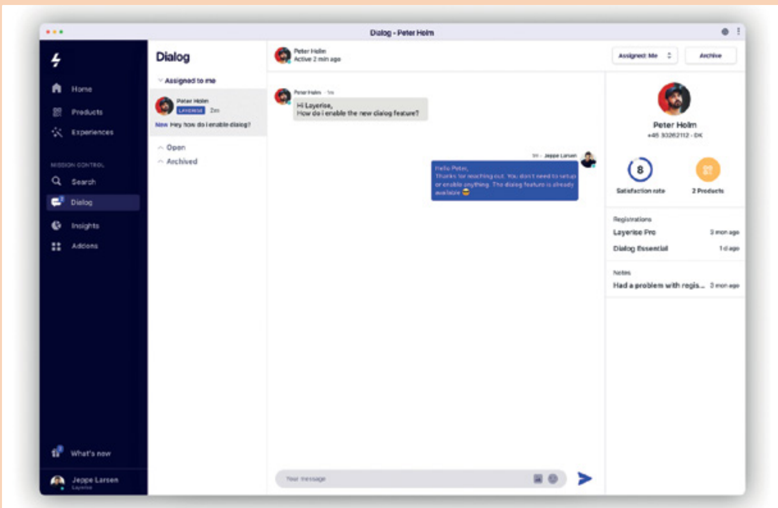

Figure 3. Chat

you have used a modern online editor, you will feel confident writing documentation in Layerise since they have done a great job establishing a modern, powerful but also familiar HTML-based editor (see Figure 4). The editor comes with several styling options including generic layouts for attention and tip box areas, as well as styling and layout for presenting videos and images. Finally, the editor comes with a table-of-contents (TOC) that is always accessible from the left side of the editor. This is a great tool as it provides an overview but also presents quick navigation short cuts between different Topics.

In my opinion, *Highlights* is one of the most powerful formats that Layerise provides (see Figure 5). For MATE this format has been extremely important allowing us to convert lengthy and ineffective written explanations into easily understood step based visual guides.

In our experience, creating visual step-by-step guides typically results in content either being image or video-driven. Using images is good but it does not always capture a complete action and thereby requires additional explanation. On the other hand, using videos is great to capture activities; however, it is costly and often outside the budget scope. With the *Highlights* from Layerise, you are provided with a WYSIWYG interface whereby you can create powerful step-by-step guides with simple drag and drop gestures. While *Highlights* is extremely capable of explaining complex procedures, it is very simple and cost-effective to create as it consists of:

- A cover image and cover title.
- A step or steps. For every step, it is possible to upload an image, or GIF and video sequence. Besides, every step can contain captions and can be linked to a specific *Topic* category or an individual *Topic*.

At MATE, a step-by-step guide usually took a day to finalise, and more challenging guides (for example documenting product assembly) could even take several days to complete. With the ease of creating and the ability to update a *Highlight* at any time, we are now able to create and publish guidelines by the hour. Over time, as more visuals are made available, we will be able to easily update any guide retrospectively.

One important detail about *Highlights* is that it is optimised for any device as it is displayed through the *Product Assistant*, yet it is great for mobile users. This has become extremely popular with our customers as the availability of any guide is always at hand. Note: for *Highlights* Layerise will strip away audio for any uploaded video. According to the company, the reason behind this is to minimise the need for audio localisation as captions are much easier to add or update, and can also be read as part of the text-to-speech support.

Reminders

Another feature that is completely alien to any authoring service that we have reviewed is *Reminders*. As all content is being provided to the customer through the *Product Assistant*, it is possible to provide rich features that are assistant-worthy. In this case, a *Reminder*, as the name suggests, is a container of information that the customer should be reminded about. As with the majority of products out there, MATE products also require periodical maintenance and usually, this will be something we declare in our documentation. On the other hand, we have learned that customers do not show the interest nor have the will to read through our documentation and thereby learn about maintenance activities. What makes maintenance especially difficult to do right in a conventional documentation sense, is that the information is about an event in the future, which does not provide any value for the customer at the point of initial product usage. Luckily, Layerise has a smart solution to this problem. With Layerise it

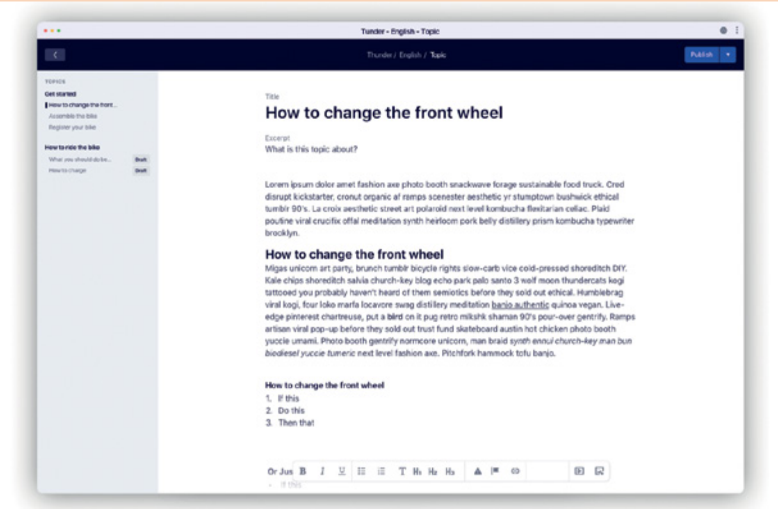

Figure 4. Topics

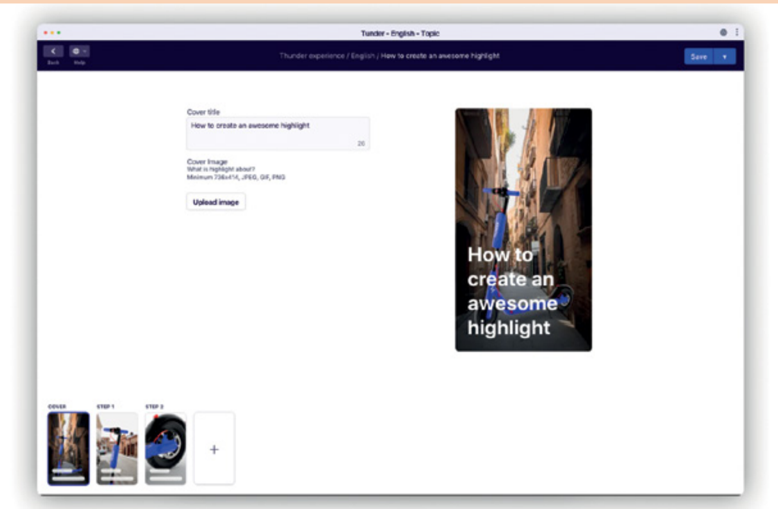

Figure 5. Highlights

is possible to create one or multiple *Reminders* that will trigger a customer notification when it's time to perform a certain maintenance activity. A *Reminder* contains the following:

- Title
- Short maintenance activity description
- Count of days between events.

Furthermore, if some maintenance activities require a longer explanation, a *Reminder* can be linked to either a *Topic* or even a *Highlight*.

Documentation as it should be

Since we at MATE came across Layerise, our content efforts have both been challenged and taken to another level of effectiveness. Layerise offers a platform that in my eyes is the needed solution to make conventional documentation work in a digital and customer-centric world. We have learned that using Layerise is not business as usual, where you create your content, click publish and you are done. Here you need to think customer first and utilise *Product Assistant* features. On the other hand, when this mindset is applied, and together with the intrinsic benefits of the *Product Assistant* content delivery, the experience that the end customer is getting is second to none. Who does not want their documentation to be awesome and powerful to use? C

Glossary

NFC-chip. NFC (near field communication) is the technology that allows two devices—like your phone and a payments terminal—to talk to each other when they're close together. NFC is the technology that enables contactless payments. https://squareup.com/gb/guides/nfc (accessed 19 April 2020).

QR-code. A machine-readable code consisting of an array of black and white squares, typically used for storing URLs or other information for reading by the camera on a smartphone. www.lexico.com/definition/qr_code (accessed 19 April 2020).

SAAS. Software as a service (SaaS) is a software distribution model in which a third-party provider hosts applications and makes them available to customers over the Internet. https://searchcloudcomputing.techtarget.com/definition/Software-as-a-Service (accessed 25 April 2020).

UI. User interface.

UX. User experience.

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IR35 off-payroll rules

For UK contractors working through intermediaries. Warren Singer explains the implications of IR35.

IR35 is a UK regulation relevant to freelancers, contractors and anyone providing their services to a client, in circumstances where you are not on that client's company payroll and do not receive a salary directly from them. If your client is currently paying you for your services through your own limited company, your sole trader business, an employment agency or through an umbrella company, then IR35 is likely to be relevant to you.

The key purpose of the IR35 legislation is to determine whether or not you should be treated by your client as an employee of theirs for tax purposes. In this case, HMRC require you to pay tax on all the income you receive from your client directly through the Pay As You Earn (PAYE) tax scheme.

Does IR35 affect me? *IR35 is relevant to sole traders, freelancers, contractors and directors of small personal services companies, who typically work for themselves.*

What is IR35?

IR35 is a current UK regulation which is intended to determine the employment status for tax purposes of contractors who provide their services through intermediaries. An *intermediary* can be another company, a partnership, an unincorporated association, or another individual. Most contractors work through a personal service company (PSC) or through an umbrella company. Some may work as sole traders or in partnerships. The contractor is typically paid an hourly or daily rate, and receives payment through their intermediary.

The IR35 regulation is referred to as the 'off-payroll rules' (since it relates to workers who work for a company but are not typically paid directly out of the company's payroll arrangements for regular employees).

The rules are intended to ensure that contractors who are treated by a company in the same ways as employees pay broadly the same tax and National Insurance contributions as employees.

For contractors working in the public sector, HMRC introduced new rules in 2018 which make it the responsibility of the employing public organisation to determine the IR35 status of their contractors/freelancers and deduct tax accordingly.

For contractors/freelancers working in the private sector, it currently still remains the responsibility of each contractor to determine their own IR35 status relating to each of their clients and to pay their tax accordingly. New rules will come into effect in April 2021, which will change this so that the private sector employer will be responsible for determining the IR35 status of their contractors and deducting tax at source. HMRC provide a website that you can use to test your IR35 status. See:
www.gov.uk/guidance/check-employment-status-for-tax

You should not rely solely on these tests to determine your status.

I complete self-assessment tax forms? Will IR35 have an impact? *Yes. IR35 is relevant. You will need to assess each client you have worked with, to determine if the contract with them lies within IR35. HMRC have the authority to retrospectively determine your IR35 status and pursue you for any unpaid tax that you should have paid.*

What are the IR35 tests?

The tests are organised around a number of key areas, which include: contractor control over their work, the level of financial risk, integration into the client's business and the contractual relationship between client and contractor. These areas and tests are described below.

Please note: *the commentary I have added on the relevance of each test to technical communicators is my own view and you should not rely on this information in making your own decision as to your IR35 status.*

Throughout this article the IR35 status is referred to as 'in' or 'out' of IR35. Someone who is inside IR35 is considered to be an employee, for tax purposes, and has tax and national insurance deducted at source.

Level of control

This area looks at the level of flexibility and control the contractor has over their work. Ask yourself the following questions:

Q.1 Does your client have the right to reject a substitute?

A substitute is someone you can send in your place to do your work. A client may have the right to reject a substitute even if they are equally qualified, and meet the client's interviewing, vetting and security clearance procedures.

The rationale behind this test is that an employee typically can't substitute someone else to do their work, whereas with a contract for supply of a service between two companies there is often a right to substitute workers if required. Your client should not be able to refuse, so long as the work is done to a satisfactory standard.

In some cases, the nature of the contract, for example, the need for a high security setting or specialised skills and knowledge, could mean that it may not be possible to substitute someone else to do your role. The key aspect of this test is that if you are treated similar to an employee of the company, the company is more likely to refuse your right to substitute.

Comment: *as a technical communicator substitution is more typical in circumstances where the contract for a supply of services is negotiated directly with the client. While it is not impossible to request substitution when working through an intermediary (and often contracts are worded to reflect that this is possible) the situation is more complicated, as both the client and the recruiting agency would need to be informed and agree to allow you to substitute another contractor to perform your role.*

Q.2 Does your client have the right to move you from the task you originally agreed to do?

If you have been hired to take on a range of general tasks rather than one specific task, you might be moved on to a new task as and when the client's priorities change. The client may not need your permission to move you on to a new task, such as starting on a new user guide or product document.

This type of relationship is more reflective of an employer–employee situation. In a genuine contractual relationship between two companies, it is typical for there to be a contract for specific services clearly defined between the parties, which governs the commercial arrangement between them. Any change to the work that is carried out would require a change to the terms of the contract.

Comment: *check whether your contract defines clear tasks and deliverables, and what happens if the client's priorities change and new work is required. A more specifically worded and narrow contract with clear deliverables and timescales is better from an IR35 perspective.*

Q3. Does your client have the right to decide how the work is done?

This can include your client instructing, guiding or advising the way the task should be completed. This is not relevant to highly skilled work.

The rationale behind this test is that in situations where you are treated as a pseudo-employee, your manager has a significant level of control over what you do and how you do it. On the other hand, in a contract for supply of services between two companies, the hired company enjoys a much greater level of autonomy and independence as to how they do their work. The company does do not expect their client to closely supervise and control its workers.

Comment: *when working on-site as a technical communicator, the situation can be ambiguous. Your clients may have greater control over the tools you select and the review and sign-off of your work. They may also stipulate that you undergo certain training, common to all employees, covering areas such as data protection, health and safety and information security.*

The work of a technical communicator is often specialised and specific. The client may be lacking in an understanding of this subject area domain and allow you to determine the tools, processes and way of working. The more experienced you are, the greater this level of autonomy is likely to be.

On the other hand, if you are part of a team, you may be expected to follow the existing team procedures, tools and work practises and your work may be closely monitored. The latter situation is more typical of a contract that falls within IR35.

Q4. Does your client have the right to decide your working hours?

Does the client insist on your working 5 days a week, 9am–5pm, to reflect the business hours and working practises of other employees in the company?

This easy availability and seamless integration of contractors into the existing business culture and work practises is something that many companies greatly benefit from, and is one reason why they are reluctant to treat their contractors differently from their employees.

If, on the other hand, your work is based on agreed deadlines and deliverables, and you have flexibility over the hours and place of work, this is more likely to reflect an independent contract for supply of services.

Comment: *the nature of work as a technical communicator lends itself to flexible working. As long as you can deliver on your agreed projects, your working hours should not matter. The situation is more ambiguous where you are paid an hourly or daily rate; in this case your client may want to ensure you remain accountable to your contractually agreed hours and may insist on a greater level of supervision and control.*

Q5. Does your client have the right to decide where you do the work?

As with the previous question, the flexibility, for example to work remotely, is one of the tests for a relationship between two companies versus an employee one.

Comment: *remote working as a technical communicator may not be possible in certain circumstances, for example, in high security environments or where the nature of the project requires you to be on-site. If you are able to specify that some work is done offsite at a place of your choice, this is more reflective of a contract for supply of services that lies outside of IR35.*

Financial risk

This area looks at how much financial risk the contractor takes on. Ask yourself the following questions:

> ***Test case 1: Am I in IR35?***
> *I work part-time as a freelancer for an organisation. This is my main source of income. I have been working for them for several years, doing the same role. Am I within IR35?*
>
> *See the Notes section at the end of this article.*

> ***Test case 2: Am I in IR35?***
> *I am half way through a 6-month full-time contract for a client. The client requires me to be on-site, but allows me to work from home one day a week. At the end of the 6 months, they may renew for another 6 months, if they need me, but this is not definite. Am I within IR35?*
>
> *See the Notes section at the end of this article.*

Test case 3: Am I in IR35?
I am a self-employed sole trader. I do work for several local companies in my area. Most of them are regular clients, who use my services as and when they need them. Am I within IR35?

See the Notes section at the end of this article.

Q6. Will you have to buy equipment or materials before your client pays you?
This can include heavy machinery or high-cost specialist equipment used for this work. This does not include laptops, tablets and phones.

Comment: *the argument here is that in an employee relationship, the employer will typically pay for the equipment and tools you need, for example, the Adobe FrameMaker or Madcap Flare Software License. In a contract for supply of a service you would normally be expected to use your own tools, that is, have your own version of desktop publishing software that you use, or assume the financial risk by purchasing this equipment in advance.*

Q7. Will you have to fund any other costs before your client pays you?
This can include non-commuting travel or accommodation, or costs for sub-contracting part or all of the work. Typically, in a contract between two companies, reasonable expenses in the course of conducting your business for the client may be reclaimed. On the other hand, other administrative expenses relating to the running of a company and managing your own employees is not recompensed directly, and is built into the charge for your services, via your rate.

Comment: *this is another of those tests where the distinction between employee and independent contractor can be ambiguous. For example, if you travel to one of your client's branch offices, in a different city or country, the client may pay for the flights and train tickets and book the accommodation up-front on your behalf. You can then reclaim any additional costs incurred. This makes sense from a small business perspective in reducing your risk and up-front costs – however, this may be more reflective of the way in which employees are also typically reimbursed for travel costs.*

Q8. How will you be paid for this work? If the client was not happy with your work, would you have to put it right?
Employees know they will get paid at the end of the week or month, irrespective of the quality of their work or whether it is finished. A contract for supply of services may be based on a fixed price for a project or fixed amount for each piece of work completed.

The situation for contractors on an hourly or daily rate is more ambiguous. The contractor is paid as long as their timesheets are approved. If there are any issues with the work, they would fix it in their usual hours at their usual rate or fee.

In a contract for supply of a specific service outside of IR35, the client may have a right to reject or postpone payment until they are satisfied that the work has been carried out to a suitable level. In this case, fixing the issue would be at your own cost and expense.

Worker's involvement
This area looks at how closely the contractor has been integrated into the client's organisation. Ask yourself the following questions:

Q9. Will your client provide you with paid-for corporate benefits?
This can include external gym memberships, health insurance or retail discounts. Benefits are typical for an employee. If you want to work outside of IR35 you should not accept any benefits from your client.

Q10. Will you have any management responsibilities for your client?
This can include deciding how much to pay someone, hiring or dismissing workers, and delivering appraisals. These types of tasks require a considerable level of integration into the client's business, and are typical of employer–employee relationships.

Q11. How would you introduce yourself to your client's consumers or suppliers?
If you introduce yourself as working for your client, that would be more like an employee. In a contract for supply of a service outside IR35, either this would not happen or you would introduce yourself as an independent business acting on your client's behalf.

Worker's contracts
This area looks at the contractual relationship that exists between the contractor and the client. Ask yourself the following questions:

Q12. Does this contract stop you from doing similar work for other clients?
Are you required to ask permission to work for other clients?

This includes working for your client's competitors. If your client has exclusive control over your work time, this is likely to reflect an employee–employer relationship that lies within IR35.

Q13. Are there any ownership rights relating to this contract?
These types of rights are usually found in media, arts and creative industry contracts. This includes all intellectual property rights, copyright, trademarks, patents, and image rights.

Comment: *this is an interesting test for technical communicators and you will need to check your contract carefully. As an employee, the company you work for owns the copyright over the material you produce as part of the agreed work for which you are being paid. This is also likely to be the case for contracts that lie within IR35.*

If you are commissioned to do a piece of work and are not paid until completion, the situation is more complex. You own the copyright until *you agree to either transfer or license it to the client. For more information, refer to the article on Copyright Law and technical communications in the Winter2012 issue of Communicator.*

Q14. Have you had a previous contract with this client? Will this contract start immediately after the previous one ended?
This does not include any holiday period between the two contracts. Automatic contract renewal is one of the key tests of IR35 status. A contractor who is being treated as a pseudo-employee is more likely to have their contract renewed continuously on an ongoing basis.

Q15. Will this work take up the majority of your available working time?
This includes preparation or any other time necessary to deliver the work, even if it is not referred to in the contract.

Q16. Have you done any self-employed work of a similar nature for other clients in the last 12 months?
This only refers to work requiring similar skills, responsibilities, knowledge, or ability. Contractors who have multiple clients on their books during any given year and do work for more than one client at the same time are more likely to be considered as working outside of IR35.

What do the results of the tests mean?

These tests are not black and white; there is always an element of discretion and the specific circumstance of the client and project that needs to be taken into account. Running your contract through the online HMRC calculator may return a result of *indeterminate*, as it is likely that many technical communicator contractors will pass some of the test criteria, but fail on others. In that case, where does this leave you as a self-employed contractor?

It is this ambiguity in interpretation of the rules that leads to much of the legal uncertainty around IR35. In the end a black and white decision must be made as to whether you are inside or outside of the rules.

In many ways, the rules are artificial and contrived, aimed at meeting a specific requirement of HMRC to enable them to gather more tax using the Pay as You Earn (PAYE) scheme. The rules unfortunately do have the effect of placing contractors into distinct categories of in or out.

Who determines your IR35 status?

Currently it is up to the contractor to decide whether they fall inside or outside of IR35 and then to pay tax accordingly.

HMRC is planning for new rules to apply from April 2021. Under the new rules it will be the company employing your services that is responsible for deciding your IR35 status. If it decides you are within IR35, then it will deduct your income tax and national insurance directly, using the PAYE scheme.

***Note:** Due to the disruption caused by the Coronavirus COVID-19 outbreak, the government postponed the rollout of the off-payroll rules to the private sector, intended for April 2020 until April 2021.*

Once the new rules come into effect in April 2021, the employing company will be responsible for determining the status of any worker not directly on its payroll; this means that the employer will also deduct any tax and national insurance contributions that are due to HMRC.

Failure to pay tax to HRMC could result in penalties and a huge tax bill. For the latter reasons, companies are more likely to err on the side of caution when determining the IR35 status of their contractors.

What impact is IR35 having?

IR35 has always been a controversial regulation. In 2019 HMRC rolled-out the new off-payroll rules to the public sector. The immediate impact was that most public sector employers transferred their contractor staff either to full-time employment or put them within the IR35 off-payroll rules.

It remains to be seen whether the application of the new regulations to the private sector will have the same impact.

In the months prior to April 2020, many larger private sector companies followed the same approach as public sector employers, classifying the majority of their contractors as falling within IR35.

While it may seem unfair to blanket-apply the rules to all contractors, especially in circumstances where a contractor may in fact work in a manner that falls outside of the IR35 regulations, from the company's perspective it is far simpler and less risky to apply the same rules to all contractors.

Conclusion

What are the implications of IR35 for self-employed technical communicators who are working as contractors or freelancers?

Before applying for a new contact, consider carefully the job advertised and clarify if this is within or outside of IR35. If within IR35, then this means that tax and national insurance will be deducted at source, and you will not be able to claim back your travel and subsistence expenses in travelling to your client's site, or in fact, most other business expenses. You are now classed as an employee for tax purposes, but remember you will not benefit from holiday pay, employee rights, security of job or any of the benefits that the law currently gives to employees.

Are there any advantages to being within IR35?

If you are within IR35, your income tax will be deducted at source by your client.

However, that will not entitle you to holiday pay, sick leave, statutory redundancy or any of the other benefits of being an employee.

If the client is only prepared to offer a contract that is within IR35, you may be able to ask for a higher hourly or day rate.

Tip: ask for an increase in your rate of 10-15%.

Consider carefully the rate being offered and whether it will be sufficient to compensate for your time and expertise. If at all possible, try to negotiate with the company or agency to change the work conditions and contractual terms so that you fall outside of IR35. If that is not possible, ask for a higher rate. If the numbers don't add up, you may be better off looking for a permanent position.

Notes on test case scenarios

Cases 1 and 3 are typical situations for freelancers, while case 2 is typical of a contractor, who moves from one contract to another. Cases 1 and 2 could potentially be interpreted as being within IR35, while case 3 is more likely to be outside. However, all these test cases could in some circumstances be interpreted as lying within IR35, and in other circumstances as falling outside of IR35.

You will need to make your own decision, based on the unique circumstances of your contract with your client. Try using the HMRC online calculator to check your status. If you are still unclear, please seek some professional legal advice. C

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Reference

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www.gov.uk/guidance/prepare-for-changes-to-the-off-payroll-working-rules-ir35 (accessed 12 April 2020).

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Table 1. IR35 checklist

Level of control		Yes/No	Comment
Q1.	Does your client have the right to reject a substitute?		
Q2.	Does your client have the right to move you from the task you originally agreed to do?		
Q3.	Does your client have the right to decide how the work is done?		
Q4.	Does your client have the right to decide your working hours?		
Q5.	Does your client have the right to decide where you do the work?		
Financial risk			
Q6.	Will you have to buy equipment or materials before your client pays you?		
Q7.	Will you have to fund any other costs before your client pays you?		
Q8.	How will you be paid for this work? If the client was not happy with your work, would you have to put it right?		
Worker's involvement			
Q9.	Will your client provide you with paid-for corporate benefits?		
Q10.	Will you have any management responsibilities for your client?		
Q11.	How would you introduce yourself to your client's consumers or suppliers?		
Worker's contracts			
Q12.	Does this contract stop you from doing similar work for other clients?		
Q13.	Are there any ownership rights relating to this contract?		
Q14.	Have you had a previous contract with this client? Will this contract start immediately after the previous one ended?		
Q15.	Will this work take up the majority of your available working time?		
Q16.	Have you done any self-employed work of a similar nature for other clients in the last 12 months?		

S1000D for the Amphibious Battalion

A case study by Jenny Jansson and Mats Broberg, published in two parts.

Part 2: Formal project

Introduction

This is the second part of the case study. In this part of the article, the formal project will be described, including information analysis, choice of software, conversion, delivery format, and project findings.

Here is a summary of 'Part 1: Description and outline of the prestudies' of this article which explains what this documentation project is about:

How to maintain technical publications for a large fleet of combat boats and support vessels, which differ not only in terms of series and version within each class, but also with respect to ongoing life extensions, rapid reconfigurations for missions abroad and changes due to technical orders?

The answer is... You do so by introducing S1000D – *the International Specification for Technical Publications using a Common Source Database*. SSPA Sweden is assisting FMV (the Swedish Defence Materiel Administration) in a variety of projects by providing information analysis, conversion, restructuring, revision and quality assurance.

A list of abbreviations is available at the end of the article.

Revision of documentation Amphibious Battalion S1000D

The formal project started at the beginning of 2017 and comprises, as stage 1, conversion and, as stage 2, revision of the boat manual for Combat Boat 90H and Light Support Vessel using the S1000D documentation standard.

The major objective of the project is to make updating the technical information easier over time, so that it is consistent with the system and installation configuration on board the boats. Another important aspect is the concept of *single-sourcing*. Here, the value for FMV of a central database of reusable data modules can hardly be overstated. This, together with a neutral data storage format, will then provide real potential for interactive publication types and the generation of technical information unique to a given, individual boat.

More specifically, the project consists of the following parts:

1. Analysis of existing documentation information in order to identify what is valid and what is obsolete.
2. Mapping of information analysis results to the configuration of the individual boats.
3. Structuring of the information for best 'fit' into appropriate data modules.
4. Conversion to S1000D Issue 4.1.
5. Incorporation of existing supplier documentation for new components.
6. Incorporation of outstanding technical orders.
7. Homogenisation of terms and other nomenclature.
8. Processing of text and images where required.

Information analysis and DMRL

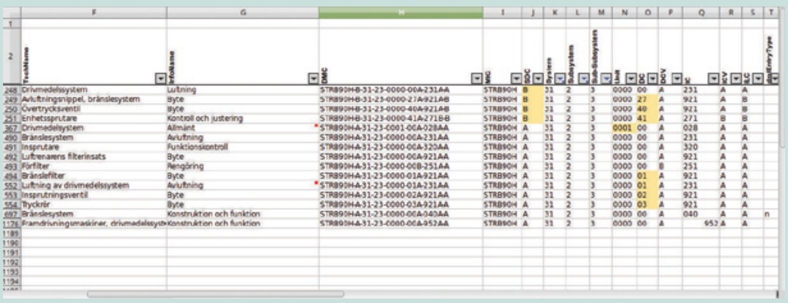
The information analysis was carried out on a document-by-document basis and was intended to provide answers to questions such as:

- What information can be reused without modification?
- What information can be reused with minor changes?
- What information needs to be completely reworked?
- What information should be deleted altogether?
- What size would be appropriate for the data modules?
- What information, for example in a technical order, should replace the existing information in a boat manual?

The analysis was performed on approximately 5,500 pages, this being the total volume of technical information that was to be converted for Combat Boat 90H and Light Support Vessel.

This work was, for the most part, entirely manual, with paragraph after paragraph being checked against duplicate information in other publications and any outstanding technical orders, analysed in terms of their contents, assigned to appropriate MIMI codes, information codes and hierarchy types and incorporated into existing data modules (Figure 1).

This work led to the development of the project's DMRL, an information strategy document that was to be of central importance – not only as a critical deliverable to the forthcoming S1000D structure and its set-up, but also as a technical basis for the imminent



	F TechName	G InfoName	H DMC	I MIC	J SDC	K System	L Subsystem	M Sub-Subsystem	N Unit	O DC	P DCV	Q IC	R ICV	S ILC	T ...EntryType
248	Drivmedelssystem	Luftning	STRB90H-B-31-23-0000-00A-231AA	STRB90H	B	31	2	3	0000	00	A	231	A	A	
249	Avluftningsnippel, bränslesystem	Byte	STRB90H-B-31-23-0000-27A-921AB	STRB90H	B	31	2	3	0000	27	A	921	A	B	
250	Övertrycksventil	Byte	STRB90H-B-31-23-0000-40A-921AB	STRB90H	B	31	2	3	0000	40	A	921	A	B	
251	Enhetsprutare	Kontroll och justering	STRB90H-B-31-23-0000-41A-271BB	STRB90H	B	31	2	3	0000	41	A	271	B	B	
367	Drivmedelsystem	Allmänt	STRB90H-A-31-23-0001-00A-028AA	STRB90H	A	31	2	3	0001	00	A	028	A	A	
490	Bränslesystem	Avluftning	STRB90H-A-31-23-0000-00A-231AA	STRB90H	A	31	2	3	0000	00	A	231	A	A	
491	Insprutare	Funktionskontroll	STRB90H-A-31-23-0000-00A-320AA	STRB90H	A	31	2	3	0000	00	A	320	A	A	
492	Luftrenarens filterinsats	Byte	STRB90H-A-31-23-0000-00A-921AA	STRB90H	A	31	2	3	0000	00	A	921	A	A	
493	Förfilter	Rengöring	STRB90H-A-31-23-0000-00B-251AA	STRB90H	A	31	2	3	0000	00	B	251	A	A	
494	Bränslefilter	Byte	STRB90H-A-31-23-0000-01A-921AA	STRB90H	A	31	2	3	0000	01	A	921	A	A	
552	Luftning av drivmedelssystem	Avluftning	STRB90H-A-31-23-0000-01A-231AA	STRB90H	A	31	2	3	0000	01	A	231	A	A	
553	Insprutningsventil	Byte	STRB90H-A-31-23-0000-02A-921AA	STRB90H	A	31	2	3	0000	02	A	921	A	A	
554	Tryckrör	Byte	STRB90H-A-31-23-0000-03A-921AA	STRB90H	A	31	2	3	0000	03	A	921	A	A	
697	Bränslesystem	Konstruktion och funktion	STRB90H-A-31-23-0000-00A-040AA	STRB90H	A	31	2	3	0000	00	A	040	A	A	n
1176	Framdrivningsmaskiner, drivmedelssyst	Konstruktion och funktion	STRB90H-A-31-23-0000-00A-952AA	STRB90H	A	31	2	3	0000	00	A	952	A	A	

Figure 1. A version of SSPA's DMRL document during the course of the project.

conversion. The DMRL is a governing document, and changes are approved and determined by FMV on a continuous basis during the project.

Choice of the S1000D system

In parallel with the information analysis, a preliminary study had been started on the choice of the S1000D system for documentation structuring. The international availability of S1000D software packages is not particularly extensive, involving a dozen or so providers from Scandinavia, Europe and the United States. A complicating factor is that the Amfibie project might be considered to be rather small from a purely S1000D perspective, whereas many of the leading S1000D suppliers are accustomed to customers who work with significantly larger documentation projects, such as fighter aircraft, aircraft carriers and so on. At the same time, it soon became clear that the need for an *applicability*-managed configuration of the technical information against a large number of unique boat individuals ruled out the simpler S1000D systems. The possibility of obtaining Swedish technical support was also a factor that figured strongly in the selection process.

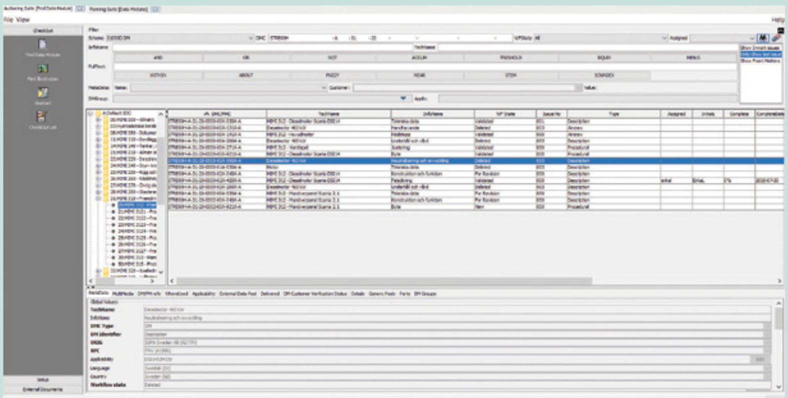


Figure 2. Corena Knowledge Center.

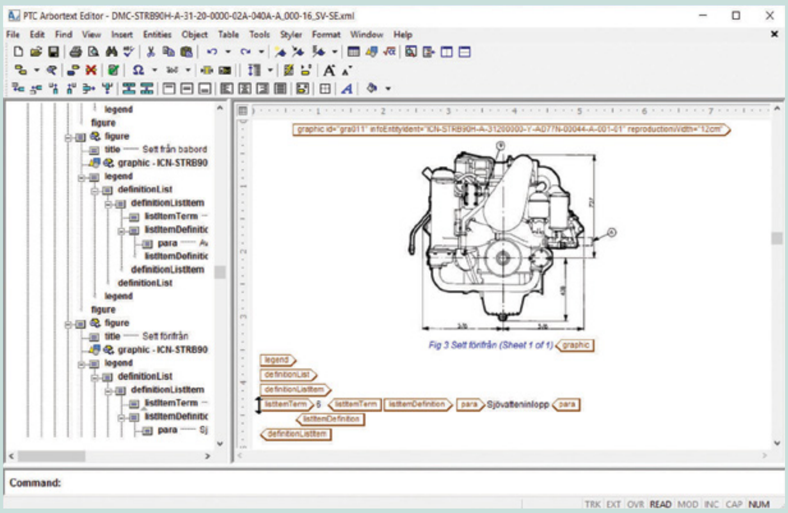


Figure 3. Arbortext Editor from PTC.

After short-listing a number of different software solutions available on the market, putting out a call for tenders and carrying out the subsequent technical evaluation, SSPA finally opted for Corena Knowledge Center, together with the Corena Page formatting engine for PDF production and Corena Pinpoint for production and distribution of IETP publications. Arbortext Editor from PTC was the editing tool chosen (Figures 2 and 3).

Conversion

Given the fact that the existing documentation for Combat Boat 90H and Light Support Vessel had been created over a long period (approximately 25 years) by different subcontractors, in different programs or systems, and with different source file formats, conversion of the 2,224 pages for Combat Boat 90H and the 2,186 pages for the Light Support Vessel was a technical challenge. Added to this was the fact that in some cases SSPA did not have access to the original source files, so was compelled to base some of the conversion on PDF files.

The datasets that were to be converted also varied greatly in terms of how the relevant installations or contexts had been described and how the information had been structured hierarchically, which also resulted in limitations in the conversion phase.

Because of these variations, the conversion company opted for an 80/20 solution; that is to say, in scripting terms, it processed 80% of the content automatically and 20% manually. This 20% in turn afforded an opportunity for visual inspection of the conversion accuracy for the remaining 80%.

Given the different formats, a script library was compiled where each script only addressed a single source file format and converted this into a neutral intermediate storage format. The actual conversion to S1000D was then carried out in another conversion stage, where all the files in this intermediate storage format were converted to Issue 4.1. From a technical perspective, various open source programs, bash scripts and the Omnimark conversion program were used.

Inputting the converted files into the S1000D system, in turn, posed new technical problems. For example, the data modules could not be input until the images' ICN codes were known, as these formed part of the data modules' image references. It was therefore necessary to first import all the images into the system, extract the newly established ICN codes and script the change in the image references in all the data modules.

FMV's regulations and support systems for S1000D

FMV has a number of regulations and support systems that are of considerable benefit in any

S1000D-based documentation project. In these, FMV has put a lot of effort into, for example, clarifying established national regulations, communicating established translations of *infoName* for information codes and developing validation engines for checking against FMV's BREX files.

- FMV General rules for application of S1000D (Ref. no. 16FMV10512-3:1)
- Guidance FMV Business Rules S1000D (Ref. no. 16FMV10512-2:1)
- FMV Business rules: Rules for application of S1000D to a specific project (Ref. no. 16FMV10512-4:1)
- FMV Information code list (Ref. no. 16FMV10512-6:1)
- FMV Decision point index (Ref. no. 16FMV10512-7:1)
- FMV BR BREX
- FMV Project BREX
- FMV BREX Checker
- FMV S1000D IPD to PMF converter

A few words about FMV's BREX files

BREX is the machine-readable implementation of FMV's adopted business rules decision points. The validation of the data modules against FMV's BREX files (and other BREX files) takes place according to a priority ordering called *layered BREX*.

This means that the first BREX file (more specific) used for validation of a data module refers in turn to another BREX file higher up in the hierarchy (less specific). In this way, a BREX file *lower down* the hierarchy (typically, a project BREX) will only address specific *business rules decision points* for that project and may refer all other validations to a BREX file *higher up* in the hierarchy

In the case of SSPA's project for Combat Boat 90H and Light Support Vessel, the validation in the production environment takes the following form:

The data module is validated against:

4. FMV BREX Amfibie (which refers to…)
3. FMV BREX (which refers to…)
2. DIG BREX (which refers to…)
1. S1000D Default BREX

Applicability

As mentioned earlier, part of the overall objective for the project was (for PDF) to be able to generate or (for IETP) to filter technical documentation for one or more boat types or boat individuals. S1000D has powerful features for this, and the specification has potential for creating highly advanced *applicability expressions*. At the same time, it entails a degree of risk. Quite soon, and in particular given the number of boat individuals this project covers, the *applicability* matrix may grow almost exponentially and may become complex or time-consuming to maintain over time for the customer.

In the case of this project, *applicability* had to be used in order to be able to manage the configuration of the technical information – not only in terms of boat model and boat type, but also in terms of variations in installation status and equipment level within these parameters, as well as in terms of changes over time, for example, in life extensions and mid-life upgrades at individual level. The following sections describe how this is structured.

Three concepts are central to an understanding of *applicability*:

- ACT – Applicability Cross-reference Table
- CCT – Conditions Cross-reference Table
- PCT – Products Cross-reference Table

These concepts exist in the form of data modules in SSPA's S1000D system.

ACT

ACT is the table that specifies the project's product attributes and its valid values. Product attributes are those product characteristics that are believed to be *stable over time*. For example, in the case of Combat Boat 90H, these will be:

- Model
- Boat number
- Water jet pump

CCT

CCT is the table that governs *clearly temporal* changes in the product, or configurations that have a finer granularity than ACT can manage. These may be aspects such as:

- Changes as a consequence of a technical order
- Generators of different models within a boat type
- Changes as a consequence of a life extension or mid-life modification.

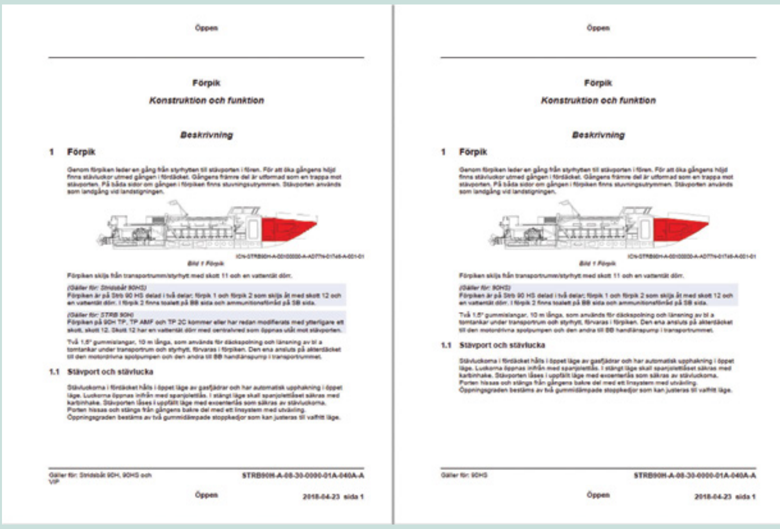


Figure 4. Example of a PDF page with two different filters applied, depending on the type of boat. Note the different number of paragraphs just below the figure.

PCT

PCT is the table that, from a product perspective, identifies which product attributes (from ACT) and conditional attributes (from CCT) are valid for a specific, individual boat.

Thus, PCT can be said to link *product attributes* and *conditional attributes* to an *information configuration* that is *publishable* (Figure 4).

Spare parts catalogues

Spare parts catalogues are something that FMV has traditionally handled in its PMF system, which has been both a production system and a publication system. However, during the course of the project, we have identified a need to be able to maintain spare parts data in the S1000D system, as other data modules frequently need to refer to this data and, in the case of the IETP applications, there is a wish for it to be integrated with the other documentation.

To avoid being compelled to maintain spare parts data in two locations and in two different systems, SSPA is currently working on a method of importing items from TIA GoF into a CIR in the S1000D system. The work on compiling spare parts lists for a design or detail is then done in Excel, prior to subsequent conversion into IPD data modules with a proprietary script. Once the IPD publication (in S1000D) has been reviewed and finalised, it is converted as a publication module to an input format that PMF can import. This way, *single-sourcing* is ensured, as is the ability to integrate spare parts data into other S1000D publications, while still satisfying FMV's desire to have PMF as a central system (Figure 5).

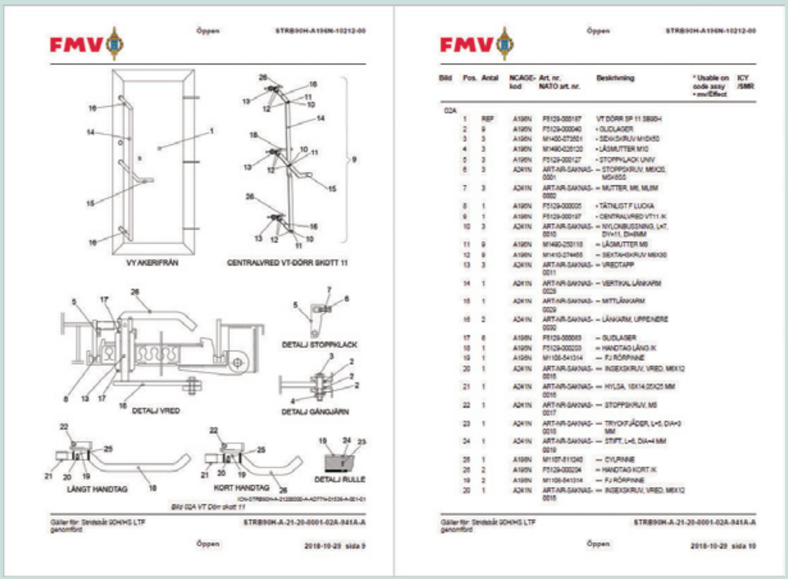


Figure 5. Spare parts catalogue made using the IPD schema in S1000D. The intention is that the IPD data and referenced images will then be imported into FMV's PMF system.

Delivery format

The current plan is for the project's delivery format to take the form of XML-neutral deliverables and PDF files. PDF is still in demand as a format, as at least parts of the technical documentation will be printed.

An XML-neutral deliverable is a collection of data module files (including images and ACT, CCT, and PCT files) that are aggregated under one or more publication modules in an industry-neutral format (XML). The XML files are processed using various conversion scripts before being presented in HTML format in the IETP application (Figures 6 and 7).

Some reflections on hardware for IETP

During the course of the project, we have tested and evaluated the purchased IETP solution on a number of different types of tablet; we have also developed a proprietary IETP demonstrator, which is currently at the prototype stage. Although the hardware, IETP application, information logistics relating to IETP deliverables and updating of the same do not form part of the current project for FMV, some aspects have been revealed in interviews and spontaneous conversations with Swedish Armed Forces personnel, who may be interested in taking a closer interest in the future.

- **Screen size**. How big/small should the screen be in order to work in the military environment and how should it be used? Should it fit in a thigh pocket or is it acceptable for it to be the same size as a traditional binder? A smaller tablet is easier to carry, but places more demands on the IETP application to make the information readable.
- **Screen resolution**. The text should not be too small and must be readable while navigating heavy seas. However, the higher the resolution, the more items can be displayed on the screen simultaneously. How to balance the two should be resolved once a decision has been taken as to which IETP application to use.
- **Presentation area**. Different IETP applications arrange the presentation areas in different ways, which affects the two points above.
- **Brightness**. The information must be readable in sunlight, as well as allowing very low brightness or night mode.
- **Battery life and charging station solutions**. It is probably necessary to have a permanent charging station on board, to which the tablet is securely attached.
- **How robust does the tablet need to be?** Does it need to be fully robust (more expensive) or is it sufficient for it to have a waterproof jacket (cheaper)? There are also models between these extremes that are water-resistant but cheaper.

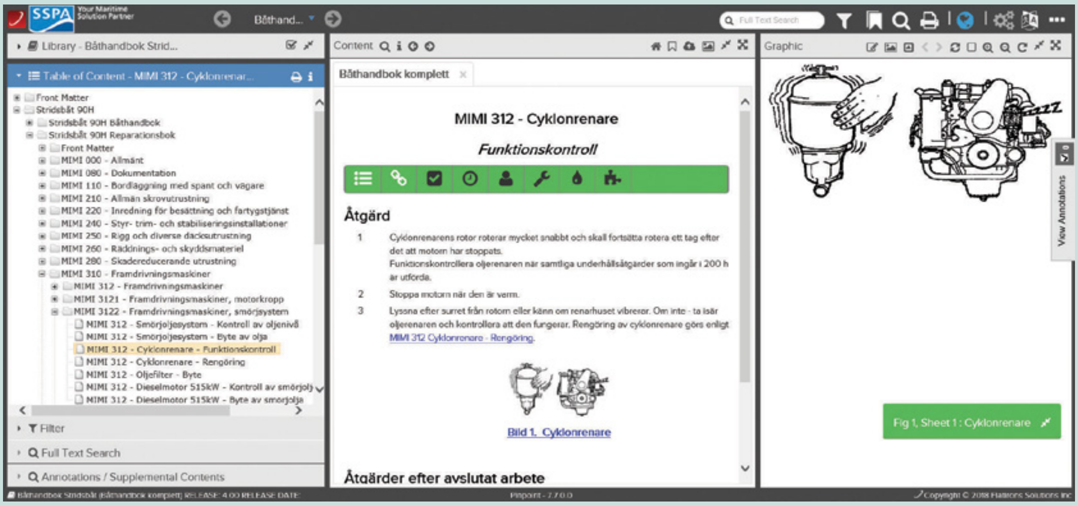


Figure 6. A section from the repair manual for Combat Boat 90H in the Corena Pinpoint IETP.

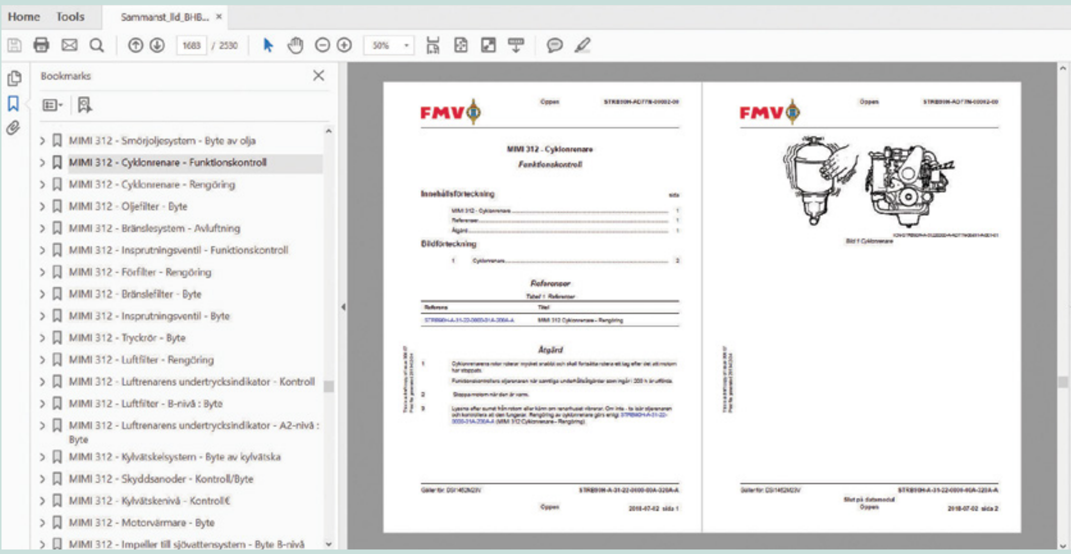


Figure 7. The corresponding section of the repair manual for Combat Boat 90H in Adobe Acrobat Reader.

Project status and related projects

Final delivery of this project took place in the first half of 2019. Since the start of the project in 2017, under SSPA's framework agreement with FMV a number of other projects in amphibious systems have been added that impact on and/or are impacted by the current project. Furthermore, SSPA is now running or is otherwise involved in a number of S1000D projects within FMV.

Project findings

In the three years since the project began, we have made significant findings relating to S1000D, information analysis, conversions and structure. Some of these findings are as follows:

- **The conversion issue**. As the work progressed, only a small part of the converted technical information was found to be entirely accurate – less than previously estimated. Given that so much information needed to be revised, it may well have been more cost-effective to re-enter the information from scratch or convert it manually. From a conversion perspective, it is also difficult to automatically capture and correct format inconsistencies in the source files; for example, where a writer has used bold instead of a valid paragraph format/XML element to indicate a section heading. Explicitly dimensioned column widths in tables also proved difficult to convert in an automated manner to column widths with relative dimensioning in terms of the available page body and/or screen width.
- **SNS/MIMI**. Much more work on the SNS/MIMI structure should have been done early on in the project. Despite the careful information analysis and checks against other information sources, there was a continuous need to refine the degree of modularisation during the project. For example, SSPA has taken

a completely new approach to MIMI 51x, *Production and distribution of electrical power (main, emergency and backup power)*, where the information is now modularised with much finer granularity than was the case in the past.
- *Diversified data sources.* During conversion in particular, the fact that the datasets to be converted were not available in a uniform source file format was a problem. This affected the work and costs relating to the development of the conversion scripts to a greater extent than would have been the case if all information had been available, for example, in one of FMV's DTDs, for example, FMV Enkeldokument 2.0.
- *BR and project BREX.* In the Amfibie Project, the work on *business rules* and the project BREX file had not been fully completed by the time the conversion project started. This created uncertainty with regard to permitted structures in the data module candidates, which SSPA then had to spend time revising when any BREX errors appeared later on in the S1000D validation process.

Concluding words

After delivery, we hope that our projects for FMV Amfibie will add significant value in a wide range of areas, for example:
- Full acceptance of an established specification (S1000D) and a data format (XML) intended for cross-disciplinary information collaboration and long-term storage of technical information.
- A modular approach with a strong focus on reuse and ongoing utilisation of the existing MIMI structure as an SNS for information breakdown.
- Reduced lifecycle costs through the provision of full, accurate, readily available and updatable technical information.
- Powerful process and system tools in order to be able to easily manage (from an information perspective) changes to installations on board the boats.

With the technical information structured in S1000D, FMV has also established a *baseline* that opens up a wide range of future development opportunities. These may include, for example, different types of dynamic published formats with varying degrees of interactivity and feedback, voice-controlled documentation, *augmented reality* and integration with other systems.

Figure 8. Combat boats from 2nd Amphibious Battalion form up for a demonstration of strength in Mysingen Bay during Exercise Aurora. A helicopter (Hkp 14) assists with documentation of the formation. Photo: © Mats Nyström, The Swedish Armed Forces.

A few words about SSPA Sweden

SSPA Sweden AB is a wholly owned subsidiary of the Chalmers University of Technology Foundation and was founded in 1940 as *Statens skeppsprovningsanstalt (the Swedish State Shipbuilding Experimental Tank)*, with a ship's test tank and associated model workshops and office premises. Later, cavitation and wave laboratories were added, and today, with approximately 100 employees, SSPA is a leading international supplier, not only in the field of towing tank and model testing, but also as a provider of a wide range of services in hydrodynamics, maritime technology and logistics, risk analysis, ILS and technical information. Since its inception in 1940, more than 8,000 hulls have been tested in the 260-metre ship test tank on the Chalmers campus. C

Publication note

This case study was first published in Swedish in the Swedish Defence Materiel Administration's quarterly journal *TIFF – Teknisk information i försvarsmaterieltjänsten* ["Technical information in the defence materiel services"], no. 2, 2019 (http://tiff.mil.se).

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Table 1. Explanation of abbreviations.

Abbreviation	Explanation
ACT	Applicability Cross-Reference Table
AR	Augmented Reality
AU	Avhjälpande underhåll (Immediate maintenance)
BORIS	Bild- och ritningsinformationssystem (Graphics and drawing information system)
BR	Business Rules
BREX	Business Rules Exchange
CALS	Continuous Acquisition and Life-Cycle Support
CCT	Conditions Cross-reference Table
CIR	Common Information Repository
DIG	Defense Interest Group
DITO	Digital teknisk order (Digital technical order)
DMRL	Data Module Requirements List
DTD	Document Type Definition
FBEN	Förrådsbenämning (Swedish Defence Item of Supply Short Name)
FBET	Förrådsbeteckning (Swedish Defence Item of Supply Identification Code)
FBF	Försvarets bok- och blankettförråd (Swedish Defence book and form repository)
FMSDUP	Försvarsmaktens system för drift- och underhållspublikationer (The Swedish Armed Forces' system for operating and maintenance publications)
FMV	Försvarets materielverk (Swedish Defence Materiel Administration)
FU	Förebyggande underhåll (Preventive maintenance)
GoF	Grund- och förvaltningsdata (Master data)
HTML	Hypertext Markup Language
ICN	Information Control Number
IETP	Interactive Electronic Technical Publication
ILS	Integrated Logistics Support
IPD	Illustrated Parts Data
LCN	Logistics Control Number

Abbreviation	Explanation
Lift	Lednings och informationssystem för Försvarsmaktens förnödenhetsförsörjning och teknisk tjänst (Management and information system for the Swedish Armed Forces' supply support and technical service)
MFI	Marinens fartygsinspektion (Naval Ships Inspectorate)
MIMI	Marin installations- och materielindelning (Marine Installation and Materiel Classification)
MS275	Materielslag 275, Amfibiesystem (Materiel type no. 275; Amphibious systems)
MS520	Materielslag 520, Teknisk information (Materiel type no. 520; Technical information)
MVIF	Materielvårdsinstruktion för Försvarsmakten (Materiel servicing instructions for the Swedish Armed Forces)
PCT	Products Cross-reference Table
PDF	Portable Document Format
PMF	Produktionsmiljö materielförteckningar (Production environment materiel records)
PRIO	The Swedish Armed Forces' business enterprise software
PSUHP	Produktionssystem underhållsplaner (Production system maintenance plans)
PTK M	Marinens provturskommando (Naval Sea Trials Command)
RMS	Regler för militär sjöfart (Naval Ship Code)
RSF	Resursstöd för främre insatsledning (Resource support for forward deployment management)
SGML	Standard Generalized Markup Language
SNS	Standard Numbering System
TIA	Teknisk information autonom (Autonomous technical information)
UH-enhet	Underhållsenhet (Maintenance unit)
XML	eXtensible Markup Language

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Information types and structured content in Flare

Matthew Ellison analyses how Flare supports different methodologies.

In keeping with the theme of this issue of *Communicator*, I have been thinking about how MadCap Flare supports various methodologies. Three of the 'big ideas' from the last fifty years that have had the most influence over the way I now write are Minimalism, Information Mapping®, and DITA. The first two could be thought of as methodologies — DITA is really a data model and technical framework for authoring and publishing. They all share key principles for dividing information into short self-contained chunks. This approach, often known as topic-based writing, is a fundamental precept of MadCap Flare and other Help Authoring Tools.

Background

Information Mapping and DITA extend the principles of topic-based writing by ruling that each chunk of information (known as a 'block' in Information Mapping) should be of a specific pre-defined type. Information Mapping has a fixed set of defined types, see Table 1. DITA defines three basic types (Concept, Reference, and Task) but enables you, through a process called 'specialization' to extend these by defining new types to suit your specific subject matter, environment, and needs.

As a structured mark-up language, DITA constrains authors to use specific structural components, such as short descriptions, warnings, and steps that are allowed within each information type. It also imposes strict rules on the organisation and sequence of these components (for example: a warning should always precede any associated steps).

Information Mapping specifies that the structure and format of a block should be consistent with other blocks of the same type, and that each component within it should be properly labelled. It recommends suitable presentation methods and information structures (such as lists and tables) that may be appropriate within each type. In a sense therefore, Information Mapping is prescribing (if not enforcing) a form of structured authoring.

If we want to bring these principles of information types and structured authoring into work practices within Flare, what support for this approach does Flare provide?

Table 1. The six information types in Information Mapping®

Information Type	Answers the reader question:
Principle	What should I do or not do?
Concept	What is something?
Structure	What does something look like? What are its parts?
Process	What happens? How does something work?
Procedure	How do I do something?
Fact	What are the facts?

Flare's support for information types and structured authoring

Flare is not (and probably never will be) a structured authoring tool. In other words, it can't force us to write our topics in a specific way. For example: Flare will allow you to follow a <h1> heading with a <h3>, to place warnings after steps, and to have procedures with no steps at all. As long as your topics are marked up as valid XHTML (which imposes only very basic rules over sequence and structure) then Flare is happy. Having said that, Flare can potentially provide an environment that encourages and *promotes* structure and the use of topic types.

There is a range of techniques and features that we can use in Flare to adopt a more systematic and consistent approach to content development based on information types. These include:

- Topic types
- File-naming
- Topic templates
- Semantic class attributes
- Relationship tables

The rest of this article provides details on each of these items.

Topic types

Flare enables you to identify the information type associated with a topic by applying a class to the topic's root (html) element. You can do this within Flare's UI (without resorting to typing code into the Text Editor) by selecting from the Topic Style Class drop-down in Topic Properties (see Figure 1). There are four default types (task, concept, reference, topic) that are included automatically by MadCap, but you can add your own by defining classes of the html element within your project's master stylesheet.

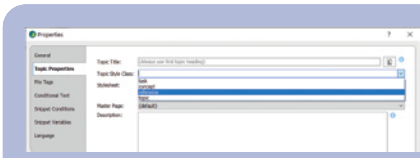

Figure 1. Topic Style Class in Properties

What would be the purpose or benefit of identifying a topic's information type in this way? Well, one reason for doing so might be to add metadata to help with project management and reporting. For example, the File View window includes a 'Class' column, which shows the Topic Style Class for all topics. Using this, you can sort the list of topics by information type, and easily select a group of topics of the same type.

For the HTML5-based output there are other potential benefits from specifying a topic's style class. You could write a stylesheet rule that associates a specific Master Page and background colour with a topic style class, which means that all topics of a specific type would automatically share the same basic layout and background colour. By using descendant selectors (what Flare calls 'Complex Selectors') you could change the presentation of individual elements for topics of a specific type.

For example, you could use the following stylesheet rule to ensure that ordered lists within task topics are followed by a horizontal border:

```
        html.task ol
{
        border-bottom: solid 2px;
}
```

Note that none of the stylesheet rules involving the topic style class has any effect on print-based outputs such as PDF or Microsoft Word.

File naming

There are no set rules for file naming in Flare. However, many companies and organisations have their own guidelines and conventions, and it is always best to stick to these, especially when working in a team environment.

One possibility is to use a naming convention based on topic types. For example, you could prefix the name of all concept topics with ‘concept-’ or ‘about-’, and prefix the name of all task topics with ‘task-’ or ‘howto-’. When looking at the Context Explorer this would make it easier to tell at a glance what type of information each topic contained. It might also encourage authors working on the topics to focus on writing the type of information indicated by the file name.

Topic templates

Many authors, when they create new topics in Flare, start from the standard Factory Template called NewTopic.htm. This means that they are effectively creating the content of the topic from scratch. As I described in Tip 6 of my column in Spring 2019[1], it is possible to create your own custom topic templates that provide a more helpful starting point, including standard headings, placeholder items such as styled paragraphs, and empty lists and tables. This means that you could create topic templates for each of the different types of topic that you include within your documentation. For example, Figure 2 shows a template for a Troubleshooting topic that I created for one of my clients.

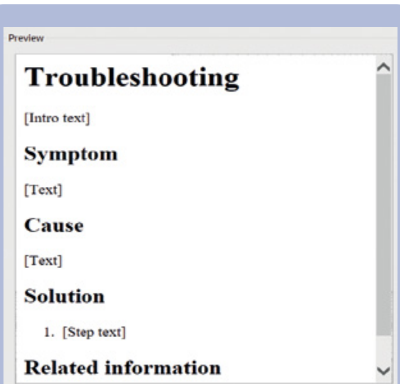

Figure 2. Troubleshooting topic template previewed within Add File dialog

Semantic class attributes

DITA is a semantically rich mark-up language that has a wide range of defined elements for different types of information within a topic. For example, there are specific elements for prerequisites (`<prereq>`), steps (`<step>`), and result (`<result>`). Flare uses XHTML which give little clue as to the type or purpose of the information contained within it. For example, a paragraph marked up with a <p> tag and you can tell nothing about what kind of information it contains.

This is where class attributes come in. These are a mechanism for applying formatting defined by our CSS (cascading style sheet), indicating the semantic nature of each element. For example, if we apply a CSS class of "Warning" to a paragraph (so that its XHTML mark-up now starts with `<p class="Warning">` then we now know that the paragraph should contain warning text. Within a Topic Template, you could include an empty placeholder warning paragraph immediately before an empty ordered list, as an indication that a warning should be positioned before its associated task steps. Unlike in a structured authoring environment, an author would of course be free to break established style guidelines by moving the warning to after the list, but at least the semantic classes would make such structural errors more apparent.

Relationship Tables

Relationship Tables are a feature of DITA that enable you to define (within an external XML file) the links between topics of different types. For example, using a Relationship Table you could specify that a certain concept topic should be linked in both directions with five specific task topics. In the resulting output, the concept topic would automatically contain five links (to the task topics) and each of the task topics would contain a link to the concept topic. Flare supports Relationship Tables, and you are free to use them in any project to add all of the links between your topics as an alternative to inserting hyperlinks or cross-references into the topics themselves.

The advantage of using Relationship Tables is that they encourage you to think about topic types as you set up your links. In addition, if you use Relationship Tables you will never get broken links, or links that don’t work as a result of the destination topic not being included within the output (as can happen with cross-references).

Conclusion

Flare is not a structured authoring tool, and therefore can’t impose structure based on information types. However, it can provide an environment that encourages and promotes structure. Even though Flare is based on a relatively simple and semantically poor mark-up language (XHML), there are many useful features and authoring practices that can help you to create consistent and well-structured content based on defined information types. This approach will require up-front planning and development (including the creation of semantic CSS classes and topic templates) and some self-discipline on the part of authors. **C**

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Real-life dilemmas: Coronavirus (COVID-19)

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*.

Coronavirus (COVID-19)

Zara and Jane, two technical communicators from different backgrounds, discuss the impact the epidemic is having on their lives.

Zara: "I am really worried about this epidemic. It's turned my life upside down. My last contract role has ended and I am not able to get another role because all the businesses I usually work with are locked down."

Jane: "I sympathise. I am okay in that I have a permanent role and am able to work from home."

Zara: You are lucky at least you have a job and are also able to work.

Jane: Our office is closed and we are all working remotely. I guess, in my role, that's quite easy to do. All our meetings are now held online using Google Hangouts.

Zara: What's it like working at home, and with all the movement restrictions?

Jane: I guess I am used to working from home, as I already work two days a week at home. However, I now have my children and husband on top of me in a small house 24/7. Keeping everyone entertained and busy is a challenge. To be honest, it's driving us all a little bonkers. What about yourself?

Zara: My partner and I are both self-employed, and we used to spend a lot of time commuting. We don't have children. However, we've both been badly impacted. We can't work and have no income.

Jane: Didn't the government say they were offering some assistance to the self-employed? I think it was up to £2,500 per month or 80% of your income, to put the self-employed in the same position as permanent workers.

Zara: That's right. They say they will calculate our average self-employed earnings over the last three years and then work out 80% of this. However, the scheme is not up and running yet and won't be available until June. It also doesn't apply to those with incomes over 50K per annum.

Jane: 50K seems quite a high threshold?

Zara: That may seem a lot, but not if you are living and working in London. Both of us have earnings just over this threshold.

Jane: Oh dear. How are you managing?

Zara: At the moment, we are living off savings. But that's not going to last us indefinitely. We are still looking. Some companies are recruiting and doing interviews remotely.

Jane: Let's hope the situation returns to normal soon. I am worried about my mom and dad. They are both over seventy and with pre-existing health conditions.

Zara: Our parents are in a similar situation. We are all in the same boat.

Jane: What sort of precautions are you taking?

Zara: To start off, wearing gloves and making sure we keep our distance from other people when shopping or walking outside. We are not visiting our parents at the moment — we are speaking on Skype.

Dilemma

What is your advice to Zara and Jane? What can they do in these troubling times to manage their situation? If you have been affected by the Coronavirus in any way, write in to let us know. C

Warren Singer MISTC
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Real-life responses: the implications of IR35

Readers' letters in response to Jane's dilemma, described in the Spring 2020 issue of *Communicator*.

Summary of Mark and Gavin's dilemma

Mark and Gavin were discussing the recent changes to the IR35 off-payroll rules for contractors working through intermediaries. The government planned to roll this out in April 2020, but this has been delayed until April 2021.

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

Brian

Rates will have to increase in order to compensate contractors for the increased taxation burden as well as the costs of covering business operating expenses (including travel, accommodation and subsistence costs), training courses, membership fees, office premises and equipment – all of which have to be paid for AFTER tax has been deducted from earnings.

Unfortunately agencies/recruiters are taking the easy way out here instead of helping contractors to operate outside of IR35; some are even cashing-in by setting up as umbrella businesses.

It's important to show very clearly that the temporary role you take on for the benefit of your client is to be executed by a professional who has been brought-in to perform a specific task — that you are being consulted in how to resolve your client's needs and where your contract (NOT the recruiter's or the client's) determines/dictates:

- your hours of work — ensure they cannot be confused with employee hours of work
- the place of work — you decide whether you work on- or off-site (and the mix of on-and off-site working)

There are several other aspects to be considered.

IPSE is an organisation offering advice and protection to its contractor members.

There is an indication that HMRC will look back over previous contract roles to see where a contractor can be trapped within IR35 so that tax can be harvested retrospectively.

James

At the risk of offending my self-employed colleagues, I think HMRC has a duty to ensure that everyone pays tax fairly. The reason the IR35 rules were introduced was that too many very highly paid consultants were getting away with working for the same company for years, without paying their fair share of income tax and national insurance. We are talking about consultants earning £500–£1,200 per day, then paying themselves a minimum wage, deducting all kinds of expenses and taxing profits as company dividends to avoid paying the same tax rates as normal employees.

Contractors complain they are being treated unfairly, but they are already being paid much higher rates than regular employees.

Gerry

HMRC is not interested in whether you are an employee or not; they are only interested in how you pay your tax. That means you can be classed as within IR35 and have to pay tax and NI on a Pay As You Earn (PAYE) basis, but still not be entitled to the benefits of being an employee, such as statutory rights, holiday pay and sick leave. And HMRC can apply this retrospectively going back several years, which means you could be left with a hefty tax bill.

It is possible to take out IR35 insurance, to protect your business. I'd recommend this if you are self-employed and unsure about your IR35 status. C

Editor's notes:

IR35 is a complex law and its application is the subject of much debate and controversy.

It is important to realise that there is a distinction between your employment status (as defined by your contract with a client) and your tax status (as defined by IR35 and determined by HMRC). These are *not* the same.

In other words, from a contract perspective you may not be classed as an employee (that is, do not have the benefits of pension, training, bonuses, company perks and holidays, or the statutory rights of an employee), but at the same time, HMRC could determine *retrospectively* that you have had employee status for the purposes of paying income tax. HMRC apply their own tests to determine your IR35 status,

In these circumstances it is important to ensure you check your circumstances carefully and take legal advice if necessary. Contractors who are worried about potential IR35 tax bills and litigation are able to take out IR35 insurance, to protect their business. See the Further reading section for details.

Further reading

HMRC Online test: www.gov.uk/guidance/check-employment-status-for-tax (accessed 15 April 2020).

Contractor weekly IR35 section, latest news and online calculator: www.contractorweekly.com/ir35 (accessed 15 April 2020).

IPSE IR35 section: www.ipse.co.uk/ir35-hub-ipse.html (accessed 15 April 2020).

Please see the Article on IR35 in this issue of *Communicator* on pages 42-46.

Designing with the right terminology

Are your colleagues consistent with their terminology and do your customers know the terminology to use? Robert Scott-Norton describes terminology differences at Sage.

Introduction

Using the right words is a crucial part of any customer journey. Whilst this shouldn't be the total responsibility of content designers, we're well placed to help nudge the rest of the design team toward the best choices. At Sage, I work within a close knit team of designers who are quite happy for me to explore word choice in the design process.

In this article, I'll walk through my recent experience of getting the right words built into the customer journey.

Licence versus subscription

A large part of our business is now in software as a service and this means a shift away from one-off purchases for software towards a pay-monthly option. As part of redesigns in this area, I was asked to review some screens from a content design perspective.

The screen I was asked to review contained the words 'licence' and 'subscription' in the same sentence which struck me as odd. I'd seen these words used interchangeably in our designs before and I wanted to ensure we weren't being lazy with word choice.

The User Experience (UX) designer had included both words at the behest of the solution designer, who had included them because they existed in a previous iteration of the software.

Digging deeper, I asked both the UX designer and the solution designer to explain the difference between a licence and a subscription in the context of the screen I was reviewing. Neither had a compelling answer. One admitted to using both terms interchangeably depending on whom she was speaking with.

There was a can of worms here and I'll admit to thinking twice before opening it.

Confirming the problem

My initial reaction was that if we weren't sure of the difference between the words, then we were at risk of confusing customers. Many of these customers were transitioning from our desktop software, where licences were indeed bought for perpetual use, and moving to a subscription service. I wanted us to get this right to avoid any confusion as to what they were paying for. My gut instinct was we should be using the word subscription and could probably drop 'licence' from our vernacular altogether.

But, maybe we were in too much of a bubble in Experience Design. Perhaps outside our department there really wasn't an issue at all.

I spoke to a long-time colleague in the Sales team.

"I only ever use the word licence," she told me.

"Never subscription?" I pushed.

"Nope. Only licence. It's what we're used to."

Oh.

Researching options

I turned to online definitions:

Subscription — An arrangement by which access is granted to an online service.

Licence — A permit from an authority to own or use something, do a particular thing.

This led me to the example sentence:

"*When a client subscribes to product X, they have a licence to use that software.*"

So, we could still use both words but I didn't think we needed to. In the context of many popular software companies, as service providers, they go out of their way to avoid even the word subscription.

- Netflix talks about signing up for an account and cancelling that account rather than subscribing and cancelling the subscription.
- Spotify mentions subscriptions in their help files, but not at the front end.
- On the Microsoft Office 365 product page, the word subscription is only included as a footnote.

Do our customers care about this?

What do our customers think of our licence / subscription terminology? Was there any evidence that customers struggled with the terms?

I'll admit to not following up this aspect of research at this stage. My advice to you would be to contact your Support and Sales teams and ask them this question directly.

Also look to any feedback mechanisms you have within the product to see whether customers have demonstrated any confusion.

My approach was to handle this in the testing phase once I'd firmed up my thinking and we had something to show customers.

Terminology expands

It wasn't just a choice between the words licence and subscription. Within our product, we have a feature where one customer can purchase product units for their clients. Where a customer has bought multiple product units (aka subscriptions) for their clients, what should we call the 'thing' where these units are stored prior to being assigned to a client?

I dumped a lot of initial thoughts on a Miro board along with examples of how each word might be used in the types of sentence we were likely to create in help topics and the user interface. This gave my thoughts some shape and helped me understand what might be feasible.

Narrowing down the options

Language and emotion play a huge part in the customer journey. I needed to decide on a word to use for this collection of subscriptions. When a customer buys a unit for one of their clients but doesn't assign it to them straight away, it gets 'stored' for them, ready to be assigned.

But, what to call it? Pot? Store? Pool? Bench? Archive?

I quickly dismissed 'Pot'. It seemed too homely for the business scenario. 'Store' was next to go because of its obvious commerce connotations. I seriously considered 'Bucket', but I associate buckets with soil, and building, and dirt. Yeah, I didn't like the dirt association. 'Bench' could have worked. I was thinking of the American phrase around benching players, but thought the phrase wouldn't be obvious to most. That left me with 'Pool'. It's not perfect, but subscription pool had a certain ring to it.

(I also invited others to suggest words, but no one came up with anything that wasn't already on my list.)

Bringing stakeholders on board

As I was about to propose dropping one commonly used word from our development team's vocabulary, it was necessary to start building up support. I work in a fairly small team of content designers in a much larger department of developers, solution designers, and product managers. Whilst I feel my work is respected, it can sometimes feel like shouting in the wind. I needed to amplify my message by finding supporters.

I've found visuals and examples the best way to bring people over so I created some before and after screenshots of designs impacted by the change. I use PowerPoint to create these fairly crude designs. I deliberately haven't asked for access to more designery tools as I don't want it to ever look like I'm trying to do the UX designers job for them. Instead, I want people to be able to focus on the word differences I'd introduced.

I met with the key stakeholders and outlined what I saw as the problem with my proposed solutions. It was rewarding to hear that stakeholders had recognised there was a problem but hadn't been able to make moves to addressing it. I was given the blessing to carry on down my preferred route of simplifying by dropping licence from our designs.

With stakeholders on board, it was simple to work with the UX designers and arrange for my changes to make it into the latest round of designs. The UX designers were happy that the stakeholders weren't going to be surprised at the next design review.

What do customers think?

We're lucky that we have two dedicated user researchers who will put designs and questions in front of real customers. I've arranged for the latest designs to be shown along with some guidance that the researchers should ascertain whether the customers are clear on the subscription terminology.

This has been scheduled into the next round of testing (due after this article's submission date).

We get good feedback through the user research programme and I'm optimistic that my recommendations will stand.

What I've learnt from this process

- As a word 'expert' it's always worth scratching those itches to see if word choice can be improved.
- It's difficult for people to object to evidence so user research is important.
- A good relationship with stakeholders, especially UX designers, oils the wheels thus making the content designer's job easier.
- Acting as early as possible in the design process will reduce friction.
- Opinions matter but if you can provide evidence and demonstrate the value your recommendation will make, you'll find supporters.

Why is this good content design?

I didn't set out for this change because it irritated me. I did it because I was focusing on the user journey and how this particular word choice shaped many aspects of it. The most important of these relating to how much the customer would have to pay each month.

Working with other experience design professionals, particularly UX designers and researchers demonstrates how content design is a collaborative process and can't work in isolation. As word 'experts' our teams are looking to us to solve these word problems for them, and expect us to help improve the customer journey.

Concluding thought? Never be afraid to open the can of worms. C

Glossary

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UX. User Experience.

Related reading

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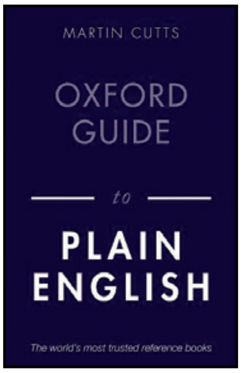
The Oxford Guide to Plain English

By Martin Cutts, Fifth Edition.
Oxford University Press (2020), Paperback 384 pp ISBN 978-0-19-884461-7. £8.99.
Reviewed by Warren Singer MISTC.

Rating: ★★★★★



"This is an excellent book! Information is presented in a crisp, clear and easy to read way."

Introduction

Plain English is the art of writing clearly, concisely, and in a way that precisely communicates your message to your intended audience.

Martin Cutts has produced a comprehensive book that describes how to write in plain English. He guides the reader through the principles and process of writing.

This book offers expert advice to help writers of all abilities improve their written English. If you are new to technical communications, then you should read this book. Experienced technical communicators will also find this an excellent reference source to refresh their knowledge of how to write crisp, clear and easy to read content.

Evaluation

The Plain English movement was founded in the 1970s with the aim of educating writers on how to write to a standard that was easy to read and accessible to the average user.

This book provides step-by-step instructions to guide the reader through the process of producing clear and easy to read content. Martin explains how to take long, wordy, clunky and poorly constructed sentences and transform them into clear, concise and easy to read prose.

There are 30 chapters with practical advice, including planning, choice of vocabulary, punctuation, grammar, layout, proofreading, and organisation. Each chapter features examples to show how it is done, with 'before' and 'after' versions.

What's new in this edition?

The fifth edition has been revised and updated to include new chapters discussing customer-service writing and common blunders in the workplace. Other chapters provide updated examples and easier routes through the book. A new appendix has also been added, summarising the history of plain English from Chaucer to the present day.

Conclusion

This is an excellent book! Information is presented in a crisp, clear and easy to read way. The principles are easily grasped, and the use of examples helps the reader to test their understanding and reinforce their own learning.

I like the fact that the principles are not just based on the author's opinion, but on research and readability statistics from user feedback.

Whether you are a new or experienced technical communicator, you should *definitely* have this book on your shelf. C

Related reading

If you like this book you may also enjoy reading related Oxford Paperback reference series:

- Oxford A-Z of Grammar and Punctuation
- Oxford A-Z of English Usage
- Oxford A-Z of Better Spelling
- 1001 words you need to know and use.

About the book author

Martin Cutts is a writer, editor, and teacher.
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Claire Walsh shares the structure of her home working day

I start each day with a cup of coffee while I catch up on the news online. I work from home for a company called TWi, so I don't have the chance to wake up en route to work. Therefore, I need to allocate time in the mornings to caffeinate. After the caffeine has taken full effect, I log onto my work laptop.

> *Flexi-time gives me a work-life balance.*

I'm usually online around 9am, but today I've gotten up earlier because I'm meeting my mother for coffee after work, so I want to finish earlier today. That's one of the benefits of flexi-time; I can have a work-life balance that meets my needs on any particular day.

The first thing I do when I log on is check my inbox, reply to any emails that I've received since logging off the day before, and jot down any actions I need to take.

I am an ardent list writer; I use lists to organise just about everything. Typically, before I log off every day, I write down a provisional to-do list for the next day. So, after reading my emails, I update my list from the day before. I like to have an achievable set of tasks to complete. Crossing each one off is a little win.

Now that I have my goals set for the day, I take on the first task on my list: complete the information security awareness refresher quiz. This is an internal quiz to ensure that all TWi staff are up to date with our information security awareness processes and policies.

After this, I begin working on a client project. I'm currently working on an online help single-sourcing project for a multi-national company (MNC). This involves taking content that has been combined from various sources into one and streamlining it to make it work as a single source for multiple regions. I am working on this project with two other writers from TWi in collaboration with a team of subject matter experts from the MNC. Working with two other writers is great because I can reach out to them if I want a second opinion.

> *Readability scores show the impact re-authoring has on help pages.*

Today, we are collecting screenshots of some of the help pages that are currently live on MNC's website and getting the readability scores for these pages before we begin the process of re-authoring them. This is an important step in the process as it allows us to show the client the impact that re-authoring has had on the content at the end of the process.

At 11am I have a one-to-one meeting with my manager. We catch up on the progress of projects and discuss upcoming work for the week ahead.

After this, I resume working on the client project until lunch time. I like to use lunch time to organise my personal life. Right now, I'm in the process of planning a wedding and have recently moved home, so for the last few months I've been using lunch time to catch up on any personal emails I have from wedding suppliers or about my home move.

After lunch, I work on the client project until 3pm. At 3pm, there is a presentation about the work done by the Cork Simon charity. TWi, as a Cork-based company, has partnered with Cork Simon to assist the charity in their effort to improve the lives of homeless people in the Cork community. It is great to see the impact that TWi has made in partnership with Cork Simon.

Following the presentation, I finish up working on the screenshots and readability scores for the client project and move onto re-authoring one of the topics. I start by migrating the content from a Word file to the authoring tool that we are using for this project, XMetaL. I then edit the content to ensure that the information is relevant and written to a high standard. As this information is aimed at the general public, it's important to ensure that it is clear and easy to read. For this purpose, we use a tool called Acrolinx on this project. It allows us to see the readability score of the content and identify any areas where the writing could be improved.

At 4.50pm, I finish up on client work. Then, I check my emails for the last time and create my provisional to-do list for the next day. At 5pm, I log off and cross the threshold of my home office into the hallway, and that's it, I'm home. No rush hour traffic or waiting for a bus. This is the key benefit of working from home for me. Once work is complete, the rest of the day is mine to spend how I like.

> *No rush hour traffic or waiting for a bus.*

Getting out is important when you work from home, so I try to get out as much as possible when I'm not working. Usually, I go for a walk after work, but since it's still winter in Ireland and we're in the midst of storm Dennis, I think a warm cafe will do just fine. C

Claire Walsh is an information developer at TWi, a leading provider of outsourced technical writing, editing, and documentation solutions in Cork, Ireland.

Perspective and tense

Back to basics. Jean Rollinson recaps the tenses and gives examples of when you can use them in technical communication.

I have recently started a new job where, unusually for a technical author, I need to write reports in the third person and the past tense.

So, to help me in my conversion and because it might be of interest to others, I thought I would take a look at narrative perspective and tenses.

Narrative perspectives

First person

A first-person narrative uses the pronouns I, me, mine, myself, we, our, ourselves and us; and the story teller, in effect, tells their own story or describes what they did. This column is an example of first-person writing. First-person writing is also often used in fiction so you see the narrative unfold through the eyes of the character. It's obviously not used much in technical writing, but I've included it here for completeness.

Second person

Second person gives the "you" perspective (pronouns you, your, yours, yourself and yourselves). It is (generally) what I would use when writing instructions and technical documentation to make it clear to the user that they are the person completing the action.

Third person

And finally, third person uses he, she, it, they and so on. It is usually used to describe events from an external view or at a distance. Using the third person also often means using passive rather than active language (see my previous article of Summer 2010).

Tenses

There are twelve basic English tenses, but for the purposes of this article I am only going to consider the simple past, present and future.

Past

You use the past tense to describe events that happened in the past. These can be actual events (She finished the marathon) or past habits (I practised singing for an hour every day).

One common error I have come across from non-native English speakers (more often in speaking than writing), is using the past continuous rather than the simple past. For example, "I was working hard at school when I was a child" should be "I worked hard at school when I was a child."

You wouldn't generally use the past tense for instructions or when writing about a product or service. But it is usually used to write reports and to indicate that an action or event has finished.

Present

You use the present tense to write about the present, that is events happening now. You can also use the present tense for:

- habitual actions (I cook every day)
- general truths (The sun rises in the east)
- commentary on what is actually going on (Tracy hits the ball hard into the net)
- future events that are part of a fixed timetable or programme (The train leaves at 6pm tomorrow).

I try to write instructions in the present tense. I think it makes them more direct and easier to follow. It also helps the user to see that the event is now and is immediate and doesn't depend on something else. This is harder when there is a dependency and it is very tempting to use the future tense after "if" or "when", but I believe you should try to avoid this. One common example is of the form "When the action is complete, you will be able to complete your task." I try to rewrite this as "When the action is complete, you can complete your task."

Future

And finally, the future tense describes events that will happen in the future. One obvious indicator of the future tense is the use of "will" or "shall". It may be a statement of the inevitable (I shall be 50 next month) or speculation or belief about what might happen (I think it will rain tomorrow).

We can also use the form "going to" for actions that are already decided on but have not yet happened (We are going to the cinema on Friday).

The first technical writer I worked with was of the opinion that using the future tense in instructions and descriptions implied that a feature was not yet available but would be in the future. I'm not sure that is always the case, but it is certainly worth bearing in mind.

Other tenses

In case you are interested, the other basic tenses in English are:

- past continuous
- past perfect
- past perfect continuous
- present continuous
- present perfect
- present perfect continuous
- future continuous
- future perfect
- future perfect continuous.

I may visit these at some point in the future. C

References

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Jean Rollinson FISTC 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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