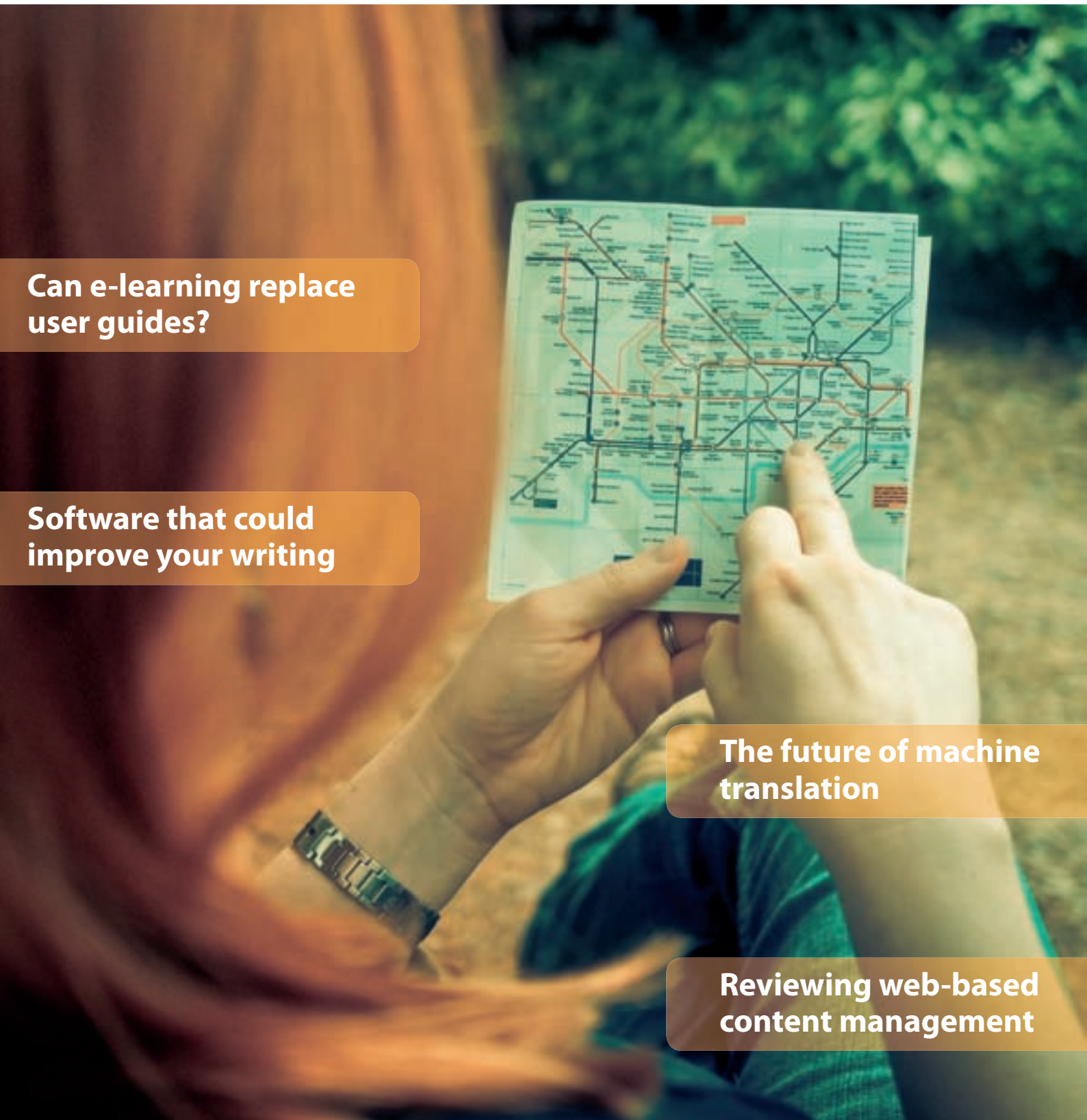
Harry Beck's London Underground

Inspiring others with clear illustrations

Communicator

The Institute of Scientific and Technical Communicators
Summer 2011



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ISTC news

Articles

Regular columns

WINNER 2010 APEX AWARDS FOR PUBLICATION EXCELLENCE

Editorial

I'm writing this editorial the day after an ISTC council meeting. It was an online meeting where we discussed current as well as on-going issues. It's good to catch up and keep up-to-date with all the happenings as well as hearing everyone talk about the issues they're interested in and passionate about. My focus is *Communicator* and as part of my Council role, I report my figures and set budgets as well as report on the progress of the previous issue and forthcoming issues.

I think it's important to be on the Council in my position as it ensures that I'm keeping abreast of the latest developments and it gives me lots of ideas as to how I can improve the content of *Communicator*. If you have any suggestions, I'd be happy to hear from you.

In this issue

For this issue, we've gone back to the basics of what the ISTC is really all about. On a scientific theme ('S') there's an article about an exhibition at the Palace of Versailles. For an article on communicating ('C') a complex technical ('T') issue there's a fascinating article about Harry Beck who designed the London Underground map.

For articles on tools, we have:

- Scrivener — a text drafting tool, plus a background article on the readability formula used
- StyleWriter — editing software
- Ekumo — a web-based content management tool
- Arbortext — end to end optimisation.

Keeping up-to-date, there is a recent survey article and another about the current developments in technical communication at the University of Bolton.

Following on from the Spring issue's article by Martin Block and Chris Atherton, the review has a book with lots of design examples that may work for you.

Plus, there's an article on machine translation, FrameMaker automation and the regular columns including a new column with Adobe tips and developing documents in an agile environment.

I think there should be something of interest to everyone.

Changes to Communicator

For the Summer issue we've tried to make a few improvements to the layout of *Communicator*. Here they are:

- Contents page — this has been updated to incorporate a page reference to all articles. This should ensure that you don't miss anything, especially ISTC news items. I hope it makes it easier to find information.
- Pull quotes — I've started to add quotes from an articles in the margin of that article to capture the reader's attention. I will continue to add more in the next issue.

If you have any suggestions as to how to improve the layout of *Communicator*, I'd welcome the input.

Communicating worldwide

Did you know that *Communicator* is sent to the ISTC membership, subscribers and technical communication events across the world? In the past year, *Communicator* has been sent to events in the UK, USA and Europe. If you've picked up this copy of *Communicator* at an event, I hope you find this issue useful and inspiring.

If you are an ISTC member and you'd like to read more articles about technical communication 'down under', why not take a look at the Southern Communicator pages of the Members Area of the ISTC website.

Feedback

Readers are reminded that they are invited to send their comments in to *Communicator*. Comments on articles can be sent to individual

authors or to my email address: commissioning.editor@istc.org.uk or you can of course always write to our Letters page using the new email address: communicator@istc.org.uk

Finally

The ISTC is always on the lookout for volunteers, so if you'd like to help, contact one of the council members, myself or keep an eye on developments in InfoPlus+ or the website.

Have a look at the competition on page 33, hopefully it will get you all thinking. The deadline date for entering the competition is 8 July 2011.

Enjoy reading the Summer issue. C

Contributing to *Communicator*

Are you interested in writing an article:

- About a case study of work you've completed recently
- Explaining a project that involved creating illustrations
- Describing the roles of technical communicators, for example technical illustrators, technical authors, copyeditors, proofreaders, editors, e-learning and more.

Or do you work in an Engineering or Scientific field?

Would you be interested in writing about your experiences in these areas?

If so get in touch: communicator@istc.org.uk

Katherine Judge MISTC
E: commissioning.editor@istc.org.uk

Letters

British or American spelling?

Sophie Watson FISTC discusses common misconceptions

I noticed that in an article on translation in the Spring issue you refer to the 'British' spelling of localisation, presumably referring to the 's' spelling.

This is indeed a British spelling, and I know that it's the one preferred by *Communicator*; it is also true that the 'z' spelling is used internationally. I would however like to point out that the 'z' spelling is also British; it is the preferred spelling in the Oxford English Dictionary. The British Standards Institution (amongst others) specifies use of the Shorter OED spellings in its publications. There is some interesting information on the origin of the variants in Oxford Reference Online, which I have quoted on a number of occasions to people who have asked why British Standards are written using 'American English'!

Reply from the Editor:

The 's' spelling is used for consistency with *Communicator*'s established house style.

Did you know that all ISTC Members have use of the Oxford Reference Online in the Members Area of the ISTC website?

More information on this topic can also be found on Wikipedia http://tinyurl.com/ise-vs-ize

Technical communication is not just about tools

James Bromley FISTC describes what is missing from the ISTC

Excellent to hear a clear acknowledgement that 'Technical communication is not just about tools'. Our membership, communications, and events should be composed of: business strategy 1, structure 2, operations 3, campaigns 4, programmes 5, initiatives 6, tools 7, plan & budgets 8. So, tools are just 1 of 8, and at the tail-end at that. Even allowing for its advertising budgets, the tail should not wag the dog.

In the same vein, it's excellent that the Technical Communication Awards brief recognises a broader church. I would dearly love to apply this year, and have a yet another cracking campaign to submit, but am precluded by client confidentiality — like other members, I suspect, I do work that is 1–8 as above, but of necessity, it goes unsung. As an Institute, we should recognise that our members create business, and nationally add value that can go way beyond the features, benefits and price of a tool 7. We are under-selling ourselves if we do not engage, lead and drive, on all 8 cylinders. C

E: communicator@istc.org.uk

Presidential address

An event for you to be proud of

In April 2011, the team running the Technical Communication UK conference started to announce the speakers and their topics. It has been very satisfying to see how far the ISTC has come in reviving an event so that it attracts the best and encourages them to think hard about what to present.

For the first time in many years, we were oversubscribed with good quality proposals by our first submission deadline of mid-April.

Let's Google or Skype

Working for a big company is no guarantee of the presenter's flair or their topic's relevance. But when we are building the programme, it's not a bad place to start and it certainly helps to grab the attention of potential delegates. You know your company has hit the big-time if the name doubles up as a verb. Hoovering has been used for years but we all seem to Google without thinking. And how did we ever manage before we could Skype our boss in Germany, granny in Australia or even our colleague sitting next door? We are not offering hoovering at the conference but Patrick Hofmann of Google and Larissa Flynn of Skype will be there, along with speakers from other big names including Zsuza Nagy of ARM, Ultan O'Broin of Oracle, Cerys Willoughby of IBM, Anna Haberko of Agfa, and Tom Aldous of Adobe.

People with insights worth sharing

The event is not only about big company names though, and the team has been pleased to see such a strong set of proposals from individual practitioners or academics with compelling and potentially useful topics. We have tried not to repeat too many speakers and have been particularly encouraged that more than half the proposals came from people who will be speaking at this event for the first time. In every case where someone is speaking again, it is with a different topic, matched with excellent feedback from previous presentations or workshops. Here are a few of the confirmed speakers:

- Chris Atherton
- David Farbey
- Ellis Pratt
- Linda and Greg Urban
- Kai Weber
- Torsten Machert
- Ron Blicq
- Jang Graat
- Andrew Lightheart
- Roger Hart

Something's missing

As pleased as the team is with the quality of both the speakers, and in some cases the companies they represent, I am worried that the content on offer from the conference programme, at the time of writing, is not quite living up to the goal we set when we re-launched the ISTC conference in 2009. *"Technical Communication UK is the annual conference that aims to meet the needs of technical communicators, their managers and clients, from every corner of the industry."* What's missing for me is the 'every corner of the industry' bit. Where is aerospace represented? After all, it is one of the biggest employers of technical authors in the UK. Where are heavy engineering or the process industries? Where is retail, government, and scientific equipment? Where are the technical illustrators, the indexers, or the XSLT developers? Where are you?

If you look through the conference programme and then ask yourself *"Where is the content that reflects what I do, that will help me with the challenges I face?"*, I invite you to tell me. Despite being oversubscribed, we have kept one or two gaps available. C

Paul Ballard MISTC
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The Institute

The Institute of Scientific and Technical Communicators is the largest UK body for people engaged in technical communication. The ISTC encourages professional development and standards, provides research resources and networking opportunities, and promotes technical communication as a profession.

To join the ISTC, change your grade, or get involved in what we do, contact the ISTC office on +44 (0) 20 8253 4506 or istc@istc.org.uk

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Graphic design

A member wants to improve her graphic design skills for technical manuals. She is especially interested in graphic design for technical manuals. What makes a graphic good instead of only average? What are the principles of graphic design?

Members recommended the following books:

- *The Non-Designer's Design & Type Book* by Robin Williams, ISBN: 978-0-321-53405-7. Although the book is not about technical publications, it has useful design guidelines.
- All books by Edward Tufte are good. Tufte's books are expensive, but they do not become out-of-date. In particular, read *Visual Explanations* (1997).
- *Dynamics in Document Design* by Karen Schriver deals with the cognitive processes that are related to layout and graphics.
- *A Practical Guide to Designing for the Web* by Mark Boulton explains basic graphic design principles that apply to all fields (http://fivesimplesteps.com/books/practical-guide-designing-for-the-web).

Andrew Mundi has a good introduction to graphic design:

- www.designconsolidated.com.au/graphic-design-principles/
- http://apecalledman.com/pogdonline/online_edu1.html.

For resources and tutorials, a useful website is http://technicalillustrators.org

Typography of symbols

What are the guidelines for the typography of scientific and technical symbols? For example, what is the usual letter space between a value and an abbreviation of a unit?

- The National Physical Laboratory has a short checklist (www.npl.co.uk/reference/measurement-units/si-conventions).
- The National Institute of Standards and Technology has detailed information (www.nist.gov/pml/pubs/sp811/index.cfm).
- Quantities, Units and Symbols, published by the Symbols Committee of the Royal Society in 1971 is old but still useful.

Tools for DITA

One member asked whether the DITA Open Toolkit (http://dita-ot.sourceforge.net) is sufficient for structured writing.

To produce useful output with only the DITA Open Toolkit is difficult. Tools help you to obey the XML schema. Members suggested the following tools:

- oXygen XML Editor (www.oxygenxml.com)
- XMLmind XML Editor (www.xmlmind.com)
- Arbortext Editor™ with Arbortext Styler™ (www.ptc.com/products/arbortext/epic/try.htm)
- FrameMaker® (www.adobe.com/framemaker/)
- XMetaL (http://na.justsystems.com).

Many of the editors that support DITA include the DITA Open Toolkit. Therefore, you can create output 'out of the box'. If you can write script and have XSLT skills, then you can customise the DITA Open Toolkit.

The spelling of new nouns

In one search, Google gave 47 million results for 'touchscreen' and 118 million results for 'touch screen'. When a new noun is made from two words, what are the rules for spelling? For example, is the correct spelling 'touch screen', 'touch-screen, or 'touchscreen'? Another member bought a PC with a touch-sensitive screen. The US website used 'touchscreen', but the UK website used 'touch screen'.

Usually, first the words are not connected, then they have a hyphen, and finally, they become one word.

Technical communication must be clear. If the two existing words that make the compound noun each have many meanings, confusion is possible. Therefore, make sure that the new thing is clearly different from the two existing words. The words 'touch' and 'screen' are both verbs and nouns:

- Compare 'the light touch' and 'touch the light'.
- Compare 'the data screen' and 'screen the data'.

Confusion is possible, especially for people whose first language is not English. Technical communicators must minimise the possibility of confusion. Therefore, 'touchscreen' and 'touch-screen' are satisfactory, but 'touch screen' is not satisfactory.

CMSs for websites

To improve some old websites, a member wants to use a content management system (CMS) instead of HTML and CSS. He wants a flexible design, a good range of templates, and the option to change colours and backgrounds. Additionally, the CMS must be easy to learn and easy to use.

Members recommended the following CMSs:

- WordPress (http://wordpress.org) is simple to use and is good for publishing content. However, the options are more restricted than with other CMSs. Sometimes, free WordPress templates contain hidden links to dangerous websites. If the security options are not set correctly, the website will be easy to attack.
- Joomla!® (www.joomla.org) is more complex and has more options than WordPress. To use Joomla!, you need some technical ability.
- Drupal® (http://drupal.org) is the most complex CMS. Drupal is difficult to learn. Additionally, to import existing content is difficult.

One member uses Blogger (www.blogger.com) to link two separate blogs to her website. The member thinks that Blogger can be used for a template-based website. Blogger is easy to use, and has many templates.

A CMS is good if you manage and publish much content. However, a CMS can restrict options, and you need time to learn to use it. C

Mike Unwalla FISTC
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Obituary: Cyril Windust 1915—2011

One of the most prominent members of the ISTC, Cyril Herbert Windust, died on 21 March 2011, at the age of 95.

Cyril was born on 28 August 1915. He grew up and went to school in Southampton. After he left school, he worked for a number of years until the outbreak of World War II. During the war, he was with the Royal Engineers but was badly injured in 1944 and was eventually sent for rehabilitation to Surrey where he met Beryl. They married in 1946.

Cyril had a wide background in practical engineering. He worked at De Havilland Aero-Engines, in the technical publications department, for many years. Here he met Albert Dennis Oakes, who was involved in the Technical Publications Association (TPA). Cyril himself had joined the Presentation of Technical Information (PTI) Group in the 1950s. In 1972, the PTI Group, the TPA and the Institute of Technical Publicity and Publications (ITPP) amalgamated to become the ISTC.

Cyril took a keen interest in the ISTC, holding a place on Council between 1978 and 2000 (co-opted between 1984 and 1990) and eventually becoming an Honorary Fellow. In addition, Cyril was one of several ISTC members to produce articles for the Society of Electronic and Radio Technicians (SERT) between 1976 and 1977. His experience of technical communication also involved providing training: Cyril delivered part time lecturing at Willesden Technical College for 10 years and then lectured student/adult courses at City University London. He not only provided training, but also made use of some of the training available via City & Guilds from 1960, passing the Technical Writing, Technical Author and Technical Editor examinations.

Cyril became involved in recording the history of the ISTC when, at a Council meeting, Gerry Gentle (then President of the ISTC) asked if he could help. Cyril produced a series of articles concerning the history of the ISTC that were published between 1996 and 1999, in connection with the 50th anniversary of the ISTC. In 1998, he gave a presentation of the ISTC history at the ISTC Conference (titled '50 Golden Years') at Churchill College in Cambridge. Between 2005 and 2008, during the history project ahead of the 60th anniversary, he contributed with much information that would otherwise have been lost. He also coined the phrase "The incomplete history of the ISTC", part of the sub-title of the history.

We offer our sincere condolences to his daughter, Patricia Rogers. C

Emma Bayne FISTC

Member news

New Members

Member

Andrew Barr	Surrey
Fiona Cattermole	Cheshire
William Coulter	Berkshire
Nigel Doughton	Bristol
Patrice Fanning	Ireland
Patrick Gribben	Cambridge
Jay Hicks	Germany
Jane Hodges	Hertfordshire
Ultan O'Broin	Ireland
Michelle Refson	Denbighshire
Terry Richards	Bath
Bridget Rooney	London
Paul Anthony Stocks	Bolton
Maxwell Williams	Cornwall
Cerys Willoughby	Hampshire
Claire Wood	Hampshire

Junior member

Peter Gault	Newark
Sarafraz Hussain	West Sussex
Carol Leahy	Cambridge
Hannah Seeney	East Sussex

Associate

Nicholas Berardo	Surrey
Andrew Gillard	Kent
Jason Jackson	East Sussex
Louise Jefferson	Co.Antrim
Malcolm MacDonald	Lancashire
Sanjay Shenoy	State of Qatar
An Van de Borre	Australia

Student

Stephen Hayden	East Sussex

Transfers

Member

Henry Brooks	London
Martin King	Surrey
Richard Potter	Kent
Michel Szarindar	Twickenham

Rejoiner

Fellow

Simon Rollitt	Sheffield

Member

Stephen Peter F.Brown	Somerset
Mike Drinkwater	Southampton

The Welocalize revolution

In this article, writer at Welocalize, Louise Law provides a business update on the merger of Lloyd International Translations with Welocalize.

On-Demand and very much In-Demand

As a long-standing member and business affiliate of the ISTC, we want to update you on the Welocalize/Lloyd International Translations (LIT) merger. Lots of big news. Now we are part of Welocalize, we have a lot more resources and capability. The UK office in Tarporley, Cheshire is settling well into the Welocalize global team and we are adjusting to the shifting cultural change from being a relatively small, regional company to a team spread across multiple time zones: we're all on Skype.

It has been an exciting time for the LIT team and although we were sad to see LIT Chairman Mike Lloyd retire, we hear he's enjoying his well-earned retirement.

We have made links with Welocalize development teams over in China and the USA to improve the delivery model for offices in Europe, the USA and Asia. From this summer onwards, all company communications will bear only the Welocalize brand and Welocalize has invested in a rebranding exercise. A key compatibility between LIT and Welocalize is people and throughout the merger, the focus has been on clients and employees, ensuring total business continuity. We are making sure that our clients reap the benefits of the new global organisation: it's the people that matter.

We are excited to again be a gold sponsor at this year's TCUK event in September as the company is committed to being an active and key player in the technical communication industry. Tom Gannon, Welocalize's Technical Services Director will be delivering a presentation on Machine Translation at the event.

The Welocalize vision is to revolutionise the translation and localisation industry and be the on-demand content and translation leader – providing high-quality translations at high speed. This year's specialist stream at TCUK is 'Anything but text'. The way in which content is authored, created, developed and published is changing, as is the demand for more multilingual content.

"Communication is always on, content is on-demand, the world is on-demand. Welocalize translation services sit at the heart of global communication" Smith Yewell, Welocalize CEO.

We are still technical translation specialists and fully committed to supporting the industry and the next generation of technical communications and translations.

Louise Law is a writer and marketing professional at Welocalize. Based in the UK, she has worked internationally as a professional writer for 16 years, creating high-level business and marketing communications for organisations all over the world.
E: louise.law@welocalize.com
W: www.welocalize.com

Exploring educational futures

Dai Griffiths discusses current developments for managing information at the Institute for Educational Cybernetics, the University of Bolton.

One perk of working for the Institute for Educational Cybernetics (IEC) is that every time I introduce myself there is an opportunity for a conversation about our name, often involving Dr Who, William Gibson and robots. Fortunately these are all topics I am pleased to talk about, but none are directly related to our research work. Rather, our starting point is the tradition of inter-disciplinary thinking which can best be summarised by Stafford Beer's definition of cybernetics as 'the science of effective organisation'.

We use these ideas and techniques as an input to our research into the ways education is being shaped by technology. Through our research, recommendations are made to government agencies and the European Commission as to how resources should be directed as Universities and Schools seek to adapt to a fast-changing environment. We have some twenty full time employees, plus a growing group of post-graduate students.

Researching the ways that education is shaped by technology

Main activities of the IEC

Education is beset with organisational challenges to which technology might be applied: teachers have to manage many learners; institutions have to manage many teachers; governments have to manage many institutions, and so on. The questions are: what technology? what strategy? to what purpose?

One of the IEC's main activities in seeking answers is the JISC funded Centre for Educational Technology and Interoperability Standards (JISC CETIS), whose focus is on technological developments and their implications for higher education. In this work we identify new technological opportunities, and work with the Higher Education sector to explore their potential use. This leads us to many interesting lines of work, often testing and exploring our research ideas through the development of innovative applications. For example, these include tools to support the design and delivery of learning activities using IMS Learning Design, and the design of enterprise architecture using Archimate. One area which we are working on intensively in current projects is the delivery of agile services across a range of platforms. This may sound rather a dry topic, but I hope to persuade you that it can have quite exciting implications!

Flexible access to information

In a physical university campus, it is inevitable that the buildings, information, resources and services are all in locations designated by the university, and made available in ways which are consistent with the university's administrative processes. University websites often mirror this, and the same is true for many other organisations. Students and staff who want to engage in activities with the university are expected to go to the university's portal, and find the place where information and activities are provided for use with designated tools. This can be constricting and frustrating, especially if you are involved in a number of courses, perhaps at a number of institutions. IEC is researching systems which make it possible for students and staff to access information, activities and documents provided by the institution using a range of applications and devices which they can choose and configure themselves, whilst respecting security and confidentiality.

The innovative use of widgets has been the key approach in making this possible. Most

Figure 1. Staff at the Institute for Educational Cybernetics
© Monty Rakusen, www.rakusen.co.uk

Figure 2. University of Bolton

computer users have come across widgets even if they don't know what they are. They are small applications which are available on as gadgets on the Windows desktop and Google homepage, and which populate the Mac dashboard. They are often very simple, presenting information about the weather, or forthcoming events, or providing alerts. This functionality was too restricted for most educational purposes, and offered no way of interacting with other users. To overcome these barriers we developed the Wookie Widget Server, an open source implementation of the W3C widget specification which is now incubating in the Apache Foundation. Using Wookie we can deliver collaborative widgets, such as instant messaging, forums, and voting. Wookie can be integrated into a wide range of host platforms quite simply (for example blogs, mobile applications, and Virtual Learning Environments) and once this has been done the server manages the authentication process transparently with no need for additional log-ons.

Inverting online relationships with institutions

This technical development has made it possible to do some very interesting new things. A course forum is no longer tied to a particular location, in Blackboard, or Moodle, or Google, or whichever system the university chooses. A widget based forum, can be accessed transparently in all these places at the same time, with the participants even being in different institutions. The users may even decide that they would like to move all their conversations onto their personal web space which may be more convenient for them to access, perhaps on their phone. The relationship with the university in these aspects is inverted, with the university managing cohorts and providing feeds and services, but the students and staff deciding where and how they want to make use of them. In Omelette, a thirty month long European ICT project, IEC is using Wookie to integrate web content and phone services into combined applications which have the potential to transform the way we use our phones. This opens up fascinating opportunities for both students and staff, most of whom are carrying around powerful multimedia communications devices which are currently poorly integrated with their educational activities.

Wookie is easy to integrate with most of the applications used in education, and this has already been done with Moodle, Blackboard, and blogging and portal platforms. Once this is in place, authorised users can choose to display any widget which has been loaded onto the server. Institutions or groups of teachers can create collections of educational tools and resources, which constitute an 'App store' that can be used locally, or across institutions and countries. In the iTEC project, a four year Technology Enhanced Learning (TEL) project funded by the European Commission, we are using this functionality to provide a set of easily configured tools for school teachers to use in eLearning scenarios in a thousand classrooms across Europe. This ability to provide easy access to a collection of resources and services on a wide range of computer platforms, mobile systems and interactive whiteboards would have been impossible without the kind of functionality provided by Wookie.

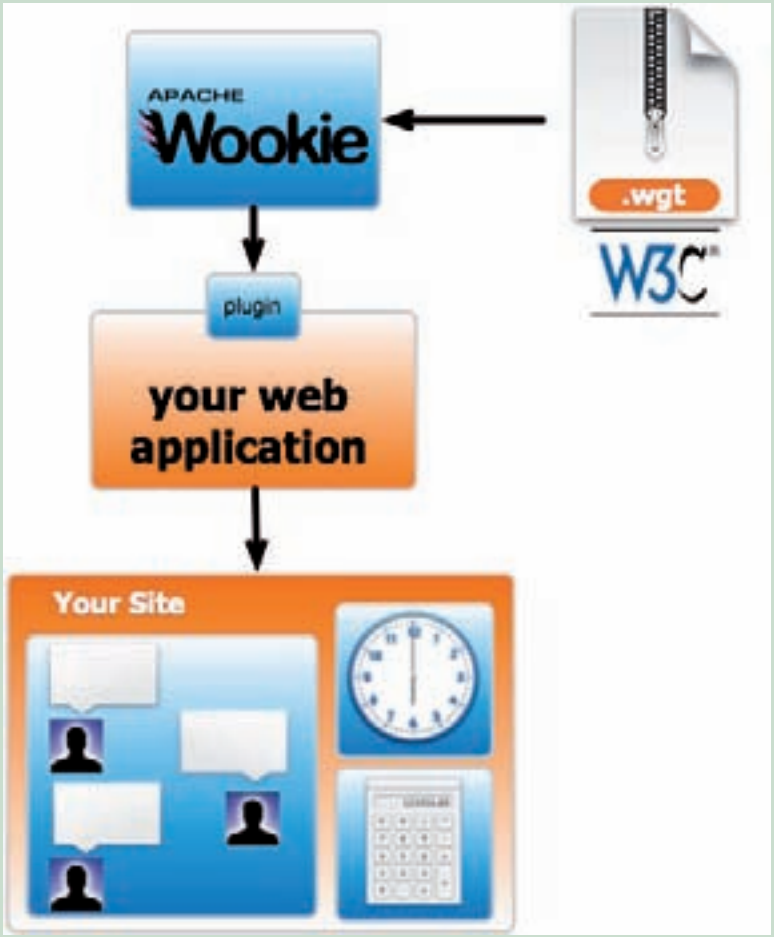

Figure 3. Apache Wookie overview

I hope that I have successfully sketched how technological developments can change the way that we interact with the institutions that we are part of, and the people that we work with. Because of this potential we are pleased to be able to complement our more technical work through our participation in the TELmap project (also funded by the European TEL programme) where we are working in a Europe-wide initiative to build a road map of how developments such as those I have mentioned (and many that I haven't!) may feed into the future of education. C

Further information
For further information about IEC research, projects, and Masters and PhD opportunities, please visit www.bolton.ac.uk/IEC

Bringing tools to hand for teachers, when they need them and where they need them

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France: Science and Curiosities Exhibition

Expat ISTC member Theresa Cameron discovers science, curiosities and Englishmen at the Court of Versailles in the 17th and 18th centuries

From the top of the long avenue approaching the Palace of Versailles, newly restored gilding on the palace roof gleams with a brilliance that immediately evokes the Sun King and the glorious golden age of Versailles. I am familiar with the palace, having lived almost next door between 1998 and 2002, but I am still impressed at each glimpse. The palace attracts hundreds of thousands of visitors to see the royal apartments, the Hall of Mirrors, and the vast gardens with their fountains, but a recent exhibition there prompted me to once again join the throng and enter into the spectacle: 'Science and Curiosities at the Court of Versailles'.

When Louis XIV decided to build a palace in Versailles, the rural, marshy site was considered to be unpromising but what the King commands, the King must have, and so as the land began to be prepared for construction, the foundations of a truly remarkable era were laid.

Setting the scene with a rhino and a globe

On entering the exhibition, the scene is set immediately with expectations of curiosity and wonder. The first item is the Indian rhinoceros that was given to Louis XV in 1770 for the royal menagerie, and was a celebrated sensation at the time. The unfortunate animal was hacked to death by a revolutionary in 1793 but the newly-founded natural history museum in Paris removed the bones then stuffed the remains, stretching the skin over wooden hoops.

Mounting the stairs in semi-darkness to the main exhibition area, you are drawn towards a huge luminescent blue globe suspended from the ceiling. This is a reproduction of a celestial globe made by the cartographer Vincenzo Coronelli for Louis XIV. Coronelli made two globes,[1] one celestial and one terrestrial, in Paris between 1681 and 1683. The brass meridians for the globes were made by an Englishman, Michael Butterfield, who together with the king's architect Jules Hardouin-Mansart, installed the globes in the palace. This was no mean feat as the globes each weigh in excess of two tons.

Figure 1. Graphometer made by Michael Butterfield, 1698

Laying the foundations for more than a palace

The second room is dedicated to the founding of the Academy of Sciences. It was soon deemed that fulfilling the royal command for a palace required experts in a number of fields. Previously there had only been one acknowledged science in France, astronomy. In 1666, twelve scientists including Christiaan Huygens, mathematician, physicist and astronomer, were brought to court to contribute to the construction of the palace. By 1699 the academy was granted royal status and there were six sciences: geometry, astronomy, mechanics, anatomy, botany and chemistry. To support these, schools for civil and naval engineering, fortification and mining were founded, along with the Academy of Surgery, veterinary schools, the Agriculture Society, and the Royal Society of Medicine.

Naturally, the experiments and investigations of these scientists were to be recorded and for this too, the king issued a command: to create a royal Roman script that conformed with mathematical standards. A display table shows us the serif letters drawn on graph paper to precise measurements, copperplates of lettering, and metal stamps on long wooden handles.

Preparing the land with help from Englishmen

Moving on to the preparation of the land for the gardens, the next room presents the tools used for surveying and levelling the ground, and once again we encounter Mr Butterfield. His graphometer (Figure 1) proved invaluable for making small maps and measuring angles based on features in the landscape. The work of another Englishman is also displayed here. Thomas Haye, a craftsman working in Paris, made a simple theodolite in brass for the park's surveyors.

This room, with its carpet reflecting the garden design, also contains drawings and instruments for the various water systems

1 The original globes are on permanent display at the Bibliothèque Nationale de France in Paris: http://expositions.bnf.fr/globes/index.htm

constructed to supply the park with seemingly limitless quantities of water for the Grand Canal and the 2,400 *jeux d'eau*, or water features. The final project, completed in 1685 with its 200km of conduits bringing water from the River Seine 16km away, still forms the basis of the system in use today.

Chevalier Talbot's secret remedy

Medicine and chemistry are represented in the fourth room. The royal court naturally had a bevy of doctors, surgeons and apothecaries who concocted remedies from the medicinal plants in the palace grounds but it was another Englishman, Sir Robert Tabor (also known as Talbor or Talbot), or Chevalier Talbot as he was entitled by the French court, who won significant acclaim in Versailles. Tabor's remedy for what was probably malaria cured members of the royal family but he was very protective of his recipe. Louis XIV paid him 2,000 *Louis d'ors* (gold pieces) for the recipe, promising not to divulge its secrets until after Tabor's death. Tabor died in 1681 and one year later, true to his word, the king ordered the publication of *The English remedy, or, Talbor's wonderful secret for curing agues and fevers, sold by the author Sir Robert Talbor, to the most Christian king, and since his death, ordered by his majesty to be published in French, for the benefit of his subjects, and now translated into English for public good.*[2]

Experimenting with flora and fauna

In the next room, we find ourselves in the zoology section, built in the shape of the now defunct royal menagerie. The collection of exotic animals was a popular entertainment during the reigns of Louis XIV, XV and XVI, and a source for anatomical studies when dissections were performed on animals that had died. A separate 'domestic' menagerie was constructed for farm animals and the *Bergerie Nationale*, now in Rambouillet, continues to breed merino sheep that are direct descendents of the original flock sent from Spain in 1786.

In the botany section, we walk into a room where the objects are displayed in replica greenhouses. The *Potager du Roi* or King's Kitchen Garden, a mere nine hectares in size, was created to feed the court with suitably unusual and extravagant varieties of fruit and vegetables. Through experiments and innovations, asparagus, figs, pineapples and even coffee plants flourished here. The *Potager* continues to supply high tables to this day at the local restaurant of another Brit, Gordon Ramsay, as well as offering produce to other *Versaillais* (including me) at its little boutique in the grounds.

2 Mary J Dobson, 'Tabor, Sir Robert' Oxford Dictionary of National Biography, OUP 2004, accessed 6 April 2011.

Developing life-long passions

The long gallery after the greenhouses displays the tools and instruments that were used for the education of the royal children. A card game that might have been a forerunner of Trivial Pursuit sits alongside a 2m long model boat (complete with canons), a model chemistry laboratory, maps of fortifications, a replica Eskimo kayak, a wax head of a native American, and an enormous globe — to name just a few of the curiosities. The globe was constructed in layers to show the (supposed) depths of the sea as well as the heavens.

Louis XV must have been a keen student as the next room shows some of his collection of scientific instruments. Here, instead of paintings, the walls are covered with bookshelves and the room is dominated by an astronomical clock (Figure 2), conceived by Claude-Siméon Passemant and presented to the king in 1750. The clock shows the movement of the planets, the phases of the moon, the time, and more. It also gives the date, including the year and it was Y2K compliant; the years continue well beyond 2011 — and the clock still works.

Like his grandfather Louis XV, Louis XVI also had a passion for clocks and other mechanical objects but he was particularly interested in naval matters. Perhaps inspired by Captain James Cook's voyages of discovery, which he followed closely, Louis XVI collected scale models of ships and construction plans for ports, and actively encouraged the scientific expedition of the French naval officer La Pérouse.

Encouraging scientific experiments

The final room of the exhibition highlights some of the scientific demonstrations that took place in Versailles. An early experiment in electricity was carried out in the Hall of Mirrors in 1746, and in 1783, watched by Louis XVI and Marie-Antoinette, the Montgolfière brothers launched a hot-air balloon containing a sheep,

Figure 2: Detail of the astronomical clock by Claude-Siméon Passemant

Figure 3. An impression of the aerial experiment at Versailles, 19 September 1783

a cockerel and a duck (Figure 3). All three passengers landed safely and the experiment was a huge success, resulting in knighthoods for the brothers. Franz-Anton Mesmer did not achieve quite the same acclaim. His experiments in animal magnetism were assessed by a group of eminent scientists appointed by Louis XVI. The commission, which included the American ambassador, Benjamin Franklin, concluded that any benefits from the magnetism treatments were due to imagination.

Marie-Antoinette offered a compensatory pension to Mesmer, which he refused but she found other inventors to sponsor. The queen enjoyed the sciences and innovations of the age and purchased a mechanical *tympanon* (hammered dulcimer) player. This unusual item, consisting of an elaborately dressed female figure playing a keyboard instrument — that contemporary hearsay claimed was modelled on the queen — was constructed by two Germans, Peter Kintzing (mechanism) and David Roentgen (cabinet) in the early 1780s. Marie-Antoinette gave the piece to the Academy of Sciences in 1785, which probably saved it from the pillaging and destruction in the palace when revolutionary fever broke out a few years later.

Lasting impressions

The exhibition was an unexpected revelation to me. From an artistic view, I am acquainted with the opulence of the palace and its exultant gold ornamentation oozing with power and wealth, but the richness of the scientific and technical history inspired a new awe. It was a special thrill to discover the designation of a royal typography, and to learn of the English participation and recognition at the court. And if the exhibition is impressive almost to excess, the skill and inventiveness of the scientists and craftspeople are worthy of the accolades this exhibition offered.

But my favourite exhibit had nothing ostentatious about it. Spectacular firework displays are regular events at the palace, following a tradition that was started by Louis XIV. Three hundred years ago, fireworks were hazardous entertainments, but in the exhibition there was a simple diagram of a hydraulic contraption that allowed the fireworks to be lit at a safe distance and next to that, a little book of intricate designs for firework displays that were illustrated by hand. The pink colour was radiant. The world of wonder created by the royal court at Versailles has given us an unprecedented heritage of scientific and technical innovation that continues to the present day. C

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Survey results reveal worrying trend

'Long in the tooth' or just long time in the profession? David Farbey discusses the results from his recent survey.

Earlier this year, I ran a survey asking technical communicators about the tools they used, the deliverables they produced, their delivery methods, and how long they had worked in technical communications. When the results of this survey were compared with earlier data the most surprising result was that, as a profession, we appear to be aging.

Background

In January 2011 I was approached by the EMEA Marketing department of Adobe and asked to organise a survey of what tools technical communicators were using in their work. The survey was given the title 'Getting your message across' and I was invited to present the survey results at the UK launch event for Adobe Technical Communications Suite 3 (TCS3), which took place in London in early February. I have been running occasional surveys across the technical communications community for several years, and have presented results at various events in the past.

Single-sourcing is used by 62% of respondents

It's very easy to make misleading claims about survey data so I want to preface this report with a caution. For any survey to claim that its results apply across a whole population it must adopt a suitable methodology to select a representative sample of respondents. When the population is 'technical communicators' in general it isn't possible to construct a representative sample, because it is very difficult to define or quantify the entire population of technical communicators, either in the UK or worldwide. The respondents in this survey are a self-selecting sample, and the results are indicative of what they said. The size of the sample gives the results some value, but it is not necessarily representative of the opinions or experiences of all technical communicators.

Usually, I run surveys using an online facility such as SurveyMonkey which allows for a variety of question types. This survey however, was hosted by Adobe and the format of questions was more limited. Respondents could choose 'Yes', 'No' or 'Don't know' responses, or select a response from a list, and for tools being used or expected to be used, they could select from a multiple choice list. There were also differences in the way that the survey was publicised, and the length of time it was available. Usually my surveys run for a month (as was the case with the ISTC's own 2011 survey, which was reported in the Spring issue of *Communicator*). This survey was available for just eight days, which may have limited the number of respondents. On previous occasions I have tried advertising my surveys as widely as possible, but this time the survey was only publicised through Twitter and LinkedIn, and a small number of email lists. In these circumstances, attracting 158 respondents must be considered a success.

Organisation size

The first questions in the survey regarded the size of organisation respondents work in, and the size of the organisation's technical communications team (Table 1 and Figure 1, and Table 2). The results show quite an even distribution, with 25% of respondents working in organisations of fewer than 50 people, 25% working in organisations of more than 2,000 people, and the remaining 50% in organisations of more than 50 and fewer than

Table 1. How many people work in your organisation

No. of people	Percentage	Responses
Less than 50	25%	39
51–100	17%	27
101–500	20%	31
501–2,000	13%	21
More than 2,000	25%	40

Table 2. How many people work in technical communications in your company

No. of people	Percentage	Responses
Just 1	31%	49
2 – 4	22%	34
5 – 10	14%	22
11 – 25	12%	19
26 – 50	7%	11
More than 50	15%	23

Table 3. In the last six months which of the following tools or methods have you used for your work?

Tools or methods	Percentage	Responses
Microsoft Office 2007	61%	97
Microsoft Office 2010	21%	33
Open Office Suite	13%	21
Adobe Technical Communications Suite	25%	40
Adobe FrameMaker	44%	70
Adobe RoboHelp	27%	42
Adobe Captivate	11%	17
Madcap Flare and related products	10%	16
AuthorIT and related products	7%	11
Arbortext	4%	7
XMetal	4%	7
Other XML based editing tool	9%	15
Docbook	4%	7
DITA Open Toolkit	6%	9
Other tools not listed here	46%	73

Table 4. In the next six months which of the following tools or methods do you expect to use for your work?

Tools or methods	Percentage	Responses
Microsoft Office 2007	50%	79
Microsoft Office 2010	28%	44
Open Office Suite	9%	14
Adobe Technical Communications Suite	29%	46
Adobe FrameMaker	39%	62
Adobe RoboHelp	26%	41
Adobe Captivate	16%	26
Madcap Flare and related products	15%	23
AuthorIT and related products	6%	9
Arbortext	4%	6
XMetal	7%	11
Other XML based editing tool	16%	20
Docbook	6%	9
DITA Open Toolkit	11%	17
Other tools not listed here	45%	71

Table 5. Do you consider that you use single-sourcing in your work?

Single-sourcing	Percentage	Responses
Yes	62%	98
No	34%	53
Not sure	4%	7

Table 6. How important is web-based delivery for your work?

Web-based	Percentage	Responses
Very important	58%	92
Somewhat important	21%	33
Not very important	11%	17
Not important but used occasionally	6%	9
Not used at all	4%	6
Not sure	1%	1

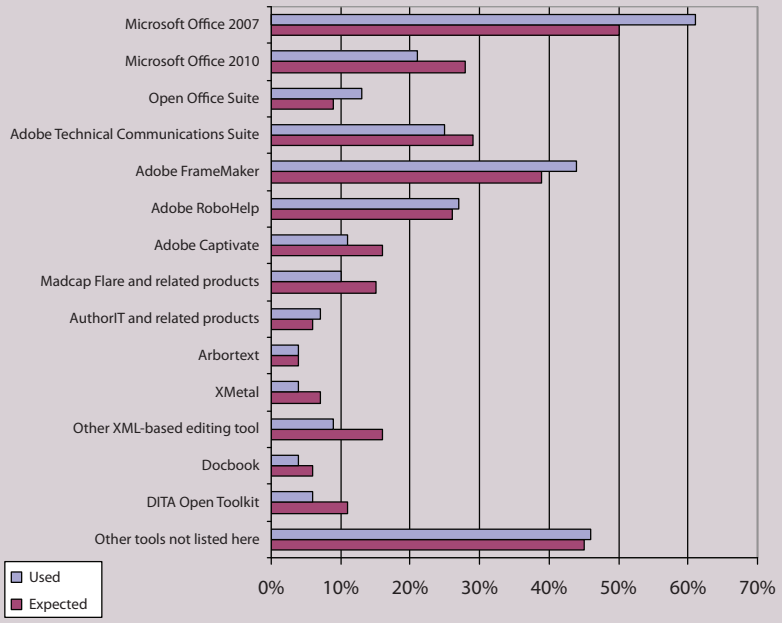

Figure 1. Respondents views on tools and methodologies used in the last six months and expected to be used in the next six months (multiple responses allowed)

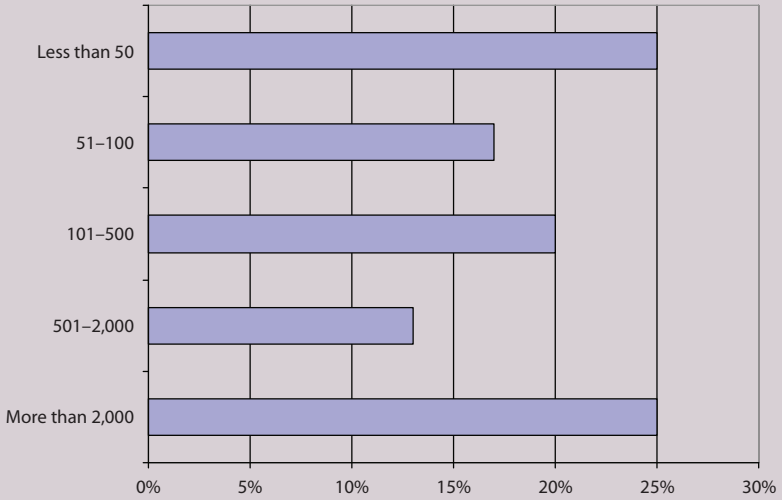

Figure 2.Perecentage of respondents working in different-sized organisations (by total number of staff)

2,000. 31% of respondents said they were the only technical communicator in their organisation (sometimes referred to as 'lone writers') and only 15% of respondents worked at organisations with more than 50 technical communicators.

Tools in use

It was no surprise to see the massive penetration of Microsoft Office products in the technical communications workplace, as shown in Table 3. Similarly, Adobe's place as a major vendor of technical communications products was as expected. In comparison, the number of respondents working directly with XML tools was very low. When asked about their expectations for tool use in the near future (Table 4), respondents indicated a slight overall decline in the expected use of Microsoft products, but also a slight decline in the expected use of Adobe FrameMaker, though an increase in the use of other Adobe products. The table also shows an expected increase in the use of XML tools. A comparison of present use and expected future use is shown in Figure 2.

Single-sourcing and delivery methods

The survey asked respondents for their views on single-sourcing and on the importance of various delivery methods. 62% of respondents claimed to use single-sourcing (Table 5), which clearly represents a market opportunity for vendors of products that support multiple delivery modes.

Web-based delivery appears to be particularly significant for technical communicators with 79% of respondents saying that it was 'Very important' or 'Somewhat important' (Table 6). Cloud-based delivery (Table 7) and mobile device delivery (Table 8) are still less significant. Only 15% of respondents rated cloud-based delivery as 'Very important', and only 6% gave this response for mobile device delivery.

83% of respondents worked on online documentation in the last six months

Types of deliverables

Even though the production of printed books is no longer universal, the book appears to remain a powerful metaphor for producing online documents. 62% of respondents answered that they had worked on printed manuals in the previous six months while 83% answered that during the same period they had worked on online documentation (Table 9).

I have asked a similar question of technical communicators in a number of surveys over the last few years, and it also featured in this year's ISTC Survey (Table 10). From these figures it appears that there has been a significant decline in the preparation of printed documents, but also a slight decline in the preparation of online help. The preparation of online documents appears to have declined for a while and then recovered.

Length of time in the profession

The survey asked respondents to report how long they have worked in technical communications (Table 11). This question also appeared in this year's ISTC Survey, and was part of my MA dissertation research survey in 2003 (Table 12). The ISTC survey and this survey produced very similar results, and comparing the figures from 2003 to those from 2011 appears to show a very dramatic change in the length of time respondents have been involved in technical communication.

Fewer than 30% of respondents have worked in the profession for less than ten years. This might be related to the fact that there are no longer any undergraduate programmes in technical communications at any UK university, meaning that there is no clear entry route into the profession. Whatever the cause, it does appear that more than two-thirds of technical communicators have been working in this field for ten years or longer.

Conclusions

Much of the data from this survey is interesting in itself but in order to describe trends in areas such as tool use and delivery channels, surveys such as this need to be repeated at regular intervals. Where previous data exists, as is the case with types of deliverables and length of time in the profession, trends have begun to emerge. The apparent change in the length of time people have been in the profession may be a cause for concern. Anecdotal evidence from people involved in technical communicator recruitment suggests that there is an imbalance between the number of junior level posts being advertised and the number of senior technical communicators looking for work. Without new professionals joining the ranks of our profession, there is a danger that junior level posts will be filled by individuals who lack appropriate training and expertise, or that the posts will be eliminated altogether. The ISTC hopes that its educational events and activities can help reverse this trend. C

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Table 7. How important is cloud-based delivery for your work?

Cloud-based	Percentage	Responses
Very important	15%	24
Somewhat important	15%	23
Not very important	15%	24
Not important but used occasionally	6%	10
Not used at all	34%	54
Not sure	15%	23

Table 8. How important is delivery to mobile devices for your work?

Mobile devices	Percentage	Responses
Very important	6%	10
Somewhat important	18%	29
Not very important	16%	26
Not important but used occasionally	8%	13
Not used at all	46%	73
Not sure	4%	7

Table 9. In the last six months, which of the following types of document have you worked on?

Document types	Percentage	Responses
Printed manuals	62%	98
Online documents	83%	131
Online help	61%	97
Training material	47%	74
Marketing material	36%	57
Other	27%	43

Table 10. What type of documents do you work on?

Document types	1999	2003	2008	2009	2011 (ISTC survey)	2011 (this survey)
Responses	75	305	247	235	216	158
Printed docs	95%	87%	66%	69%	72%	62%
Online docs	83%	90%	70%	66%	82%	83%
Online help	76%	63%	54%	65%	68%	61%

Table 11. How long have you worked in technical communications (2011)?

Years	Percentage	Responses
Less than 1	1%	2
2–4	12%	19
5–10	15%	23
11–20	42%	66
More than 20	30%	48

Table 12. How long have you worked in technical communications (comparison)?

Years	2003	2011 (ISTC survey)	2011 (this survey)
Respondents	305	216	158
Less than 10	56.8%	28.4%	28%
More than 10 (cumulative)	39.7%	70.5%	72%
More than 20	13.8%	33.9%	30%

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Can e–learning replace a user guide?

Amanda Caley presents a Case Study about a great e-learning system that played an integral role in a major countrywide training rollout.

Create captivating e-learning using storytelling, simulations and scenarios

Can e-learning tick all the boxes so that you no longer need to develop a user guide and online help?

Had I been asked this question a year ago I would have probably said "No, I don't think so".

Now I would say "Yes, you can definitely replace a user guide with great e-learning and what's more your users will love it!"

Don't believe me? Read on to see how one company has successfully done away with the need for a traditional user guide.

Important Note: This article is about the content, not the tools used to create it. There are so many different tools and platforms out there. Before you rush out and buy a new tool, have a look at what you already have within your organisation. You may even find that you are able to use an existing tool for creating your e-learning content.

In the Resources section at the end of this article I have included some links that you might find useful. There's some interesting information out there in the e-learning community!

How do you create great e-learning?

At the Technical Communications UK Conference in September last year one of the common themes was getting your content strategy right and the specialist stream focussed on e-learning.

Many of the presentations I attended emphasised the importance of knowing who your audience is and carefully crafting clear messages to communicate to them.

Figure 1. Join the community and get involved in the e-learning conversation (Image: The Rapid E-Learning Blog)

At Conference, I took part in a session called 'You have 3 minutes...Go!'

I used my 3 minute slot to have a rave about how great e-learning can be.

Many of the speakers (Roger Hart, Ellis Pratt, Simon Rae, Chris Atherton, David Potts and Julian Murfitt) mentioned the power of good storytelling. Provoke with curiosity and interest, relate with a good story, reveal a memorable message… and if your readers think they knew it already, all the better!

In particular, Ellis Pratt referred to the power of the 3Ss in his presentation:

- Storytelling
- Simulations
- Scenarios

My message was "If you want to create captivating e-learning then use this 3Ss model. Accommodate the different learning styles. Create something for everyone; for each e-learning task create different options; one for people who like to be shown what to do, one for people who want to be led through with prompts and one for people who just want to dive in and have a go without any clues."

Did I convince my audience at Conference? Well I'm not sure I did! So I have now put pen to paper and written an e-learning case study based on a project I worked on last year.

E-learning case study

Last year I worked as a freelance trainer on a fascinating and very successful training project with one of the very best e-learning systems I have ever come across. This was a very large scale countrywide rollout of a new system to over 10,000 users.

This company has definitely proved that you can do it all with e-learning.

They developed an e-learning system with the only documentation being a single sheet, A4 tri-fold, quick reference guide.

Their e-learning really does tick all the boxes and what's more, the users love it!

So what makes it so great?

It is easy to use, aesthetically pleasing, well designed, colourful, interactive and has lots of different elements to hold the user's interest:

- Well written, well structured, realistic and engaging content
- Demonstrations — **Show Me**
- Guided tours — **Guide Me**
- Practical exercises — **Let Me**

- Ongoing consolidation exercises — **Check I Understand**
- Processes and procedures
- Video clips
- Integration with classroom training
- End of course assessments
- 'Business as usual' tool

Why does it work?
- A variety of good quality content holds the user's attention.
- Giving users choices about the way in which they learn increases the overall effectiveness of the training.

Engaging content

The company's e-learning is well structured and modular. Each module contains a number of short tasks. All tasks are based on realistic live situations. Users work through scenarios relevant to their particular role.

The system screens in the e-learning are identical to the live system so the interactive sessions are extremely realistic.

Prior to starting work on this contract I was asked to work through the e-learning system as part of my train-the-trainer induction. I have to admit to dreading the thought of ploughing through hours of e-learning. In the past I have worked through some terribly dull and boring e-learning systems. However, once I got going I thoroughly enjoyed it. It was obvious that much thought had been given to engaging the users and accommodating different learning styles.

The real winner for me is having each of the scenarios available to work through in three different modes:
- **Show Me**
- **Guide Me**
- **Let Me**

As they say, the choice is yours. So depending on your starting point and your learning preference you can choose the most appropriate mode for you. For self-study this works really well. My preference was to first work through the **Show Me**, then have a go at the **Let Me** and when I got stuck I'd then work through the **Guide Me** before having another go at the **Let Me**.

Why does it work?
- This model works so well because everyone can enjoy their own learning experience.
- Users get to choose what level of hand-holding they want. This prevents users from getting anxious or bored.

Ongoing consolidation

At the end of each task there is a **Check I Understand** exercise providing you with instant feedback on your progress. If you answer any of the questions incorrectly then you can easily work through the task again to find the right answer.

Why does it work?
- The users get instant feedback on their progress.
- The trainers can identify any areas that need to be reinforced or re-visited prior to users completing the end-of-course assessments.

Processes and procedures

For each task, if relevant, there are links to associated processes and procedures. This is an excellent feature not only during training, but also when users go live on the new system.

Why does it work?
- Having a quick way of accessing up-to-date procedural information is invaluable for 'business as usual'.
- Updates are maintained centrally.

Video clips

For some of the tasks, associated videos have been created, some of which are simple demonstrations of how to perform a task. There are also a number of paired role-play videos - first 'how not to do it' followed by 'how to do it well'.

Why does it work?
- The videos provide variety.
- This works particularly well for covering customer service and other behavioural skills.

Integration with classroom training

The e-learning is introduced to users during the classroom training sessions. Some of the practical exercises are intentionally carried out on the e-learning system rather than the training system. Users are also encouraged throughout the training to look for answers in the e-learning system.

Accommodate different learning styles

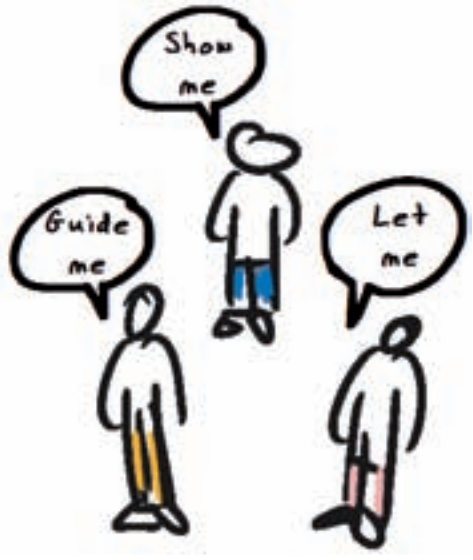

Figure 2. Give your users the choices they want. (Image created using free resources found on the Rapid E-Learning Blog).

General tips for creating great e-learning content

	
Don't start without first finding out what your audience needs.	Know what you want to achieve then plan, prepare and create.
Don't use lots of different styles and layouts.	Choose a consistent look and feel throughout.
Take care with outsourcing it if regular maintenance is required (unless of course you have a limitless budget!).	Choose a tool that you can easily maintain.
Don't make it too easy or too hard.	Get the level just right for your audience.
It shouldn't contain too much information.	Create clear and concise content.
Don't create really large modules.	Create small modules with short tasks.
Don't focus on the features of a system.	Create task-based examples that are relevant and realistic.
Don't just use one type of media.	Use a variety of media. Hold your users' attention.
Don't make it too passive.	Let users practice what they are learning.
Don't just present facts and instructions.	Include challenging activities and scenarios.
Don't force users to work through every exercise.	Make it flexible and easy to use. Let users skip the bits they already know.

All the practical exercises covered in the classroom training are available in the e-learning system.

Why does it work?

- Users become familiar with navigating their way around the e-learning and are happy to use the e-learning as their first port of call when they need assistance.
- The trainers have a great contingency tool for those rare moments when the training system fails.

Practical exercises

In addition to the instructor-led practical exercises, covered in the classroom training, there is also a workbook containing extra practical exercises for users to work through.

Why does it work?

- This is particularly beneficial when the trainer has a group of users with varying objectives. Half the group can be working through exercises in the workbook while the trainer works through additional instructor-led exercises with the rest of the group.

End of course assessments

At the end of each classroom course, users work through a short online test. Results of the test are stored in the Learning Management System (LMS). Users are required to achieve a pass mark of 80% or over. End of course results were consistently above average. Any users who did not achieve the pass mark were given additional coaching before being asked to re-sit the assessment. All users were successful on re-sitting the assessment.

Why does it work?

- Achieving the pass mark gives the users a great confidence boost.
- The training team can measure and manage users' progress.
- The system goes live with fully trained staff.

'Business as usual' tool

The really great thing about this e-learning tool is that not only is it used as part of the classroom training and for self-study purposes for new users, it is also a great asset as a 'business as usual' tool.

When I took part in Go-Live Support work I was able to see first-hand how valuable the e-learning is on an on-going basis.

Why does it work?

- E-learning is an excellent self-study tool for new staff.
- Existing staff can very quickly access the e-learning system and refresh their knowledge, or learn something new.

Other ideas

There is virtually no limit to what you can include in your e-learning. With the rapid

development of Web 2.0 concepts, there is a growing trend for more collaborative learning. Here are just a few ideas of the sorts of things you could also consider including in your e-learning:

- Social software applications (for example, Twitter, YouTube)
- Podcasts
- Quizzes
- Games
- Web Conferences (Webinars)

Conclusions

If you want to create great e-learning this case study is an excellent example of the sorts of things you need to think about.

E-learning needs to be easy to use, well designed, and interactive with lots of different elements to hold the users' interest.

I am now a self-confessed convert to the powers of e-learning. So if like me, you were previously a closet e-learning sceptic then perhaps it is time to take another look at this medium.

My first encounter with e-learning was back in the days when it was called computer-based training (CBT). Things have moved apace since then so I would strongly recommend you take a look at what is out there now. You may be pleasantly surprised.

As I said at the beginning of this article, I'm not recommending any particular tools as there are just too many to mention. However, do have a look at what you have already got available at your disposal. It is possible to use PowerPoint as a base tool and if you already use an authoring tool then speak to your supplier. It may be that the functionality is already there or you may just need to buy an add-on.

So yes, you can replace a user guide with great e-learning. It just needs a little courage and the willingness to try something different. C

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10 Key points:

1. Remember the 3Ss — Storytelling, Simulations and Scenarios.
2. Know your audience and create clear messages to communicate to them.
3. Create engaging content.
4. Give your users choices so that they can learn in a way that suits their learning style — demonstrations, guided tours, hands-on.
5. Give users opportunities to check their progress on an on-going basis.
6. Integrate your processes and procedures.
7. Include different media, for example video clips.
8. Integrate e-learning into your classroom training.
9. Include end of course assessments to boost users' confidence and monitor their progress.
10. Keep it up-to-date so that it becomes a valuable 'business as usual' asset.

Resources

If you missed the Technical Communications UK Conference in September 2010 all is not lost! There is an opportunity for you to have a look at some of the content from last year's Conference.

Many of the speakers have been kind enough to make their slide presentations available: http://tinyurl.com/6e4njwo

Some Technical Communications UK 2010 presentations are available on video. www.technicalcommunicationuk.com/2010-videos

There are lots of e-learning resources out there on the internet, including some for free. I've just included a few that I like but it is well worth setting aside an afternoon to surf around the net to see what interests you.

How Stuff Works — How e-learning works
http://people.howstuffworks.com/elearning12.htm

E.learning age — An e-learning magazine available online
www.elearningage.co.uk/home.aspx

The e-learning coach — tips, advice and reviews for online learning.
http://theelearningcoach.com/elearning_design/10-sources-of-inspiration/

E-Learning Learning — A community collecting and organizing the best information on the web about e-learning.
www.elearninglearning.com/browse

There is a wealth of resources available on The Rapid E-Learning Blog. For example, I found some lovely little hand-drawn men, hand-drawn letters and other hand-drawn shapes which I have used in Figure 2.

The Rapid E-Learning Blog — 5 time-saving tips from the e-learning community
www.articulate.com/rapid-elearning/5-time-saving-tips-from-the-e-learning-community/

The Rapid E-Learning Blog — What everybody ought to know about using PowerPoint for e-learning
www.articulate.com/rapid-elearning/what-everybody-ought-to-know-about-using-powerpoint-for-e-learning

E-Learning Heroes — Advice and ideas from the Articulate community. They have a very active forum and blog. http://community.articulate.com

Free Digital Photos.net — Images are free to use. Check the terms of use.
www.freedigitalphotos.net

Scrivener: write the way you think

Phil Stokes reviews a text drafting tool that encourages topic-based word-processing and an iterative writing process

Since first writing with a computer nearly 25 years ago, I have used a variety of tools to craft thoughts into text: Impression Publisher, WordPerfect 5.1, Microsoft Word, QuarkXPress, Scribus, LibreOffice, Nexus Writer; I've even tried out LaTeX and FrameMaker. What all these programs have in common, however, is far greater than anything that sets them apart. Despite all the bells, whistles, ribbons and menus, the essential method of writing on a computer has barely changed from the first WYSIWYG programs of the 80s.

That is until Scrivener came along. Scrivener is one of the very few text creation tools that approaches writing in a completely different way from those mentioned above. More important than merely being different, what makes Scrivener noteworthy is that it is designed around the way writers think, rather than the way computers work.

Writing as an iterative process

Ever since their inception, word processors have forced us to write text by starting at the beginning and ending at the end. But back in the early 80s, when most people had never even heard the term 'word processor', Flower & Hayes (1981) made an influential case for thinking of composition as an iterative process that is far from linear. As we move through the stages of brainstorming, researching, drafting, editing and proofing, we do not do so in a neat, orderly fashion. Rather, we visit and revisit each of these stages multiple times throughout the creative process, jumping backwards and forwards at the whim of the text and our own cognitive processes. Since almost every writing task involves some kind of research, that also means we jump back and forth between reading, note-taking, highlighting, and drafting.

In 1997, researchers at Rank Xerox (O'Hara and Sellen, 1997) pointed out that the standard desktop computer offered little support for the process writing approach. Ten years later, Microsoft researchers found that while technology had become faster and slicker, little had changed: computers and software applications still failed to support an iterative, process-writing workflow (Morris, Brush and Meyers, 2007).

Overview

Scrivener changes all that. It may be difficult to say precisely what kind of program Scrivener is — it is part word processor, part outliner and part bibliographic repository — but very shortly after first using the program, it becomes clear that Scrivener approaches composition in a completely different way from the tools we've all been brought up with.

Productivity, costs and hardware

Precisely how Scrivener is different we'll get to shortly, but there's always a few important things I want to know before hearing about how some piece of software is magically going to change my life, for example: how much time am I going to have to spend learning this new wonder tool before it starts adding to, rather than subtracting from, my productivity? And what about the costs? Few of us want to hear that it takes the resources of a medium-sized IT department to purchase and maintain it.

In both respects, this program is a writer's dream. Getting to grips with Scrivener is a cinch. The gentle learning curve is due in part to its familiarity - its basic functions will be familiar to anyone who has ever used a word processor – but more so to its exemplary Help and tutorials. These are not after-thoughts but have been carefully thought through from the beginning. Both a locally stored interactive tutorial and web-based video tutorials are available from the application Help menu, as well as a traditional PDF user manual. However, if you want to take quick and full advantage of the special things Scrivener has to offer then the interactive tutorial is the best place to start. It's fast, clean and doesn't stop you using the program while you're using the tutorial or searching the Help.

And the financial investment? A mere £35. On top of that, you can download the 30-day trial and give it a run before you decide to pay for the licence key, so it is not only within the budget of even the most cash-strapped freelancer but also risk-free to boot.

As far as hardware requirements are concerned, it is worth noting that Scrivener was made for Mac OS X, and while a Windows version is in development (tentatively scheduled for later this year), this review applies only to the Mac version. Scrivener will run on either Power PC or Intel machines with anything from OS X 10.4 to the latest version of Snow Leopard.

So what can it do?

The first and most obvious thing that you can do with Scrivener that you can't do with an ordinary word processor is simultaneously read, mark-up, and take notes on a source document while you compose your draft. You can open your source document in one panel of Scrivener and make short notes on it in an adjacent one,

or take longer, fuller notes in a new document within your project (see Figure 1).

Importantly, you can scroll the source document without deactivating the input window, meaning you do not have to interrupt your writing task to click between reading your source and inputting text into your draft. You can also search, annotate and highlight within the source document directly from within the Scrivener interface, and of course you can cut and paste from your source straight into your draft. Scrivener enables you to import webpages, email and most popular file types such as .pdf, .png, .rtf, .docx and many others.

In Mac OS X, Scrivener works natively with Finder and Preview, so you get all the functionality of these built into Scrivener, including the use of Quickview, which can be contextually invoked by pressing the spacebar, and an array of other floating HUDs (Head-up displays).

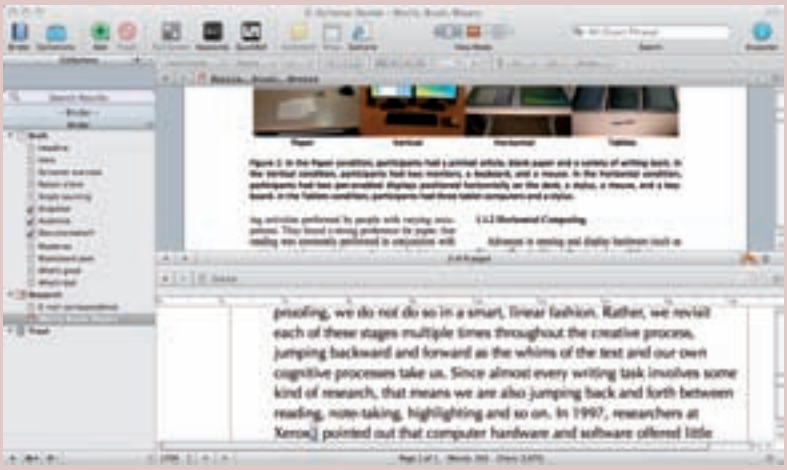

Figure 1. Splitting the editor. Read and scroll a source document (top) while input focus remains in drafting window (bottom). The Binder (left) enables navigation and easy topic hierarchy manipulation

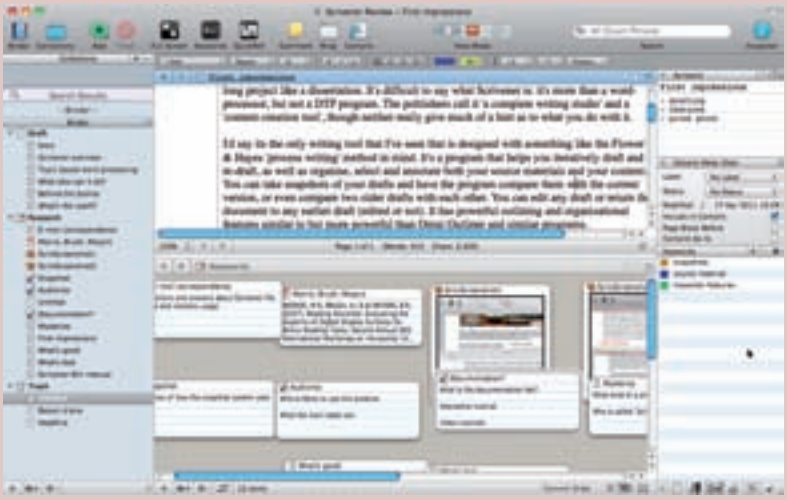

Figure 2. Corkboard view (bottom), shows virtual index cards which can be dragged and dropped into different relative positions and hierarchies. Inspector (right) gives access to comments, footnotes, references and meta-data.

Topic-based word-processing

Drafting is what Scrivener is all about. Although it is not a single-sourcing program, Scrivener encourages you to write in small topic-based chunks and it could be ideal for drafting content that you might later move over to something like Madcap Flare or Adobe RoboHelp.

Regardless of what software you use to put together your final content, the benefits of drafting in Scrivener come from its powerful outlining and organisational features, which centre around 'the Binder', the navigational panel on the left hand-side of the interface.

In a Scrivener project, you can write in a single document in the main editor window, and then split the content into new documents with their own topic names using a simple hotkey call (you can also invoke the split command through the menu). You can keep splitting your documents wherever you want and as much as you want, and then reorganise them by dragging them into the preferred position in the Binder. Dropping one topic on top of another in the Binder, for example, makes the dropped topic a 'child' of the other.

You can also give each document a synopsis and use the 'corkboard' feature – a sort of pinboard of virtual index cards – to rearrange them in any order you like (see Figure 2). If you want to see what your whole draft looks like as a combined project, click the View mode icon. No compiling is necessary at this stage and the view mode is instantaneous. If you're not yet sure which arrangement of topics suits your project best, Scrivener's 'Collections' feature allows you to collect all or some of your documents into different groups in any order you want. The 'Collections' function works in a similar way to 'playlists' in iTunes, organising items (in this case, documents in your project) in ordered lists according to different rules rather than physically moving or copying them from one location to another. The 'Collections' feature provides an interesting solution to solving topic organisation problems on long or complex projects.

When you are finally finished drafting and organising, the 'Compile' command enables you to choose which elements in the Binder are finally exported (or printed) and which are not. You can choose to export some combinations of topics for one purpose and other combinations for another. Apart from various text formats, Scrivener also exports in HTML and PDF.

Powerful tools

Scrivener has an array of powerful drafting tools that aid the writing task without disturbing your workflow.

Snapshots is for all those authors who have ever realised that the draft they had two days previously was probably better than the one they're staring at on the morning of the deadline. Personally, I've always found saving

Figure 3. Quickview enables you to have as many document views as you need. Multiple floating windows of any item in the Binder (top right) are permitted.

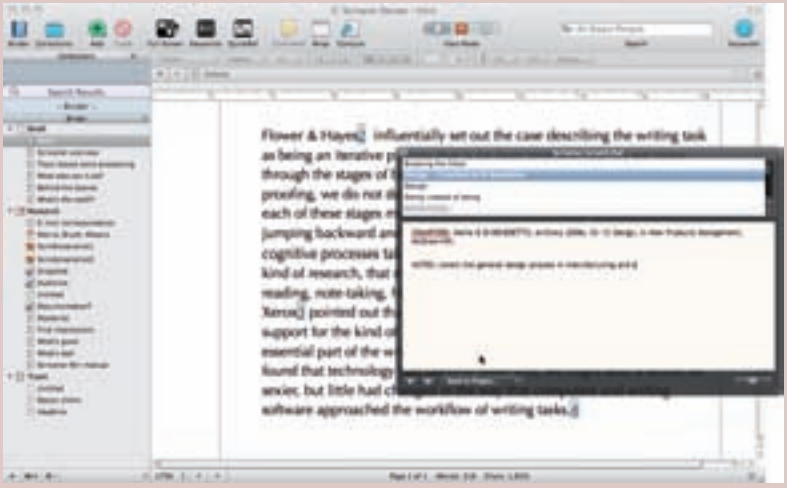

Figure 4. Scratch Pad sits on top of the main Scrivener interface, and can be invoked anywhere in Mac OS so long as Scrivener is running.

multiple document versions or using Word's 'Track changes' feature to be visually confusing and complicated to use. Scrivener's snapshot feature enables you to take a complete record of the state of any document with a simple command, to easily compare different versions, see the changes, or revert to a previous version in the Inspector. However, Snapshots is primarily intended to give authors the confidence to make radical changes to their work to see how they will work out, rather than to document every minor edit. Unlike version control software or content management systems, you are not asked to 'sign off' changes, nor are changes recorded by author name. Essentially, Scrivener's default assumption is that a project is the work of a single author, rather than a collaborative enterprise. Moreover, there is no automatic way to schedule a 'snapshot': it is a manual option that you must remember to invoke.

In-line annotations are another useful feature if, like myself, you are the sort of writer who likes to make editorial notes in the text rather than out in the margins. You can automatically remove all your in-line annotations when you compile or export, so there is no need to run searches to delete them before you print. You can even make your in-line annotations appear as marginalised comments if you export your final draft to Microsoft Word. Alternatively, you can export your annotations as a separate .rtf file if, for example, you wanted to produce a report on how a project developed throughout the drafting process.

The Scratch Pad and the Inspector are also features that can usefully aid the writing task. So long as Scrivener is running, the Scratch Pad can be invoked from anywhere within Mac OS X even when you are working within another program. So if some wondrous thought suddenly hits you while reading an email from a friend or browsing an article on the web, you can call up the Scratch Pad with a hotkey combination, jot down your thoughts and send them directly to your Scrivener project (or just leave them in the Scratch Pad to be read over later): perfect for those authorial gems that only occur when you least expect them. Perhaps more usefully, because the Scratch Pad is a floating HUD, it is ideal for taking notes while reading PDFs or other source documents outside of Scrivener and for drafting posts to blogs, discussion forums or social media sites.

Scrivener's Inspector is the place where all sorts of meta-data can be created, viewed and organised as well as where snapshots can be compared and edited. Comments, footnotes, tags, keywords, document status, synopses and much more can be recorded and accessed via the Inspector panel, which sits on the right-hand side of the interface. Visibility is easily toggled with the prominent 'i' icon in the top right of the toolbar or by hotkey.

There is more to Scrivener than can be mentioned here, but as the program's chief architect and company founder Keith Blount likes to point out, the beauty of Scrivener's many features is that they intrude little in the writer's workflow: none of the features force you to work in one way or another just to comply with the software architecture. And yet, just about any feature you might wish for in an authoring tool can be called up with a simple command. You can use the program as nothing more than a simple text editor if you wish, or you can create complex novels with character and location templates and targeted word counts for each topic in your section, chapter or book.

Behind the scenes

Scrivener organises your work into 'a project', which contains all the documents you have created for that project as well as any files you have imported in the Binder. Although each project is saved with a .scriv file extension, one of the things I really like about this program is that it does not lock you into using Scrivener for the rest of your — or your data's — life.

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A .scriv file is simply a Mac OS folder containing separate files, and importantly these are not stored in any proprietary file format. Documents created in Scrivener are all stored as .rtf files, and all imported files maintain their original extensions. This means that if anything goes wrong with Scrivener, there should be no problem retrieving your data. It also means that your work is portable. You can easily open, read, edit, copy and move anything you create without using Scrivener at all if you need or choose to.

Because Scrivener integrates with and exploits a lot of native Mac OS processes, the program is fast to use and light on processor memory. The 'spinning beach ball' (the Mac OS equivalent to Windows' egg timer) is rarely seen except during file import. Even graphics, once loaded into the Binder, are displayed quickly and effortlessly in the editor window.

Where's the catch?

Inevitably every application has its limits, quirks and niggles. On the limitations front, the main problem is that Scrivener lacks much in the way of page layout tools. That's not surprising given that its primary objective is to be a drafting tool, but it does mean you're still going to need to open up Microsoft Word, QuarkXPress, InDesign or whatever else you normally use to produce your finished document. With that in mind, for some users, Scrivener's writing tools may not offer much advantage over those of Word. Short documents or quick writing tasks can be done just as easily in your usual word processor. Scrivener best serves those embarking on writing long documents with complex structure, or writing tasks that require researching source material both before and during drafting.

A second limitation of Scrivener is its support for graphics. Although there is no problem importing various graphic files and resizing them in the editor window, that is about the limit of Scrivener's graphical capabilities. You are going to have to do any fine-tuning of graphics — run-arounds, opacity, borders, drop shadows and annotating or adding call outs — in another application.

Moving on to the quirks and niggles, Mac users will find Scrivener's trait of adding a new document when hitting return while a document is selected in the Binder — rather than performing the default Mac OS action of making the selected name editable — a frequent irritation. Even after several months of using the program, I find this continues to vex. Other things that could be improved are the provision of more buttons for common word-processing functions in the editor toolbar and improved consistency of controls for actions such as zooming: standard Mac OS swipe gestures can be used on imported documents, but Scrivener's own text-editor window does not respond to these, and offers only the more traditional (and cumbersome) zoom menu with fixed percentage steps.

Conclusion

Given the low price point and 30-day trial, this really is a program that anyone who writes anything of more than few hundred words should consider looking at. While primarily designed for authors composing long, multi-page documents, it is useful for any kind of writing task that requires researching and annotating material from several sources. Indeed, as a close look at the screenshots will show, I found it useful in just that way for composing this review. C

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Scrivener is available from www.literatureandlatte.com/scrivener.php

Harry Beck's underground map

Beck revolutionised the map of London's Underground, and inspired many others, Richard Truscott is a fan of his work.

Harry Beck designed the London Underground map[1,2] and inspired similar maps used for transport and other purposes. Harry Beck took something complex and made it simple and understandable, is this not the essence of good technical communication?

Making complex ideas easier to understand

Since Harry Beck's invention of the map many designers have adapted the idea of a map to show an overview of complex procedures or information; making maps useful in technical documentation.

Harry's history

Henry Charles Beck (Harry Beck) was born at Leyton, London in 1902 and died at Southampton in 1974. Harry married Nora Millington (1906–93) in 1933; they had no children.

Harry's father was artistic and so was Harry, who trained as an artist and sculptor. Harry found it difficult to find work in his chosen profession of commercial artist. He did however find work in the Signal Engineers department of London Underground.

Harry's big idea

Harry lived in London's Highgate and was a regular user of the Underground, but because he did not have a railway background, he could see things as a member of the public would. He found the maps of the Underground unsatisfactory and taking a number of influences, he reinterpreted the underground map. *'Looking at an old map of the Underground railways', he said, 'it occurred to me that it might be possible to tidy it up by straightening the lines, experimenting with diagonals and evening out the distance between stations.* 77 years later, the map we see today is very similar to his original design.

In 1931, while working as a contract draughtsman for London Underground, Beck designed the map as a personal project. He offered it to London Underground's Board who rejected his idea. He tried again in 1932, this time the Board agreed to a trial of a pocket map. The trial took place in 1933 and won huge public acclaim.

Beck received 10 guineas[3] (£522 in modern terms) for the pocket map and he went on to produce a poster for which he received five guineas (£266).

It is unclear where Beck's idea came from; certainly, one influence was the style of electrical circuit diagrams and he even produced a 'joke' map for a staff magazine along these lines. In addition, another draughtsman F.H. Stingemore preceded him in producing a geographical map that used different scales for the central and suburban areas but retained the direction of the lines and the distances between stations (see Figure 2).

Why the map works well

The key to the success of the map is that it:

- is an abstraction, only showing information strictly necessary for navigating the Underground. Stripped of geographical information the only feature that remains is the river Thames. Removing the geographical information gives plenty of space for station names and interchanges.
- reduces the complexity of the network by distorting, but not destroying direction and distance. The traveller maintains a sense of

1 Strictly speaking, it is a Diagram not a Map, but because London Underground calls it a map, I have used the term throughout.

2 The ownership and Management of the Underground has changed a number of times passing from private, to local and central Government hands. I have used the term London Underground throughout this article to refer to the organisation rather than the legal entity.

3 Pre decimal money. A guinea is £1 and 1 shilling or £1.05. Originally it was a gold coin.

Figure 1. Harry Beck in front of a 1958 version of the map. In his hands, he is holding his original sketch. © 1965 Photograph by Ken Garland

Figure 2. Geographic and Schematic maps. © TfL from the London Transport Museum collection. Left image: F.H. Stingemore, right image: H.C. Beck

direction because Watford appears as North West of the centre and Morden is South West. Stations are spaced evenly along the lines allowing for a clear un-crowded look even though some stations in the central area are only a few hundred metres apart and suburban stations a kilometre or more apart.

- makes the crowded central areas take up more space than the suburbs. It is the central areas that need clarity because it is where most passengers change trains.

There were maps of the underground prior to Beck but they were always geographic (Figure 2 left). Compare this map with Beck's first schematic map (Figure 2 right); Beck retains the basic shape of the northern end of the Northern Line (shown in black[4]), but distorts the length of the two branches. The same is true of the western end of the Piccadilly and District Lines.

4 Black has always been the colour of the Northern line; other lines have changed their colours over the years.

Problems start to arise

Beck was to find out the truth of Samuel Goldwyn's quip that 'A verbal agreement is not worth the paper it's written on'. At some time, Beck signed over the copyright of the map to London Underground; exactly when has been disputed but Ken Garland says it cannot be before 1937. However, Beck thought he had an agreement that he was the design authority and had control of future changes to the map.

This ad-hoc agreement worked well for a few years until a slightly modified design appeared in 1938. Beck took issue with London Underground who then appeared to accept his design authority. The legend 'H.C. Beck' always appeared on the seven versions of the map he produced until the last in 1958.

London Underground's Publicity Officer; Harold F Hutchinson had a new version of the map produced in 1960 (see Figure 3 left). It was very different from Beck's; there were no curves and more diagonals.

A battle of letters then started between Beck and London Underground. Beck claimed that

Figure 3. Comparison of the Hutchinson (left) and Garbutt (right) versions of the map ©TfL from the London Transport Museum collection.

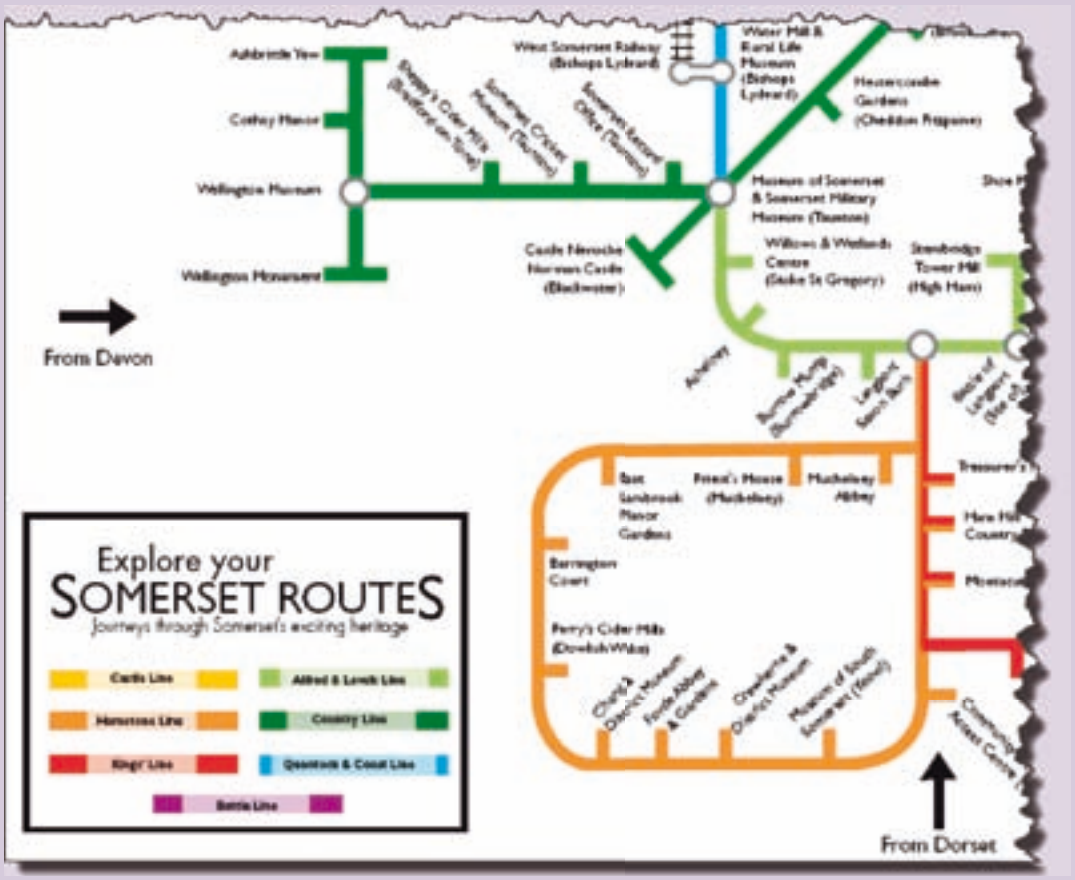

Figure 4. Somerset Tourist Map

he owned the right to change the design by the agreement made with London Underground when he signed over the copyright, London Underground denied Beck's claim. The letters became more strident and threatening and Beck even hinted that he was going to court over the matter; however, he never did take that step.

The Hutchinson design was not a public success as its 'jerky' look was hard to follow (Figure 3 left).

Another London Underground employee Paul E Garbutt realised the Hutchinson map was unsatisfactory and in his spare time (he was Assistant Secretary and New Works Officer) he designed a new version in 1964, that reinstated many of Beck's original ideas (see Figure 3 right). Garbutt put back the curves, straightened, and smoothed the lines. Meanwhile Beck was still sending London Underground unsolicited designs that allowed for changes to the network such as the Victoria line. Garbutt produced four versions up to 1972; the designer's name does not appear after this date.

Modern versions of the map now attribute the design to Beck with the words 'This diagram is an evolution of the original design conceived in 1931 by Harry Beck'.

Standing the test of time

Harry Beck and London Underground were the first to produce this type of map. It is an idea that many other transport organisation such as the New York Subway, Paris Metro and Madrid Metro, use to show their network. The map has certainly stood the test of time; it is of course still in use, and in a form, that Harry Beck

Figure 5. Troubleshooting guide

Competition

Can you identify the UK City from a section of its underground map?

Prize: Tea-towel of the UK City shown above.

How to enter: Please send an email to commissioning.editor@istc.org.uk with the answer.

Winner: All entrants will be placed in a draw. The final date for submissions is 8 July 2011 BST.

Open to all readers.

would recognise. The design has accommodated new lines without major change (Jubilee and Victoria). In addition, it has been adapted for modern uses to show disability and bike access, and other things, by producing single purpose variants. New versions showing all of the London's transport links and fare zones follow the original design.

Some examples of using a map

Somerset County council have an imaginative tourist map based on the Beck model (see Figure 4)

The idea of using a map could be applied to a trouble-shooting guide (see Figure 5).

Why I like Beck's work

I admire Beck's determination and dedication to his idea, many others would have given up after being rejected. Garland tells how Beck filled his house with drafts of maps for London and other cities (Paris for example) and how he was constantly re-thinking his ideas. I also admire Beck's design because it conveys complex information in a simple and clear way.

And finally…

To me, having been born and grown up in the London suburbs, the underground map has always been around. However, until the BBC's culture show and the Design Museum held a design icons competition in 2006, I had given the map very little thought. In finding out more about the map and its designer, I found Harry Beck's life and work interesting and hope that you enjoyed reading this article. The idea of using an underground map has sparked many imaginations, for example, art works such as Simon Pattison's 'Great Bear' (an underground map with station names replaced by artists, scientist and writers), and The Bike Station's 'Inner Tube' cycling map of Edinburgh; maybe it will spark your imagination too. C

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Who edits the editors?

John Revington finds out if the StyleWriter 4 editing software has a place in our technical communication world.

If you ever wished that you could have your own tame subeditor to check your work, find those easily missed mistakes, and offer advice, then perhaps StyleWriter 4 is for you.

This review takes a closer look at how well this editing software performs in the demanding world of technical communications.

What is StyleWriter 4?

StyleWriter 4 claims to be the 'world's most powerful copy-editing software' (www.editorsoftware.com). While this is no modest claim, the latest version of this software certainly offers a rich set of features, many of which are unique, in a single powerful package.

You can run the program as a standalone application, or launch it from the StyleWriter 4 icon on the Word toolbar. It 'reads' the document you're working on, analyses it using a vocabulary of 200,000 'graded words' and some 50,000 word and phrase 'rules', and displays its findings, advice, and statistics in its own window.

Using highlighting and a range of colour codes, StyleWriter 4 neatly and clearly sets out the results of its analysis, particularly with regard to:

- style checking (for example, categories such as passive verbs, clichés and jargon, complex words, legal terms)
- proofreading (for example, commonly confused or misused words, hyphenation, sexist writing)
- readability (see Nick Wright's article in this issue of *Communicator* on page 36 about a new readability measure — the Bog Index)
- likely reception by three kinds of audience, and 20 different writing tasks
- your own house style (you can add your own style rules and categories, and delete others)
- measurements and statistics (for example, Passive Index, average sentence length, 'Bog' and 'Pep' readability measures).

Why would you want to use StyleWriter 4?

As technical communicators, we face a broad range of writing tasks. Sometimes our work is little more than correcting a few typos, or improving the grammar in a short document. At the other end of the scale is the challenge of a large, poorly written, technical manual aimed at a non-technical audience — not an uncommon situation in our world.

At every point along this wide scale, StyleWriter 4 has plenty to offer, even to the most experienced technical communicator. None of us knows it all, nor can we spot every mistake. To have that tame subeditor at your shoulder will undoubtedly improve the language quality of your document and bolster your confidence.

This program helps you write straightforward (plain) English according to established language rules and conventions. This in turn helps your readers understand complex or technical documents more easily, and helps you meet the promise of being an effective technical communicator.

It offers a structured, objective, yet flexible way to edit documents, as well as acting as a tutor, helping you learn about the complexities of our rich language.

A typical editing process

I've used different versions of StyleWriter on many kinds of document, from personal emails to scientific papers, for nearly three years. Most of the time the software's advice has been both positive and enlightening, even when I had checked and re-checked simple documents, and was sure about the quality of their language.

Typically, editing a document with StyleWriter 4 starts by launching it from Word's toolbar. By default, it analyses the whole document, although it also gives you a choice of analysing selected text, or text copied to the clipboard from other sources, such as a PDF.

When the program displays its findings and its advice, the fun starts.

Figures 1 and 2 outline the approach I've found to be most productive when editing a document using StyleWriter 4:

1. 'Eyeball' the text in the main panel (lots of different colours and lots of highlighting means there's lots of work to do!).
2. Look at the three main calculations at the bottom of the results window to get a sense of the quality of the writing according to plain English rules (Bog [readability] Index, average sentence length, and Passive Index).
3. Explore the bar charts and the corresponding, colour-coded text in the left hand panel (each bar represents a sentence).
4. Look at the detail of a secondary window which displays the plain English 'transgressions' in various categories (such as how many passive verbs or jargon terms there are in the document).

The number of suggested edits that display in the window is often quite overwhelming, so the next step is to decide what edits to make: change all passive verbs, delete some unwanted jargon, and simplify a few complex words? These

decisions often depend on the time, quality, and cost constraints of the project — what changes can I afford to make in the time available? — as well as on the document's readership.

The results windows

Figures 1and 2 show StyleWriter's results windows for an unedited document, and indicate the editing sequence described above.

Two contrasting examples

Rather than showing the results of StyleWriter on familiar content (The Economist and BBC content tends to be excellent; financial and compliance reports are often poor), I aimed the software at two pages of ISTC's in-house writing, and at a random article from the web.

Figures 3 and 4 show the statistical analyses of these two contrasting pieces of writing.

The Word template the *Communicator's* commissioning editor sends to contributors has two pages of guidelines and instructions for using the correct styles when submitting copy to the journal. The resulting analysis, as we might expect, is excellent (Figure 3).

The second example (Figure 4), is the random web article.

Final thoughts

Having used StyleWriter on several thousand pages of business and technical documentation, I realise I have come to rely on it, not just for its sharp 'eye' and consistent advice, but also as a tool to measure the value we, as technical communicators, can add to our client's or to our internal documentation.

Conclusions

If the idea of having an unbiased, ever-alert, and knowledgeable companion to help you improve your writing appeals to you, then StyleWriter 4 is definitely worth befriending.

At first you may find the volume of advice is daunting, but you have many choices for how deeply you edit, and they are all under your control. You can even ignore its advice, if you think that's wise. That flexibility alone makes a compelling reason to have this editing tool on your desktop.

With a 14-day trial download and a price of £104+VAT you can't go wrong. C

Figure 1. StyleWriter's results window for an unedited document

Figure 2. A secondary window showing which plain English rules have been 'broken'.

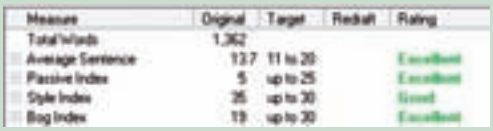

Figure 3. Result for ISTC's instructions in its writer's template.

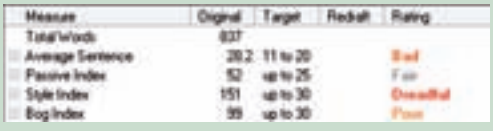

Figure 4. StyleWriter's result for the web article

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Designing a better readability formula

StyleWriter's Nick Wright, discusses the background behind developing his company's Bog Index.

I once presented a course to technical writers on the drafting of computer manuals. Unlike every other profession I taught, I didn't have to tell the technical writers to write shorter sentences. So I asked: 'Who taught you to write in short sentences?' No one knew. Their manager eventually piped up: 'They only write short sentences because they don't know many words.' A little harsh, but according to standard readability formulas — short sentences and a basic vocabulary is the ideal way to write clearly.

Readability formulas, such as Flesch-Kincaid or the Gunning Fog Index assess writing style by analysing a document's sentence length and the length of words. The shorter the sentences and the fewer syllables or characters in the words, the lower the score. Advocates of these formulas use this to work out the grade of education needed to understand the text. The lower the score or grade level the easier the writing style — or so the theory goes.

Back in the classroom, the technical writers had pages of short sentences — often disjointed — and always with a liberal sprinkling of acronyms, abbreviations, jargon and abstract words and passive verbs. Perfect according to the readability formulas; but confounding to their readers.

Designing the Bog Index

With the power of the modern computer, we can design a readability formula to assess many more features in writing than word and sentence length.

We've designed a new readability measure for our StyleWriter editing software — the **Bog Index** — so called because it measures how style can bog down writing. It's unique in analysing text against a graded 200,000-word dictionary, and in assessing style faults found by the StyleWriter program such as; redundant phrases, passive verbs and hidden verbs.

The Bog Index doesn't just measure poor writing habits but includes measures of good writing style — called **Pep** because these features pep up writing. Pep makes reading easier and more enjoyable and consists of lively verbs, interesting nouns, names and conversational style (contractions, personal pronouns, direct questions and short sentences).

StyleWriter's Bog Index measures sentence length, word choice, style problems and abbreviations. It then reduces the index depending on the Pep (good writing features) found in the text.

Adjusting the Bog Index by Writing Task and Audience

Clear, readable writing differs depending on the writing task and the audience. A medical paper read by scientists naturally uses more difficult words than a speech to the public. StyleWriter's Bog Index adjusts its scores and ratings depending on the writing task and audience chosen.

What makes the Bog Index better than standard readability formulas?

Readability formulas claim good writing is around US education eighth grade — that produced by 13-year-olds. Gunning, in 'The Technique of Clear Writing' states that the easy reading level is in the range of sixth to tenth grade and that 'anyone who writes with a Fog Index of more than [Grade] 12 is putting communication under a handicap and a needless handicap at that'. This doesn't mean writing should be like a 13-year-old's, but rather a 13-year-old can read and understand it. Insofar as it goes, this is reasonable advice, but there are problems.

In a survey of 50 different readability formulas on text independently assessed by teachers as suitable for different school grades, standard readability formulas:

- Predicted the correct grade in only 8 to 28 per cent of cases.
- Had an average error between 1.5 to 3.8 grades.
- Often produced errors of up to 6 grades.

But even if readability formulas were accurate, they offer limited help to the writer because:

- They do not show writers where and how to edit.
- They do not take into account the writing task and audience.
- Writers often ignore a high grade level as claiming they are writing to an educated audience.
- Good writing can have a higher grade level than poor writing.

Compare these two examples:

Management-speak

The ARP and AAR outputs were determined as part of the overall operational FSX needs. Management were then asked to oversee both ARP and AAR production with consideration being given to ARP and AAR in the annual accounts. The ongoing assessment of the above requirements is a necessity for ARP and also AAR production.

- Average sentence length 18,
- Flesch Reading Ease 47.5 (fairly difficult)

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Figure 1. Bog Index Equation

- Grade Level 11.0
- Bog Index: 123 (bad)

Journalism

Elephants, rhinoceroses and wildebeest have migrated across the parched African grasslands to the continent's high tablelands, searching for desperately needed water. Zoologists studying animal migration have reported devastating losses with thirteen million animals under threat. Alexander Donaldson, from the African Wildlife Agency, declared this was 'disastrous and endangering animals to the point of extinction'.

- Average sentence length 18
- Flesch Reading Ease 5.2 (very difficult)
- Grade Level 16.9
- Bog Index: 18 (excellent)

Why does the measure of grade level education show that you need nearly six more years of education to understand the clear and descriptive piece of journalism compared to the mind-numbing management-speak? Why does StyleWriter's Bog Index give the opposite result, considering the journalism excellent writing and the management-speak bad writing? The answer is simple — it depends on how you assess the words and style.

Flesch's Reading Ease and the Flesch-Kincaid Grade Level look at the number of syllables. The journalist's writing contains longer words — averaging 6.5 characters a word compared to 4.8 (because of the overuse of three-letter abbreviations) in the management-speak example. StyleWriter's Bog Index knows the words in each sentence and distinguishes between words and abbreviations. It allows that clear, specific and descriptive words, proper nouns and Pep words such as **grasslands** and **tablelands** in the journalist's writing add interest and specific content, which make the document easier to read. The Bog Index also marks the management-speak down for using abbreviations, passive verbs, jargon and other style faults, and it finds no Pep to relieve the boring style.

Turning the Bog Index into an editing tool

As StyleWriter's Bog index accurately measures each sentence, we have a powerful editing tool. First, we can plot each sentence on a graph for its readability and style. Second, we can highlight sentences with poor readability and edit them. Third, we can highlight the words, phrases and sentences that need editing in order to improve readability.

How can we be so sure StyleWriter will improve writing style? An independent test of the program on financial documents showed that following editing after applying StyleWriter, the grade level fell by 2.7 from an average of 12.8 to 10.1. In some samples, the grade level fell by 5 years. C

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The critical importance of integration

Technical communications benefits from technology integration. Peter Li discusses how Arbortext 6.0 enables end-to-end process optimisation.

Introduction

Technical communications is leveraged by a wide network of information users — including both internal and external stakeholders within an organisation's service information 'ecosystem' — for product support and training and a wealth of aftermarket services, such as maintenance, parts, repair and operation of a product throughout its lifecycle. As such, more and more of today's organisations are recognising the critical role that technical communications plays in establishing competitive advantage, increasing customer satisfaction, maximising cost efficiencies, enhancing productivity and improving profitability.

… recognising the critical role technical communicators play in … increasing customer satisfaction … and improving profitability

To facilitate such outcomes, technical information must be accurate, up-to-date, easy to access and understand, timely and personalised. These exacting demands fall squarely on the shoulders of technical communicators in their role as content developers.

Unfortunately, the support that technical communicators receive in executing their responsibilities can be less than ideal. Frequently they are forced to employ disconnected, disparate systems when creating, managing and delivering technical information, which can jeopardise the quality of information consumed downstream — and thereby limit the business benefits such information can confer.

With Arbortext, PTC is at the forefront of addressing this challenge. Arbortext is the industry's first fully integrated, end-to-end technical communications solution suite, a suite that fosters more effective collaboration among stakeholders in the creation, management and delivery of quality information through utilisation of a single content source. The culmination of a five-year PTC initiative to provide a best-in-class technical communications suite, today's version of Arbortext represents an end-to-end service information solution: leading-edge technology that helps optimise the processes underlying the communication of technical information.

In short, Arbortext not only enables technical communicators to more easily and effectively author complex, technical information, but to deliver information that is inherently more usable — and essentially more useful — in furthering product and organisation success. What's more, Arbortext's latest enhancements expand its capabilities as a powerful solution through greater integration of the products.

Case study: SAIC accelerates product launch, boosts customer satisfaction

With over 60,000 employees, the Shanghai Automotive Industry Corporation (SAIC) is one of China's largest automobile manufacturers. To keep pace with new vehicle rollouts, a growing global distribution network and increasingly stringent customer requirements, SAIC recognised the need in 2010 to implement a sophisticated technical information management and publishing system for both product development and after-sales service support.

Up to this point, the organisation had been outsourcing the development and management of technical information, which involved many manual, error-prone processes, such as data aggregation, editing, typing, collating and publishing.

By choosing Arbortext as its new technical information solution, SAIC is now able to:

- Enhance customer service through accurate, high-quality, product configuration-specific documentation
- Reduce costs by dynamically publishing page-based documents and digital content into multiple languages from single-source content, with no human intervention
- Improve service and operator success by leveraging accurate, up-to-date technical illustrations connected to original 3D CAD data
- Ensure technical information reflects real-time product design by aligning product information with product structures, while automating the change management process as product design changes occur
- Facilitate new-product delivery by allowing service planners and information creators to work in parallel with the product development process
- Improve the costs and accuracy of translation by eliminating redundant content and reducing content overall.

Integration means better processes and communications

Technical communicators often work in multi-vendor environments comprised of disparate systems and ad hoc, disconnected elements — creating incompatibility and content inconsistency issues that impede work flow, hinder productivity and delay output. In such instances, collaboration among content developers (such as technical communicators, technical illustrators, electrical engineers and mechanical engineers) is quite difficult. Since providing service information is not a single, isolated task but rather a set of processes involving multiple touch points within an organisation that contribute throughout the entire product information lifecycle, lack of collaboration can have serious ramifications.

A typical result? Interrupted continuity between the processes that drive content creation, management and delivery ultimately jeopardises the timeliness and accuracy of technical communications that is so vital to the needs of information users.

Conversely, by fully integrating the functional areas of structured authoring, CAD-driven

2D/3D illustrating, content management, associative change management, dynamic publishing and translation outsourcing management — as well as providing full integration with PTC's Product Lifecycle Management (PLM) solution — the latest Arbortext software serves as an end-to-end solution suite that better 'integrates' stakeholders through automation and collaboration.

This integrated, start-to-finish approach distinguishes Arbortext as a powerful solution that enables organisations to dramatically streamline the processes underlying the communication of technical information, thereby empowering information creators with optimised development resources and empowering information users with optimised service and support content.

Technical information users

Users of technical information come from a wide-range of roles, including parts managers, service technicians, call centre representatives, training managers, dealers and customers. All of these stakeholders expect the highest quality information — information that can be trusted implicitly — in order to fulfil their responsibilities or achieve their objectives.

Consider several of the more common challenges faced by information users:

- Content is difficult to access or scattered across a multitude of sources. For example, service technicians and call centre representatives can spend up to 40% of their time simply looking for information that they already have but cannot find
- Information is too complex or text-heavy
- Information is inaccurate, incomplete or outdated
- Content is not localised to accommodate language and cultural differences
- Content is not personalised or relevant and refers to products that the user does not own, operate or service.

Integrated solutions enable technical communicators to provide information of the utmost accuracy and usability: information that satisfies the needs of the user as they relate to product performance. After all, falling short of this, information would fail to serve the purpose for which it was developed.

Throughout its history, Arbortext has a proven track record of helping information consumers get significant value from technical content.

Even though the results of the survey (see panel) derived from the use of better information, note that the ultimate value Arbortext provided is measured in many different ways. For information users who are internal stakeholders within an organisation's service information ecosystem (for example, call centre representatives, training managers and service managers), value is equated with outcomes such as greater authoring productivity, heightened efficiency and reduced content production and translation costs. For information users who are external stakeholders (for example, dealers, independent service technicians and customers), value is equated with outcomes such as improved first-time fix rates, faster resolution cycles, greater customer satisfaction and better product utilisation.

Furthermore, the latest version of Arbortext makes technical information even more usable for information consumers with enhancements such as improved search functionality and richer, more interactive illustration rendering.

IDC independent survey

This survey of PTC customers, showed that users of Arbortext:

- Reduced inbound call centre volume by 41%
- Reduced time-to-resolution for end-customer issues by 38%
- Decreased time spent searching for content by 20%
- Reduced service errors attributable to inaccurate information by 30%
- Decreased time required to customise content for specific service procedures by 23%
- Reduced manual formatting effort by 35%.
- Reduced redundant information updating by 30%
- Decreased authoring time by 26% through content reuse
- Improved time required to create animated or interactive content by 58%
- Eliminated desktop publishing costs (representing 30% of overall publishing costs).

Technical information developers

As mentioned previously, technical communicators are under intense pressure to develop content that is accurate, up-to-date, easy to access and understand, timely and personalised. However, numerous factors can obstruct these efforts, including:

- Delays in getting information from other stakeholders, such as electrical engineers and mechanical engineers in the product development environment
- Difficulties in identifying and updating outdated information for replacement or retirement, which often allows obsolete information to survive downstream
- The need to manually create or cut-and-paste information, which increases the likelihood of errors and content inconsistencies
- Lack of automated processes throughout creation, management and delivery necessitates manual personalisation and localisation, which is extremely labour- and cost-prohibitive and limits the available markets.

With Arbortext, technical communicators can quickly and easily develop information of the highest quality and accuracy. As a seamlessly integrated solution, Arbortext connects the processes that drive content creation, management and delivery, thereby promoting greater collaboration among developers. Significantly, in executing their responsibilities, all stakeholders rely on a single source of

content; through tight integration of the content development and workflow processes, the information gained can be directly associated — and fully aligned — with actual product data (such as illustrations, text and tabular data) that automates updates when product changes occur … and is subsequently propagated to the point of dynamic technical communications output. As such, this 'single source of truth' ensures that information used downstream is accurate and complete.

An outcome of solution integration and enhanced collaboration, this capability to 'get it right the first time' — a key benefit of employing a service information solution — enables product organisations to increase productivity, minimise shipment delays caused by lengthy information cycles, increase compliance with industry standards, automate processes related to localisation and personalisation, and lower translation costs through the use of richer, more interactive illustrations and content reuse (see Panel on previous page for similar findings from an independent survey).

In addition, Arbortext further heightens the productivity and efficiency of technical communicators with its newest enhancements, including a friendlier, more intuitive user interface and highly configurable layouts.

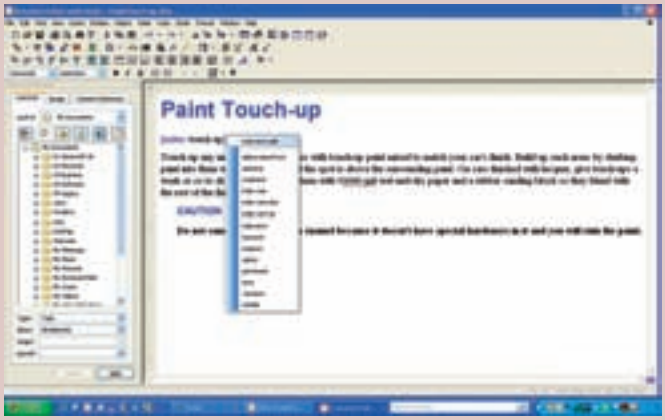

Figure 1. Insert Tag in Arbortext Editor

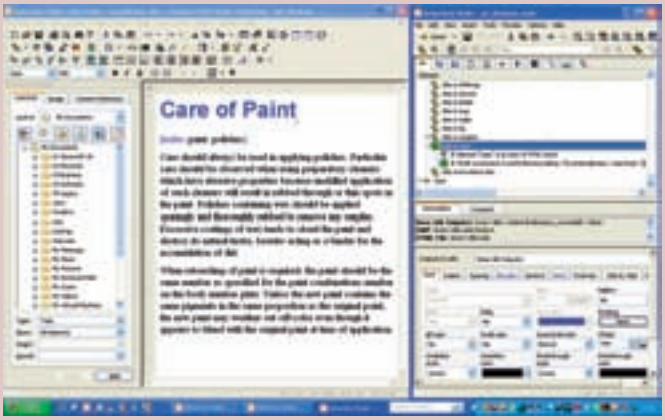

Figure 2. Enhanced styling tools in Arbortext Styler

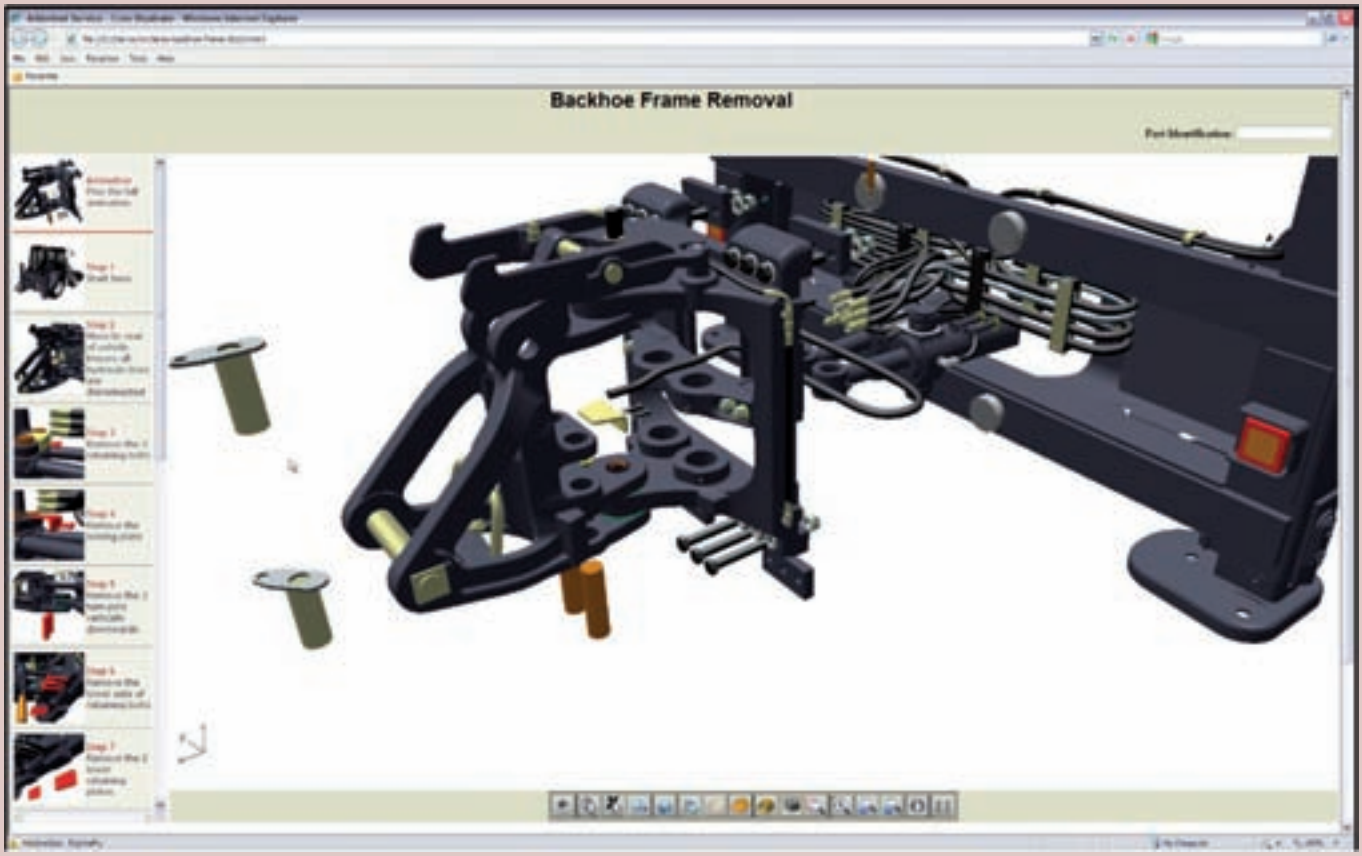

Figure 3. Creo Illustrate delivers 3D technical content to publish step-by-step service instructions to easily communicate complex technical procedures to improve worker productivity and accuracy

Highlights of recent software enhancements

Below is a brief preview of product enhancements — grouped by functional area — available in the latest release of Arbortext software. All enhancements are ultimately designed to provide greater integration within the solution suite. For complete details on these enhancements, please visit www.ptc.com/products/arbortext/whats-new.htm.

Create

To create structured, associated content components and technical illustrations, the new software capabilities provide:

Arbortext Editor. Increased support for DITA 1.2 to facilitate quick, easy compliance with standards; additional language support. See Figure 1.

Arbortext Styler. Enhanced styling tools for rapid layout development to enable improved, consistent delivery of technical communications; enhanced management of text translations. See Figure 2.

Arbortext IsoDraw. Improved integration with Arbortext Editor and Arbortext Content Manager to enable better tracking and management of document components with 2D technical illustrations

Creo Illustrate. A new offering, Creo Illustrate provides extensive 3D illustration capabilities to enhance users' product understanding and performance; Creo Illustrate integrates with Arbortext IsoDraw to support the full range of 2D and 3D technical communications requirements (print, PDF, HTML, interactive, animated). See Figure 3.

Manage

For content and change management via a 'single source of truth' repository, the new software capabilities provide:

- **Arbortext Content Manager 10.0.** Greater integration with Arbortext Editor to enable development of higher quality, dynamic technical documentation; improved Microsoft Windows-oriented UI provides more advanced search capabilities to enhance ease-of-use.

Deliver

To automatically filter, assemble and deliver configurable documents in any media format, the new software capabilities provide:

- **Arbortext Publishing Engine with Arbortext Digital Media Publisher**. Incorporation of publishing rules for establishing process parameters to accelerate production and delivery of content. C

References

White paper (2011), *Revolutionizing service information: Deliver the right product information at the right time.* Parametric Technology Corporation (PTC).

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Ekumo: web-based documentation

Christian Geng reviews Ekumo 3.0, a web-based content management system that enables easy creation of documentation using a web browser.

Typically, there are many players involved in the content management process and they all access the same documents, adding to them, making corrections and collating them: writers, editors, translators, proofreaders. International industrial organisations in particular are closely linked with their suppliers and partners in these work processes. This means multiple challenges for the authors whose objective it is to create standardised and user-friendly documentation quickly and cost-effectively. It also places great demands on the system that is used to facilitate all of this. Content management systems (CMSs) should simplify creation, management and publication of technical documentation. But what does this really mean for the editor?

What is Ekumo?

Ekumo GmbH's eponymous CMS was originally developed for the vehicle manufacturer, MAN Nutzfahrzeuge AG in Germany. The company was looking for a solution with which to consolidate its repair manuals, maintenance manuals and operating instructions for all product areas and for all languages in a single system. The special feature of the solution is that Ekumo is entirely web-based. To create, manage and publish content, the author requires only a web browser. By way of the browser, users access a central server where Ekumo is installed and they work together with a central data set that is always up to date. This means that the user does not require any kind of client software. Ekumo 3.0 officially supports Firefox as of Version 3 and Internet Explorer Version 8.

Documentation process with Ekumo

Creating modules

In Ekumo, texts and images are created in self-contained information units. These correspond to a single subchapter, for example. The complete documentation is then compiled from these modules. Copies of the modules are not created, only a link to each document. The advantage here is that any changes need to be made only once and these are then automatically updated in the various publications.

At MAN Nutzfahrzeuge AG, this approach has dramatically reduced editorial times. Up until this point all publications were subject to common editorial deadlines. Depending on the scope of the publication these could last for months. In order to shorten this time span and facilitate the swift publication of data, the publications were split into document sections. These can now be examined, released and published as individual units of information. Now individual sections of documents can be made available to assemblers in the workshop within a day as the general editorial deadline has been dropped and a document section is considered a finished unit by itself.

Translation costs are also kept to a minimum since the revised documentation does not have to be translated in full, only the new information units.

Creating text in the editor

The modules are created in an integrated editor. This has a clear structure and is easy to use. To facilitate the work of the author, the editor provides standardised structures for documents, for example, warning texts.

The use of uniform terminology and adherence to formulation guidelines in the source and target languages are crucial for guaranteeing the high quality of documentation. Ekumo relies on Acrolinx (www.acrolinx.com) technology and has integrated the company's term and linguistic checking into the Ekumo system. Authors can check their text at the click of a button at any time. Errors and suggested improvements are highlighted in colour and can be accepted automatically via a context menu.

Editing images

The integrated image editor enables editing with predefined media formats guaranteeing high-quality illustrations. When the author uploads a graphic file, the image editor first checks if it meets the minimum requirements with respect to resolution, format and aspect ratio. If it does not, the author is notified and can make corrections in the editor. The author can also assign positional numbers.

Checking and releasing contents

Completed text can be forwarded for checking, all within the Ekumo system. The checker, for example, a product development technician, makes any changes directly in the system. These changes are visible to the author (using track changes) who then decides which of them to accept.

Publishing output media

After the document is released, it is published directly in the information portal or it is formatted as a PDF for printing (single-source publishing). The layout is allocated automatically using style sheets. Work on the layout itself is no longer necessary since it is generated automatically. Postprocessing in a

Further information
Ekumo GmbH website, in English: www.ekumo.de/en

desktop publishing (DTP) tool is not required either due to the style sheets, which are maintained centrally. The table of contents and index are also generated automatically. Thus, the author does not have to spend time dealing with the layout and can concentrate fully on content creation.

Useful functions for the author

- Ekumo has an integrated context-sensitive help that the user can customise as required. You can thus create content management guidelines with Ekumo and link them to the interface.
- In the editor, the author can enter text in a WYSIWYG view as if it were a form. Predefined structure blocks guide the author through module creation so that he or she can immediately see which information is to be entered at each point.
- Using the preview functions, the author can display the relevant output view at any time in the corresponding output format.
- Ekumo ensures that you stay in control of your content. A task view displays which documents await release and which check tasks are yet to be performed or have just been performed.
- Cooperation with other colleagues is easy and uncomplicated. While the author is working on some content, that content is locked for other users. A history and versioning function lets you see exactly which users have made which changes.

Using Ekumo in the workplace

In my role as an editor at M.Schmid GmbH, a small documentation service provider, and also at MAN Nutzfahrzeuge AG, a major industrial company, I use two different Ekumo applications.

At MAN Nutzfahrzeuge AG, Ekumo is implemented at multiple MAN locations and is used worldwide by external service providers. Suppliers are also integrated in the process to create external documentation in the system. Where once different systems and standards were used to create and maintain documents and images, now this is all handled with a web browser and Ekumo.

The IT department at MAN hosts the central Ekumo application.

At M.Schmid GmbH, Ekumo is used to create technical documentation for various customers in the vehicle construction industry in a single system and then to generate the documentation in PDF form. The solution is hosted directly by the manufacturer, Ekumo GmbH.

As an alternative to purchasing Ekumo, the system can be leased on a monthly rate. In this case, hosting and maintenance are carried out by the provider. This arrangement is especially suitable for smaller organisations that do not have specialised IT departments.

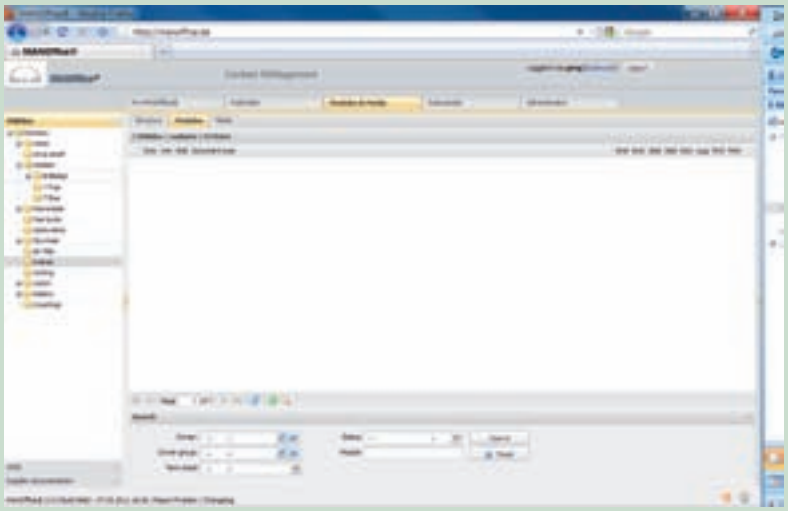

Figure 1. Ekumo overview

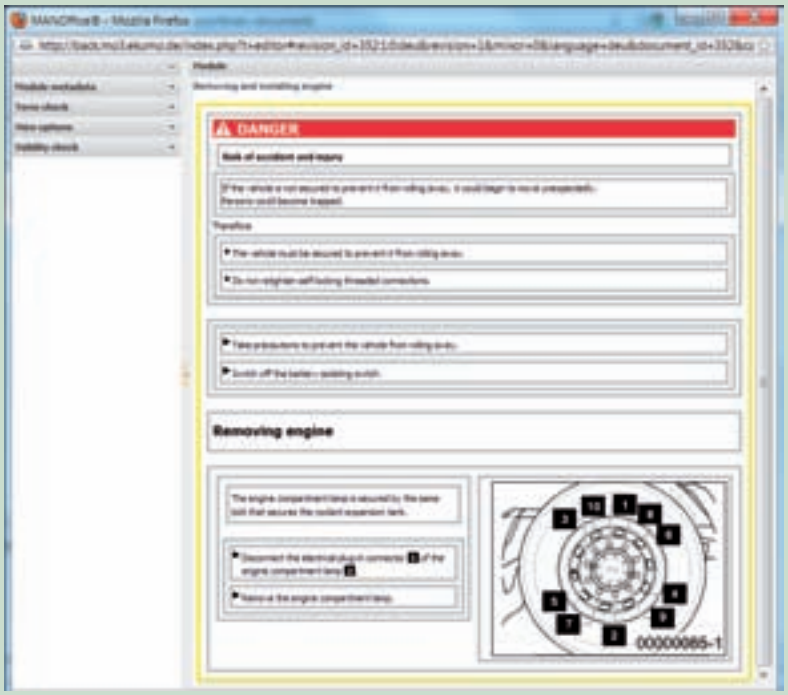

Figure 2. Ekumo Integrated editor

Conclusion

Once internet access is available, a web browser enables easy use of the system.

Location-independent accessibility enables you to quickly make changes while on the move. It is easy to set-up access for new users: simply create the access data in Ekumo and send the users a link to the CMS.

The author does not require several different programs: a web browser is sufficient for all functions.

The use of self-contained text modules enables increased control of variants, since any changes made to referenced contents are applied immediately and consistently and do not have to be repeated manually in numerous documents.

In the next version of Ekumo, drag-and-drop functionality will make working in the system even easier. C

Christian Geng is a technical editor at M.Schmid GmbH in Germany, a documentation services company. As an editor for MAN Nutzfahrzeuge AG, he has been using Ekumo to create documentation for many years.
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Machine translation and user assistance

Rob Sexstone explores the relevance of free statistical machine translation for online user assistance

Introduction

This article explores the relevance of statistical machine translation (SMT), particularly in the context of user assistance and web-based user support. To demonstrate the types of results that are achievable with machine translation (MT), I have selected a short arbitrary text from the support website of a well-known global software company and will assess the amount of human post-editing required for each of the resulting translations from French into English. I will test results from three web-based MT services: Systran NET, Microsoft's Bing Translator and Google Translate.

Traditional challenges for MT

Traditional research into MT focussed on developing computational models of cognitive processes that were believed to underpin human translation such as:

- Representing real-world knowledge
- Decoding contextual information
- Identifying and decoding ambiguity
- Natural language parsing and grammar modelling
- Resolving anaphora, metaphors, idioms and humour.

Rule-based MT

MT systems that attempt to tackle cognitive and linguistic problems are called rule-based systems. They are expensive to design and develop because they are grounded in one or several aspects of natural language research and steadily developed from prototypes into working systems. Rule-based MT systems need to be 'tuned' and managed, and usually have a high cost of implementation, particularly in terms of skilled manpower.

Nevertheless, rule-based MT has been a commercially viable solution and used by several very large organisations for over 20 years such as Xerox, Ford, Volkswagen and Caterpillar. To achieve a return on investment, most of the MT solutions in industrial publishing were built around controlled or simplified language that was enforced rigorously when writing the source content.

Statistical MT

Statistical MT (SMT) eschews all linguistic theory and exploits the laws of probability to suggest translations based on the analysis of bilingual text patterns. It relies on purely mathematical algorithms, which are language independent, and very large bilingual corpora called bi-texts. Google Translate's original creator, Franz Josef Och, has criticised the effectiveness of rule-based algorithms in favour of empirical approaches.

According to Och, a solid base for developing a usable SMT system for a new pair of languages from scratch, would be a bi-text of more than a million words and two monolingual corpora, each with more than a billion words. Little wonder then that Google pioneered a global SMT service, free (with certain limitations) at the point of entry to every internet user.

When is MT appropriate?

Both statistical and rule-based approaches to MT are able to yield reasonable results when fed concise, structured documentation, controlled language, software error messages, and so on. However, neither approach yields such good results with more complex prose such as journalism, scientific reports and marketing copy (unless you are prepared to laugh/cry and then re-edit at a cost). My reaction to colleagues and clients who ask whether MT is now mature enough to replace human translation is firstly to challenge their own expectation of MT.
I then suggest that until we examine specific examples, it is important not to be distracted by the promise of MT and how it can save money before you spend some time assessing your content for translation readiness in general.

A first step towards translation automation is to explore how your content could be edited, restructured or optimised (by writing less, formatting differently and writing with translation in mind). Any translation process that starts with less English content, carefully pre-edited with clarity and translation in mind will enable you to achieve considerable cost savings before MT even becomes a consideration.

For example, do you really need to provide the entirety of your 100-page marketing report in several languages? Is there any customer satisfaction analysis about how well the current documents you write are received, and which sections are actually read? Is some of the content you write never read?

Unless content is delivered online, these are very hard things to measure. At the risk of championing Google, their subscription–based analytics service provides a very powerful toolset for assessing how often specific topics in web-based information are accessed, and is particularly useful for guiding the efforts of authors who maintain online support sites, FAQ lists and knowledge bases.

References

An introduction to Machine Translation, Academic Press, Hutchins and Somers, ISBN 0-12-362830-X

SYSTRAN: http://en.wikipedia.org/wiki/Systran

Google translate: http://en.wikipedia.org/wiki/Google_translate

Under Milk Wood: http://en.wikipedia.org/wiki/Under_Milk_Wood, Dylan Thomas, 1954

Sexstone, R, Zydron A (2011) 'Translation server technology part 1: XTM', *Communicator*, Spring 2011: 46

Why don't most translation companies offer to assess the translation readiness, quality or even relevance of your source material for your users? Perhaps because they want volume at any price, and conveniently fail to consider any upstream content rationalisation because it means they may not be able to charge you as much.

Real-world examples of MT

I deliberately wanted to avoided discussing too much MT theory; instead, I wanted the focus of this article to be a brief demonstration of how state-of-the-art tools from companies such as Google and Microsoft can be used to the advantage of everybody engaged in writing and maintaining online user assistance. One of the key arguments made by opponents of free statistical MT services is the fact that once you have submitted content for translation, it becomes subsumed into their 'data cloud' and they have certain rights to that content. In the examples I show it is unclear how much of a concern this is for organisations that host online user assistance, not least because the information has deliberately been placed in the public domain to support their own customers.

I have randomly selected a short topic from the French support site for Symantec's Norton 360 application, and translated it into English using three different, but mature and established MT tools:

- Systran NET (a subscription service for licenced users of the Systran product)
- Microsoft's Bing Translator (free)
- Google Translate (free).

The source material in French

I selected at random a short step and action procedure, which was written clearly in French (Figure 1) and designed for a public, non-technical audience. It is also interesting to consider that this support site may have been translated professionally from English to French by Symantec's own localisation team. The topic uses unambiguous language and common Windows terminology to explain a potential cause of problems to desktop users of Norton 360.

Summary of findings

For each of the three MT results, an editor has highlighted terms and phrases that need to be post-edited to achieve a natural fluency. Interestingly, both of the pure SMT tools outperformed the Systran NET tool. Systran NET claims to use a combination of rule-based and statistical techniques and is the only commercial offering out of the three MT solutions tested.

Both the Microsoft and Google MT services rendered very reasonably with clear-to-follow results. On balance, Google's rendering is perhaps slightly more natural with marginally less post-editing required than the Microsoft's result.

Figure 1. French source material

Figure 2. MT Results — Systran NET

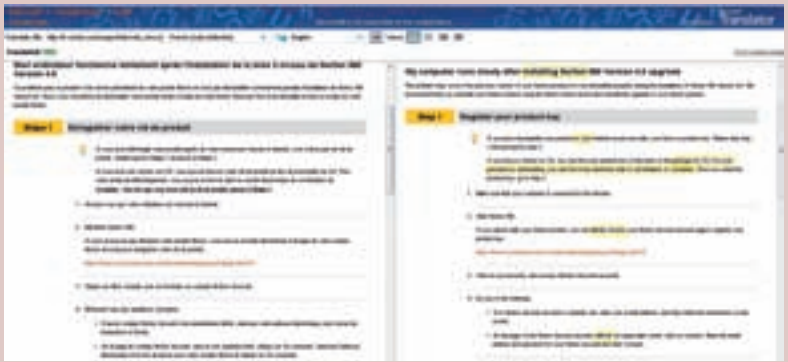

Figure 3. MT Results – Microsoft's Bing

Developing writing guidelines to streamline the translation (and MT) process

For the last eight years my colleagues at 3di have invested in the development of techniques to streamline the writing, management and translation of technical documentation and user assistance. We are a multidisciplinary team consisting of information architects, engineers, computational linguists and technical project managers.

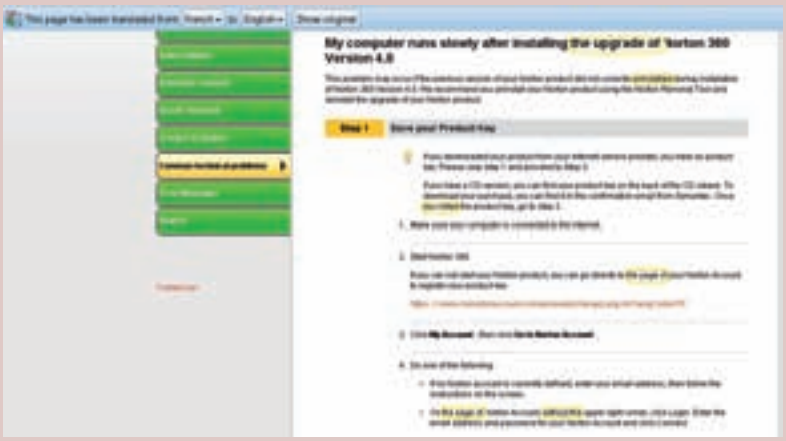

Figure 4. MT Results – Google translate

As a result of our research, we have developed a methodology for technical writing called 3MD (3di Modular Design). 3MD is appropriate for developing either online or embedded user assistance, amongst other applications. It is underpinned by established communication theories and will easily integrate with XML schema such as DITA and DOCBOOK, if required.

One of the many goals of 3MD was to improve the translatability of written content through a disciplined approach to modular, consistent, clear authoring. With 3MD, we have discovered new opportunities for several of our clients by developing online user assistance and support information that will work extremely well (that is, more than a 90% user satisfaction rating) with free statistical MT services, whilst reducing external translation costs and eliminating internal translation administration overheads.

An insight by Andrzej Zydron (CTO and founding owner of XML International Ltd), as he stated in our last article:
"I predict that we will soon discover that there are limits to what can be achieved with statistical machine translation (SMT) even given near infinite resources: language is just too human to provide an effective solution: the gisting will get slightly better over time but will never be a substitute. Nevertheless, I think that we will see a significant amount of 'de-skilling' in the translator community, with younger, less-experienced translators using SMT to displace older more experienced ones. I am already seeing this happen. As sad as it may seem it is inevitable."

Conclusion

Thanks again Andy... But I would like to counter your assessment that 'machine translation can never be as good as a human translator'. Well, by the same token, we could also say that Microsoft will never publish anything as beautifully written as *Under Milk Wood*. My point is this: when making assessments about technology such as MT, it is meaningless to do so without a very precise context. Two variables must be defined before we can argue the case for high-quality MT output:

- An SMT engine (such as Google or Bing), that has access to massive amounts of bilingual corpora
- Source content and a style guide that has been written with translation or MT in mind.

The most exciting thing for those of us who develop online user assistance is that both of these tools are freely available, albeit the latter is a result of professional training and experience. The debate on MT, therefore, is a *fait accompli* is it not? C

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FrameMaker automation under one roof

Andy Lewis reviews TOOLBOX, which provides an unrivalled range of FrameMaker automation techniques in a single product.

TOOLBOX is a modular collection of 25 separate plugins, for automating publication processes with FrameMaker versions 5.5 to 9.

While many of the features provided by TOOLBOX are available in some form via other free or commercially available plugins and FrameScripts, TOOLBOX is the only plugin available offering such an extensive range of functionalities in a single product. Its functionality ranges from basic formatting and graphic-related operations, through manipulation of 3D objects, to additions to native FrameMaker support for DITA publishing.

TOOLBOX adds its own menu to the default FrameMaker toolbar (see Figure 1), and many of the plugins are configured via a .ini file.

After the free 30-day trial period expires, the **Formats** and **Encoding in Selection** plugin modules remain active for your use.

This article describes each of the available plugin modules briefly. I have grouped the modules under the following headings to indicate related areas of operation:

- Processing tables of contents and indexes
- Navigating files
- Manipulating graphics
- Managing and modifying formats
- Complex transfer and conversion processes
- Evaluation and analysis reporting
- Book-level operations
- Extended DITA functionality (available only with TOOLBOX 7, 8 and 9 for FrameMaker 7, 8 and 9 respectively)
- Support for 3D objects (available only with TOOLBOX 7, 8 and 9 for FrameMaker 7, 8 and 9 respectively).

Note that this list does not reflect the order in which the plugin modules actually appear in the TOOLBOX menu.

Processing tables of contents and indexes

Index Markers provides an automated method of inserting multiple index markers into a document. **Update Chapter TOC** provides a method of updating 'mini-TOCs' automatically: chapter-based tables of contents that are imported into a file and usually placed at the beginning.

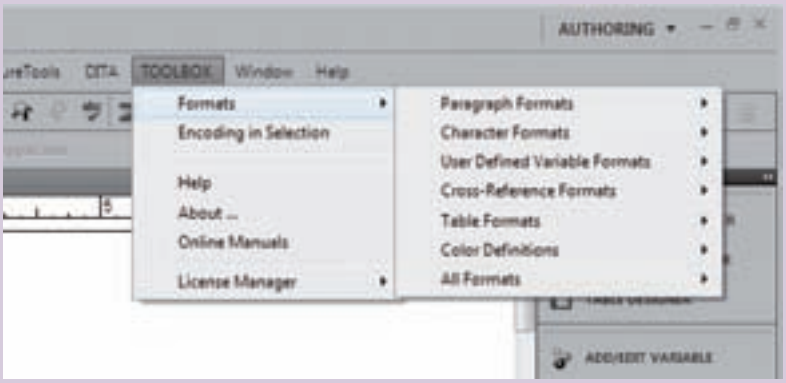

Figure 1. Formats options

Navigating files

Named Destinations offers a convenient method of jumping to specified locations within your documents.

Find/Change enhances FrameMaker's native search functionality by enabling you to specify strings in a configuration file, then performing a find and replace operation for multiple strings simultaneously and automatically.

Manipulating graphics

Adapt Imported Graphics enables you to specify how you insert graphics, either by embedding or by importing by reference. In addition, the plugin enables you to search a book or document for all imported graphics and to change the import method if required. In contrast, the **Imported Graphics** plugin enables you to select an individual graphic and perform any of the following operations on it: restore the graphic to its original size, export an embedded graphic, replace a referenced graphic with an embedded copy, or rescale a graphic with no loss of quality.

To complete the set of graphics-related plugins, **Export copied graphics** enables you to select all embedded graphics, copy them to a specified location and import them by reference from this location automatically.

Managing and modifying formats

Formats is used for deleting either all formats or all unused formats from a catalog.

Formats can be applied to paragraphs, characters, user-defined variables, cross-references, tables and colour definitions. **Formats** runs on both individual documents and whole books. The **Adopt Paragraph Format Changes in all Open Books** plugin applies changes to paragraph styles in all currently open FrameMaker books.

Format List creates a tabular display of the formats used in a specified document. Information displayed includes page layout, paragraph and character formats, system and user variables, and cross-reference formats.

Definition Editor is a tool for editing cross-reference formats, variable definitions and the text strings within markers. This plugin enables you to specify and apply font information to such formats for immediate display.

Rename Formats enables you to rename paragraph, character and cross-reference formats easily, either book-wide or within a single document. **Rename Element Definitions by Configuration** provides similar functionality in structured FrameMaker by enabling you to rename quickly any of the elements included in your EDD.

Special Characters enables you to paste special characters directly into FrameMaker documents by providing access to palettes containing character sets such as Wingdings and ZapfDingbats.

Character format for conditional text enables you to edit, apply or remove conditional tagging easily.

Left/Right Alignment enables you to specify alignment settings for paragraphs and tables by using a configuration file per FrameMaker book or document.

Complex transfer and conversion processes

Book Transfer copies a book and all associated files, referenced graphics and text insets for that book to a new location. You can specify whether you want to duplicate the existing folder structure for the FrameMaker project, or create a new one. **Document Transfer** provides the same functionality for a single FrameMaker file.

FM <-> MIF enables the conversion of an entire FrameMaker book and all associated files to MIF, and *vice versa*.

PDFs from Books within Book enables the generation of multiple PDFs without the need to send each FrameMaker book to print separately.

Evaluation and analysis reporting

Server Analysis provides a report of the dependencies between FrameMaker files based on a search within a specified folder structure.

Statistics provides information about the body pages of saved non-generated files, including the number of pages, words, characters, lines of text, tables, embedded graphics, imported graphics, text insets, variables and cross-references in a document.

Statistics also enables you to evaluate individual books, or a set of book files, as well as individual documents collected together in a single book file.

List of Paragraph Overrides generates an interactive table of all paragraph template overrides for a specified document, including a link to the override, the text of the relevant paragraph and the formatting applied to the paragraph that causes it to conflict with the catalog definition.

Encoding in Selection provides a byte display of the coding of a marked area.

Book-level operations

Last Page Number is a module that installs with the **Book Services** plugin. **Last Page Number** provides a variable that displays the total number of pages in a document or book. You can insert this new variable after the page number variable, to create an effect such as 45/46 to show that this is page 45 of 46.

Extended DITA functionality

The **DITA Services** plugin includes **Creating a book**, **Language Setting** and **Setting Edition** modules.

Creating a book enables you to add specified files and generated lists to a FrameMaker book from your DITA content. It works in conjunction with the *buildbook.ini* file in your structured application to enable you to include files such as a cover, preface or copyright page with your generated output automatically, as well as generated files such as a table of contents, list of figures or index.

Language Setting adjusts the output language for elements with labels that are generated automatically, such as notes, cautions and warnings.

Setting Edition performs a range of automatic operations, including setting variable values, conditional tag settings and inserting metadata containing file information that is visible in PDFs generated from the DITA content. You can configure all these operation parameters on a per-language basis.

Support for 3D objects

The **3D Services** plugin adds a range of functionalities to FrameMaker including:

- Connecting JavaScript to a 3D model
- Linking text to a U3D graphic (Universal 3D is a compressed file format standard for 3D computer graphics data)
- Covering a 3D graphic with a 2D graphic for printing purposes
- Creating clickable interactive areas in a 3D image with links that jump to item fields within, for example, an order form
- Generating a PDF that maintains and displays 3D capabilities.

Conclusion

Undoubtedly, TOOLBOX faces stern competition in selected areas, from IXgen or (the free) MarkerWorker for index-related features, or from DITA-FMx in DITA authoring environments. Nevertheless, it still offers a formidable range of automation opportunities provided by a single licence. Since support for TOOLBOX ends with FrameMaker 9, it is perhaps worth noting that for FrameMaker 10, Technical Communication Suite 3 and Creative Suite 5, SQUIDDS offer FINALYSER, a workflow optimisation tool that integrates the functionalities of Adobe Bridge, FrameMaker, Photoshop, Captivate, Illustrator, InDesign and RoboHelp. Further details are available at www.ig5authoringtools.com/finalyser. C

Pricing
TOOLBOX is developed and sold by SQUIDDS (www.squidds.de). Pricing information for the full version, upgrades, or individual modules is available from www.toolboxforme.com

Andy Lewis is the owner of iG5 Authoring Tools (www.ig5authoringtools.com), a one-stop shop for both technical communicators and developers of FrameMaker plugins and FrameScripts. Andy is a Certified Adobe Expert in FrameMaker and a regular contributor to *Communicator*. He is a long-time user of many FrameMaker plugins in both structured and unstructured environments.
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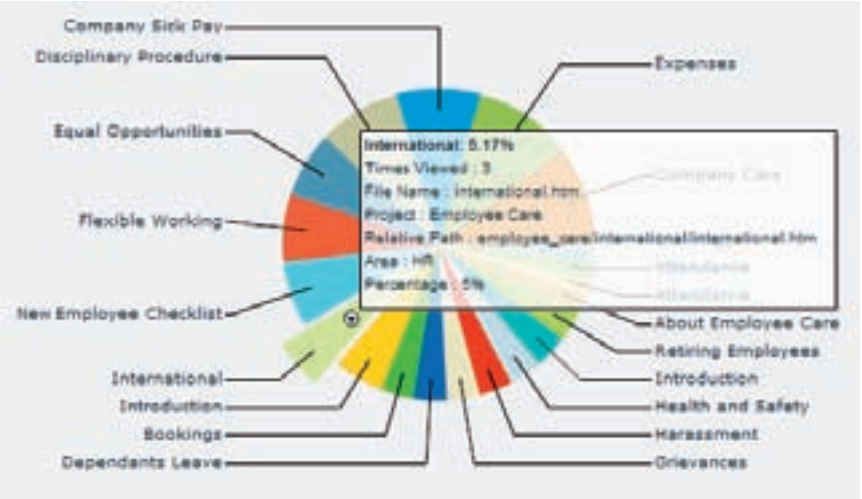
The Adobe technical communication Colum(n)

In this regular column, Colum McAndrew offers tips, tricks, explanations and advice focusing on Adobe technical communication products.

For this, the inaugural column focusing on Adobe's technical communication products, I am answering one of the frequently asked questions about Adobe RoboHelp. What licences are required to benefit from the many advantages offered by Adobe RoboHelp Server? Before I answer that, it is important to understand the differences between those two products.



Section of the Adobe RoboHelp Server 9 Frequently Viewed Topics report

What exactly is Adobe RoboHelp?

Adobe RoboHelp is, in fact, a suite of applications called Adobe RoboHelp Office that includes a set of tools, a screen capture application and two help authoring tools, one of which has its own built-in source control application.

The first called RoboHelp for Word uses .RTF files as its editing environment in Microsoft Word and is mainly used to output WinHelp. Whilst WinHelp is still used for legacy systems, its limited functionality makes this application largely redundant. Indeed, from Adobe RoboHelp 8 you can choose not to install it.

The second called RoboHelp HTML, uses a built-in HTML editor with a WYSIWYG interface. Unlike RoboHelp for Word that has a limited range of outputs, RoboHelp HTML can output 13 different ways, three of which are compatible with Adobe RoboHelp Server. There are far too many to list here, but a full list can be found at the following link:

- www.cmcandrew.com/robocolumn/archives/748

RoboHelp HTML can also integrate fully with its own source control application called RoboSource Control, or with other popular source control applications (for example, Microsoft Team Foundation Server, Tortoise SVN).

So what is this server thingie?

Adobe RoboHelp Server is a server-based feedback analytics application that unlike other analytics applications is specifically designed for technical communicators. It gathers data every time a user interacts with your help system. Using the feedback analytics data, reports help you identify what improvements to implement.

Unlike RoboSource Control that also runs on a server, Adobe RoboHelp Server is not part of an Adobe RoboHelp Office licence. A separate licence is therefore required to install it, but this is only part of the answer.

How many licences are required?

Only one Adobe RoboHelp Server licence is required for each server on which the feedback analytics are gathered. However, each licence allows you to set-up and maintain multiple websites (called contexts) on the same server. This is very useful if you want to have test and production environments. It also allows you to define the areas to which output is published and who has access to it.

An Adobe RoboHelp Server licence is not required to publish output. Writers output to WebHelp Pro, FlashHelp Pro or (from Adobe RoboHelp 9) Adobe AIR using their Adobe RoboHelp Office licence. This means that a single licence is required regardless of the size of the Technical Communications team. With the output published, users access it and feedback analytics reports are generated.

End users and report generators alike do not need an Adobe RoboHelp or Adobe RoboHelp Server licence. Report generators only need an Adobe RoboHelp Server logon with the relevant access. End users only need a logon if the output is protected (for example, it contains sensitive HR information). Logons are set-up in the Adobe RoboHelp Server Web Administrator.

Summary

Adobe RoboHelp Server is an application that must be purchased separately from Adobe RoboHelp or the Adobe Technical Communication Suite. However, a single licence allows the set-up and administration of multiple websites, including granting access to publish output and perform certain non-administrative functions. C

Colum McAndrew MISTC is a Senior Technical Author based in Guildford, UK. A user of Adobe technical communication products since 1999, he can frequently be found on their support forums offering advice to other users.
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Real–life dilemmas

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*.

Protecting sensitive information

The background

It was the first day on the new contract job. Sue checked her watch to make sure she had ample time. Tim, her youngest boy, was dressed and fed and ready for school. She finished breakfast and put on her smart clothes, adjusting her hair and makeup in the mirror before setting off.

As a contractor, the first week with a new client was always exciting. She was looking forward to this project, working on a new user guide for a manufacturing company, which developed advanced robotic devices. Matt, the product manager on this project, welcomed her warmly into the building. After she had been introduced to the team, he sat her down and explained the project.

"The whole team is very excited about this product", he told her. "We've traditionally focussed on scientific robotics, so this will be our first product targeted at young adults and children. It's new territory for us, so we are relying on you to get the user guide right for our market. It's quite a complicated product".

Matt stood up. "I've arranged for you to meet with Paul, our lead developer. He'll tell you more."

"The MDR-670 is more than your usual remote controlled device," Paul was saying to her. "It features the latest robotics technology. Fully remote controlled, with 5 programmable levels. It shoots mini plastic pellets and has a built-in mini flame-thrower, upgradable armour and weaponry.

Sue began working on the guide. A few weeks later she was sitting with Paul in the testing area, as he was demonstrating the MDR-670. "Watch this!" he exclaimed. He pushed a control on the remote and the toy sprung to life. Moving at an alarming speed, it spun round and began to shoot tiny plastic pellets in all directions.

"Cool, isn't it!" Paul exclaimed. "They travel at 20 mph and have a range of up to 10 feet. Watch out that you don't get too close. Those pellets can really sting.

Sue took a step back in apprehension, eyeing the toy nervously. "What age range did you say this toy is for?" she asked.

"I think it's 4 years plus, but let me check."

Sue looked at the contraption in horror. She had an image in her mind of Tim, her youngest, playing with this toy and getting a pellet in his eye.

Sue put her apprehension aside and started working enthusiastically on the user guide. There were many controls to document, and she worked hard with the illustration department to draw up the technical diagrams, explaining how to assemble components and select the programmable controls.

MDR-670 (or *MegaDestructor* as it was nicknamed) had a battery supply for driving its motor. For the flame-thrower it used a specially prepared liquid, and operated in a similar way to a cigarette lighter. As she documented this feature, again she had an image in her mind of Tim, her youngest, playing with this toy in the lounge and setting fire to her curtains. She shrugged her shoulders and carried on with the guide.

One week, half way through the project, she overheard a conversation Paul was having with another developer.

"I left MegaDestructor on the patio over the weekend. It must have been in the sun for a couple of hours. When I came back, there were pieces everywhere. The damn thing must have exploded."

Sue felt her anxiety level rising, and was unable to contain it. Later that day she asked for a meeting to discuss it with Paul and Matt.

Paul replied. "Well, it was my fault really. I shouldn't have left it in the sun like that."

"What do you think happened?" Matt asked.

"Not sure. I think the flame-thrower fuel must have ignited in the sun — but that shouldn't cause it to explode. We can run some tests."

Matt nodded in agreement and turned to Sue. "I suggest you add a warning notice to the user guide." He suggested.

It turned out that the MDR-670 had a design flaw. If left in temperatures over 40˚C for up to 8 hours, the pressure in the liquid would build up, and if some of the circuits then melted, this could cause an explosion. The likelihood of this happening was considered remote.

Sue's dilemma

Sue was unhappy. The more she thought about it, the more uncomfortable she felt about documenting this product. With all the safety warnings in the world, this product was dangerous. What if it exploded on someone? Did she want that on her conscience?

The problem was that Paul and Matt and the rest of the team were so enthusiastic about their product – like kids with a new toy! Each time she had raised concerns about safety, they'd simply dismissed her, and told her to add appropriate safety warnings.

Maybe she could have a warning in bold on the front cover. "Warning! Danger! Death or serious injury may occur from use of this product."

She mulled it over, and then, at the next team meeting half-jokingly suggested that she add this as a warning.

"Cool!" Matt responded. "I like it! Maybe we can use that as the advertising slogan — in bold and big letters.

Matt eyed them both sternly. "No, we are not going to do that. Let's not exaggerate please."

Over to you. What do you think Sue should do in this situation? Have you ever documented an 'unsafe' product? ➔

Real-life responses

Readers' letters in response to Sam's dilemma, described in the Spring 2011 issue of *Communicator*.

Summary of Sam's dilemma

Sam's colleague, Ellen, was in trouble for having violated company policy around data protection.

She was going to be interviewed by a senior Human Resources manager, who would also be evaluating some of the departments other work practices around handling customer data.

What should Sam do? Would he be in trouble for having sent Ellen the customer file, containing sensitive customer data, at her request? She hadn't told them yet about how she had received the customer file from Sam. Should he do or say anything to support Ellen, or keep quiet about his involvement?

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

Greg Stevens

My view is that Sam should be proactive and that he should go and speak in confidence to a member of HR, explaining exactly what happened, not exaggerating in his favour nor in Ellen's favour. It would also make sense for him to tell Ellen what he was doing and suggest that she says exactly what happened too.

My view is that, once HR established that they were both telling the truth, that they would apply leniency, especially as Sam was proactive. Any other approach could lead them both digging a bigger hole.

"Honesty is the best policy."

Andrew Pickering

Well Sam has certainly breached company policy more than once and having taken the risk to help his colleague he must be prepared to face the consequences of his actions. With hindsight Sam is probably regretting his decision to help Ellen, but at the time of his indiscretions, his response to his colleague who was also acting as his unofficial line manager is wholly understandable.

I think that Sam's abilities to influence what will happen are very limited and depend on what Ellen is going to say and how she is treated. At the best, the HR department will not ask how she got the information at home; Ellen will be disciplined and Sam will have had a lucky escape and hopefully will be more inclined to follow company procedures in the future. At the worst, Ellen will divulge that she got the information from Sam and she has been working on Sam's PC using his password. In these circumstances I feel that Sam is shortly going to be looking for another job.

James

Sam and Ellen should not have been so careless in handling customer data. How would they have felt if their sensitive personal details were being treated in this careless manner?

On the other hand, their company is also partly to blame, in not providing them with the tools they need to do their job properly, such as secure access from home and clear guidelines and training as to correct handling of customer data.

As for the HR interview, it seems to me that Sam and Ellen were just trying to do their job and weren't fully aware of the company's policies. They might receive a warning if they own up to it, but I don't think this would result in their dismissal — no customer was actually harmed. C

Editor's note

This dilemma was filled with examples of violations of basic customer-data protection and security principles.

How many of the following did you spot?

1. *Sharing of personal passwords*. This is something you should never do. If a colleague needs access to a computer or system, they should have their own login credentials, unless this is a group account.
2. *Choice of passwords*. Sam's password, which featured his name and number, would be easy to hack. It is recommended not to include your name in your password and certainly not to write it down.
3. *Downloading sensitive customer data to an unsecured flash drive*. This should never be done with sensitive customer data, unless the flash drive is encrypted.
4. *Forwarding sensitive customer data to a hotmail account*. This should never be done with sensitive customer data, unless the data is encrypted.
5. *Accessing customer and business data on a home PC*. Another grey area that should be avoided, unless your home PC is secure and has been checked and authorised for use by your IT department.

In many companies the above violations are disciplinary offences, so be warned!

Over to you

Write to dilemma@istc.org.uk

Tell us how you think Sue should solve her ethical dilemma. The next issue of *Communicator* will feature your responses.

If you have a dilemma you'd like advice about, write to us in confidence. If we think your issue would be of interest to a wider audience we'll air it here (don't worry: we will protect your anonymity!).

Note: All names and places have been fictionalised to protect the identity (and reputations) of real people.

Warren Singer MISTC
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Developing user documentation

Cerys Willoughby, discusses an international standard for developing user documentation in an agile environment by ISO working group ISO/IEC JTC1/SC7/WG2.

The ISO working group develops standards for systems and software documentation. We are currently working on a suite of standards to assist in the design and development of effective user documentation.

Anyone who uses application software needs accurate information about how the software will help the users accomplish a task. Hence, well-designed documentation not only assists the users and helps to reduce the cost of training and support but also enhances the reputation of the product, its producer, and its suppliers. Following the guidance provided by standards can help to ensure that an organisation produces effective user documentation.

These standards originated from an ISO study group on user documentation standards, tasked with establishing the relationship between existing and potential international standards on software user documentation. Their task analysis highlighted the need for a coherent set of standards based on the requirements of the standards' users. As a result, each standard is targeted at the tasks and requirements of a specific audience involved in developing user documentation. These standards are:

- ISO/IEC 26511 — *Systems and software engineering — User documentation requirements for managers*
- ISO/IEC 26512 — *Systems and software engineering — Requirements for acquirers and suppliers of user documentation*
- ISO/IEC 26514:2008 *Systems and software engineering — Requirements for designers and developers of user documentation*
- ISO/IEC 26513:2009 *Systems and software engineering — Requirements for testers and reviewers of user documentation.*

The first standard published in the series, ISO/IEC 26514 represents the core standard of the suite providing guidance for designing and developing user documentation, including creating style guides and planning information development.

While developing these we recognised the need for a standard that provided requirements and guidance for these same audiences, but where the users developed user documentation within an agile environment. Because of the nature of agile development methods, the traditional means of developing the end user documentation as described in the above series of standards are not entirely applicable.

The standard to address these issues is ISO/IEC 26515 — *Systems and software engineering — Developing user documentation in an agile environment.* It provides guidance to technical communicators and related roles on how to adapt the processes described in the ISO/IEC 2651N series of standards to develop user documentation. It provides information about common agile development methods and terminology, and how to adapt the documentation process to work most effectively within the agile development approach to produce quality user documentation for customers.

Projects that implement agile development focus on providing rapid and frequent deliveries of high-value software. These methods often involve detailed planning only for the short term, and the implementation of processes in parallel, rather than planning for an entire project in distinct phases as would be expected in traditional projects.

Although agile development methods often advocate less life cycle documentation, the users of a software product still expect and require quality user documentation to be provided with these software products. Although the end results of the user documentation process are the same, the methods to get there may be very different than in traditional methods. Agile development methods may lead to the production of less user documentation than in traditional development methods, but the user documentation developed must be sufficient to meet the needs and requirements of the users.

Guidance is provided on how to deal with reduced design documentation, and an informative annex is provided with example interview questions that can used with developers and stakeholders to retrieve information to help with the design and content of user documentation in the absence of a detailed design specification. An annex is also provided with information on different agile development practices and the benefits that agile development processes can have for user documentation, such as earlier involvement in the design and access to stakeholder feedback.

ISO/IEC 26515 provides three main clauses:

- Clause 5 describes the user and life cycle documentation processes in an agile environment and how these relate to traditional documentation processes, including the differences between agile development methodologies and traditional development methodologies.
- Clause 6 describes how to plan and manage user documentation development in an agile environment. This section includes information of how to manage teams, meetings and communications, and planning and management of tasks across sprints.
- Clause 7 covers the relationship between the user documentation process and life cycle documentation process in agile development, and describes the processes involved in designing, developing, testing, and translation of user documentation in an agile environment.

ISO/IEC 26515 is currently on its final ballot, and is expected to be published in early 2012. C

Cerys Willoughby MISTC is an Information Architect for a family of middleware products at IBM.
Cerys represents the UK as a member of the ISO working group on software and systems documentation.

An introduction to ISO standards

Richard Hodgkinson, Convenor of ISO/IEC JTC 1/SC 7/WG 2 explains the process and organisations involved in producing ISO standards.

As Cerys Willoughby has provided an article on developing user documentation in an agile environment on the facing page, I'd like to provide a general background to the development of ISO/IEC standards.

Why do we have International standards?

ISO (the International Organization for Standardization) is based in Geneva and was founded in 1947 with the objective of 'facilitating the international exchange of goods and services'. Standards are guideline documents that reflect agreements on products, practices or operations by nationally or internationally recognised industrial, professional, trade associations or government bodies. They help support safety, security, interoperability and consistency of operation. Standards are not compulsory unless mandated so by an individual, organisation or the market. Practically every country has a national standards organisation, which is a member of ISO. In the UK we have the British Standards Institution (BSI), who nominate experts to serve on ISO committees.

Who produces international standards?

In addition to ISO there are a number of other global standards organisations such as the ITU (the International Telecommunication Union) and the IEC (the International Electrotechnical Commission). For the production of information technology standards, ISO and the IEC have formed Joint Technical Committee 1 (JTC 1). Within ISO/IEC JTC 1 are several Sub Committees (SCs) responsible for specific areas of IT standardisation (see www.jtc1.org). SCs are sub-divided into Working Groups (WGs). ISO/IEC JTC 1/SC 7/WG 2 (Systems and software documentation) is currently working on several standards including ISO/IEC 26515.

Apart from the very highest levels at ISO and the IEC, all the individuals and experts who participate in the production of standards, work for businesses, academia, national standards or professional organisations. Individuals from competing organisations work together for the benefit of their industry. I have worked alongside experts from IBM, Microsoft, Apple, Philips, Siemens, Fujitsu, Sun, Sony, Canon, Oracle and Toshiba.

How is this done?

Simply put, WGs hold meetings and prepare draft standards, which then undergo international ballots.

Meetings

WG meetings are planned to coincide with the ending of ballot cycles. The meetings are held two to four times each year, typically for three to five days, each meeting being hosted in a different country. This enables experts who are unable to travel overseas to occasionally attend meetings. At these meetings, we review the votes and comments from ballots and prepare new drafts for the next ballot cycle. We can receive up to 400 comments from a ballot…all of which must be discussed and responses prepared! This work can continue between the face-to-face meetings via email and electronic conferencing.

Ballots

The SC Secretariat distributes the drafts electronically to participating national standards organisations, who circulate them to local experts for review, comment and voting recommendations. The comments and voting are agreed and compiled at national level, then sent back to the SC Secretariat for distribution to the WG. The ISO Directives set the times allowed for these ballots.

What are the stages?

While there are 'fast track' procedures for adopting existing national, '*de facto*' and industry standards as international standards, the stages for creating a new standard are as follows:

- *NP (New Project).* A requirement and business case for a new standard are identified and a set of user requirements undergo international ballot. When a minimum of five countries have approved the NP proposal, committed to contribute experts and a project editor, the project is allocated an ISO number and assigned to a WG.
- *WD (Working Draft).* The basic working draft is developed further within the WG. When it is considered to be complete, it progresses to the CD stage.
- *CD (Committee Draft).* This is the next balloting stage. A minimum 66% of the votes cast must be positive. Comments are received, and categorised as 'Technical High', 'Technical Low' or 'Editorial'. Technical High comments are often conditional and if implemented can change a vote from 'No' to 'Yes'. If the ballot is unsuccessful, the WG has to prepare further CDs, and balloting cycles are repeated until the approval requirement is met.
- *DIS (Draft International Standard).* The draft is now stable and further development is not necessary. This is the final opportunity for Technical Comments to be submitted. Again, the criterion is for 66% of the votes to be positive. If 100% of the votes cast are positive, an FDIS ballot is not required and the draft goes direct to IS.
- *FDIS (Final Draft International Standard).* This is the final approval ballot and only Editorial Comments are expected. If, there are insufficient positive votes, then the WG has to decide whether to revise the draft and go back to CD level or abandon it.
- *IS (International Standard).* The draft is published by ISO.

For each standard, this process can take several years to complete. Standards developers are always aware that their work must be relevant, address current technology and practices, but must not inhibit or constrain the future development of products or technologies. C

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Learn how to improve graphics

The Non-Designer's Design Book

By Robin Williams

Third edition, 2008, ISBN: 978-0-321-53404-0, 216 pages, £13 Peachpit Press. Reviewed by **Bridget Walsh**.

I first heard of this book when I recently emailed the ISTC discussion group (see page 8). I was looking for resources to improve my graphics skills in technical communication, since I come from a mainly writing background. While I received several replies citing different resources, this book had the highest number of recommendations.

Overall structure

True to its title, the book is aimed at readers who use graphics as part of their work, but don't have formal training in graphic design. The book is well-illustrated, well-written, and is also easy to dip into and find specific information.

The book is divided into two parts. The first part is on 'Design Principles', which covers graphics. The second part of the book, is 'Designing With Type'. Both parts identify key principles that can make or break a good design.

Design principles

The author begins with the premise that 'Once you can name the problem, you can find the solution'. In this part she initially describes four principles that identify problems, and are also useful in finding solutions. The author condenses a lot of valuable information into these principles:

- **Contrast**. If you are going to contrast don't be cautious, be brave. "If two items are not exactly the same, then make them different. Really different". For example, using a dark brown and a black line on the same page can cause visual confusion.
- **Repetition**. Using repetition of elements creates a sense of structure and unity. Examples are using the same font for related headers on a page or document, or using variations on an illustration across related documents such as business cards, flyers, and letterheads.
- **Alignment**. 'Every element should have a visual connection with another element'. Alignment clearly signals what belongs together. In particular, the author says to use centred alignment sparingly, as the eye cannot detect the alignment as clearly.
- **Proximity**. Elements that are related need to be grouped together. Those that are not related, need to be distinctly apart.

There is a structured chapter on each of these principles, with detailed descriptions, and examples. These are followed by a series of opposing 'before' and 'after' pages showing larger examples. The original page on the left has a 'bad' example, with comments, describing where the problems are, and what effects they have. The updated page on the right has one or more of the principles applied to the same example, again with comments. As the book progresses, some of these examples have subsequent pages, with different principles applied in turn to the same example, improving it with each application.

Since I read the book, I find myself applying these principles. Recently, I was revising a diagram in a document that had two different types of elements, represented by squares and circles of the same colour. I revised the diagram with contrasting colours for each type of element, and sharpened the alignment, and it looked cleaner and easier to read.

A great strength of the book is that the information is very focused and practical. The author identifies key important points, describes them succinctly, and illustrates them in detail.

For example, following the chapters on the principles, there is a chapter on the standard colour wheel. In addition to the standard information, the author takes each set of three complementary colours in turn, she then extracts the colours, and places them in three squares in a row. Then she gives a small example of an illustration using these colours (perhaps a background colour, and two contrasting sets of type) and how they work together. There are further sections on using monochromes, and also on tints and shades that are particularly clear, and how choosing the right combination can make a significant difference.

Designing with type

The second part, is 'Designing With Type'. The author divides typefaces into six groups:

- Oldstyle
- Modern
- Slab serif
- Sans serif
- Script
- Decorative.

She then describes the characteristics of these groups. She describes in detail the different elements of typefaces.

The contrast principle from the design section is again applied: in general, don't use fonts from the same group on a page together. Fonts can be contrasted by being from different groups, or if necessary, by using different colours or weights.

I feel that this section is not as successful as the first part. I think the main issue is that the author is trying to condense too much information into a small space, with not enough examples. However, she has published a separate book, *The Non-Designer's Type Book*,essentially an extended version, which I believe works better. But, if you need a primer on typeface elements, and how to use them, then this book is sufficient.

I have various other books on design on my shelves: while they are excellent texts, and have more detailed information on the subjects here, they can be hard to reference on an everyday basis. I believe one of this book's strengths is its brevity and clarity, as well as its practical examples.

Rating: ★★★★☆ C

About the author

Robin Williams is the author of many books on design, typography, desktop publishing, website design and using the Mac.

Prepositions

After explaining what prepositions are, Jean Rollinson describes common misuses of 'to' and 'on'.

Let's start with the basics — what are prepositions? A preposition is a word that governs, and usually precedes, a noun or pronoun and expresses a relation to another word or element. *The Penguin Guide to Plain English* describes prepositions as 'rather like the mortar that holds the bricks together in a building'; without them the nouns and verbs are like a pile of bricks with no structure.

There are apparently 150 prepositions in English; they include 'at', 'in', 'after', 'of' and 'for'. If you think about these words, they all have more than one meaning and according to one dictionary there are 18 separate uses for 'at', so it's not surprising that they are sometimes used incorrectly. It is also worth bearing in mind that although these words can be labelled as prepositions, they can also be other parts of speech such as adverbs, adjectives or participles.

Specific phrases

Many nouns, verbs and adjectives are normally used with a particular preposition, for example 'the reason for', 'arrive at', 'angry with' and 'the purpose of'. Often non-native speakers cannot guess the right preposition but have to learn the expression as a whole. This may be compounded by the fact that English can use prepositions where there wouldn't be one in another language and vice versa. This can make it hard to explain why a certain preposition is used, except that that's the way it is. Native speakers would never say 'at day' but we are quite happy to accept 'at night'.

But, to continue the analogy from the opening paragraph, does the structure crumble if the wrong 'mortar' is used? It may be argued that some uses of prepositions are simply convention; there is no particular reason to prefer, for example, 'interested in' to 'interested by', except that the latter makes the reader stumble.

Misuses

Many misuses of prepositions seem to be said rather than written, and it is often because the speaker wants to use a more formal sounding word. The ones I find particularly annoying are train announcements. Trains arrive *at* stations not *into* them; and I just *continue* to the next station not *continue on*.

This second example is one of a growing number of phrases where an unnecessary preposition is added. Other examples include 'comprised of', 'believe in' (unless you are talking about God, Father Christmas, the tooth fairy, etc), 'enter into' (when referring to a place, as in 'I entered into the room') and 'made good on'.

Ubiquitous 'to'

'To' is a preposition that is increasingly used in place of many others. The following list gives the preposition that should have been used in the sentence that follows.

- **of**. We've discovered the secret *to* looking good for longer.
- **on**. Experiments with GM crops will have no detrimental effect *to* the environment.

  Convention says 'effect on' even though 'effect to' may make sense to some.
- **in**. The old locomotive was repainted *to* its original colour.

  Again, convention says that we 'repaint in' a particular colour.
- **for**. Charges of lack of sympathy *to* women have been rebuffed by the chairman.
- **with**. He believed Mr Jones was connected *to* drugs.

  Connected to is a correct construction but only when used to describe the attachment of one thing to another; for example, a hair dryer is connected to the mains by a plug in a socket. Connected with has a different meaning and the two should not be confused.
- **from**. Much of the decline of village pubs dates *to* the introduction of greater competition on beer prices.

  Here the use of 'to' is not even logical, 'from' is the established and logical word in this construction.

Overused 'on'

'On' is another preposition that appears in places where it shouldn't.

- **for**. The director outlined some implications *on* the industry as a whole.

  This is a case of constructional transfer. Similar uses such as the effect of an event *on* someone make the use of 'on' understandable but nonetheless incorrect.
- **to**. I wouldn't recommend it *on* anyone.
- **against**. He claimed he supported the campaign *on* vivisection.

  This misuse is particularly confusing because it is not clear whether he was for or against vivisection; using 'on' means the sentence can be read either way.

Conclusion

I hope this brief look at prepositions will make you think a bit about these little words. If you need more help with using prepositions, the following references have useful guidance. C

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Practical English Usage, Michael Swan, Oxford University Press

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Karen Mardahl describes a working day with KEMAR in Denmark

The alarm on my iPhone starts my workday. I eat my breakfast in front of my iMac, while checking mails and Twitter streams.

I resist the cat's attempt to distract me as I walk out the door to make all the right connections for my commute: a light-rail, two trains, and a bus. Audiobooks are my travel companion for the one-hour trip and I review them on Goodreads.com.

The first thing I do at work is 'punch' the time clock. Yes, I work in a factory, although it doesn't look like it. I sit in the Sales and Marketing department. My colleagues in Production (about half of the employees) assemble our products, primarily acoustical measuring microphones. My favourite product is the manikin called KEMAR, which is used for testing hearing protection devices, hearing aids, microphones in cell phones, and much, much more. I had to take my photo with KEMAR!

I don't think I have had a typical day since I started at G.R.A.S in January. My colleague, Ole, was hired on a part-time basis in late 2010 to dash off a few urgent manuals; he was the first technical author in the company for a while. I was hired on a full-time basis to write documentation, but also to bring order to chaos!

I need to review my work for our new website. We are preparing all the content in advance. With all the projects tempting me with so many details, I should dig out the notes from my project management course last year to help me make a better schedule for my time.

There is no online help in my world; we only have manuals that are printed for shipment, as well as some that are stored online as PDFs. The work on our website upgrade is opening doors in many new directions. This is where content strategy fits in so nicely — and I emphasise the word **strategy**.

Our graphic designer is reviewing my work on an InDesign template for manuals, but I'm already using it for my current project. I converted Ole's project to the new template, and now he is revealing some oversights as he adds new material to the document. Oops!

We have the privilege of working with the company's founder, a pioneer in the field of acoustics. At 85, he still comes to work everyday. He loves it when we interview him for information. Our first interview attempt was a bit of a failure, however. Our note-taking skills couldn't cope with a sharp mind containing more than 60 years of accumulated acoustics wisdom, so Ole bought a recorder for our next session! We need the help of technology to grasp wisdom that has been honed over the decades to beautifully crafted and concise gems of wisdom.

Whenever I encounter an issue with terminology or styles, I record it in our style guide or in a private log in the "I'm not sure where this should go yet" category. My trusty paper notebook contains notes from meetings and to-do lists, but I've also turned it into a journal of what I am doing. I stopped doing it for about a month, until I discovered how helpful it really was for helping me remember what I'm doing and what I want to do, as well as recalling all the ideas and inspiration I get.

Lunch is an obvious constant in my workday, but so is gymnastics. Following the tradition of many factories in Denmark, quite a few of us gather for a 15-minute exercise session each day at 11. I can highly recommend you trying to implement that at your workplace. It's perfect for someone working on the computer all day long!

Some days, I squeeze in time to read some articles. I still subscribe to blogs and websites via their RSS feeds so I can read them at my leisure in Google Reader. The people I follow on Twitter share great article recommendations, too, so my Twitter stream or searching on Twitter is an equally reliable source of inspiration. I look for general articles on planning or strategy, as well as tool-specific articles that can help me out of a bind. If I don't read them at work, I'll read them at home.

Previously, I had only one meeting a week and that was with the entire department. Recently, I started a new routine: meeting with my technical author colleague and the marketing manager. The way we work, it is natural for the three of us to meet to discuss our projects. We sit next to each other in an open office, but setting aside time to meet in a meeting room is truly productive. So far, our sessions have been brainstorming sessions extending far beyond the half-hour I allocated. They have all proved to be constructive and valuable, and very philosophical.

Now that the warm weather has come to Denmark, I walk to the train station at the end of my workday. It's a lovely 25-minute walk and the perfect activity after a day at my desk. A few minutes into my walk, I pass five large stones in a circle. Those stones excite my imagination; they mark the spot where the elders of the surrounding farms met for centuries in a form of local government, sitting in a circle on very similar stones.

If I have no lecture, workshop, or movie in my calendar, I head for home after work. After dinner, it's computer time: checking e-mails and tweets or possibly writing a blog post. With my current schedule, I'll soon start planning for two presentations I'm giving in August and September.

Often, I just want to go to sleep when I come home after all the still-new impressions from work! As for writing, I have been in my job for four months. Despite my years of experience, I naively thought I would have matters under control by now. There are so many areas to tackle that some days feel like my first day on the job again. I find this exciting and a great stimulation to my mind and my skills. I am grateful to have colleagues, a boss, and a workplace that likes that attitude. C

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