Communicator

Putting the learner first
in e-learning design

Making a business
case for tools

Facing the future

Listening to customers

Horses for courses
Preparing winning images for your website

Features

Regulars

Communicator — the quarterly journal of the ISTC

Polish up your crystal balls...

In this issue, you'll find several features that relate to the nature of our role as technical communicators and the developments that we're seeing in different sectors of business. This is something that affects how the ISTC positions itself and the criteria that it sets for membership.

On pages 19–21, Ellis Pratt of Cherryleaf asks if the role of technical author as we know it is dead. The title he proposes, information designer, is already used by some organisations (along with information developer). However, when I spoke to Ellis at a recent London Group meeting, he said that Cherryleaf still tends to refer to most practitioners as technical authors or writers, because this is the term that its clients understand.

The question of job titles leads into another thorny area: how should the ISTC define a scientific or technical communicator? So many titles developed in the last third of the 20th century that the Membership Committee now has to look beyond job titles to judge whether applicants are technical communicators. For example, there has recently been interest in the Institute from Integrated Logistics Support (ILS) engineers. On pages 16–18, Tom Nicholas and Velma Parker of TMS Publications give an overview of ILS engineering. In coming issues of *Communicator*, articles on documentation in the defence industry will explore this sector in more detail.

From yet another perspective, Florence Dujardin writes on pages 14–15 about the skills shortage in usability testing and suggests technical communicators can extend their skills to fill this role. Do those of us writing instructions think enough about how effective our materials are? Are we aware of the latest ideas and research in this field?

These issues affect us as individuals and the ISTC as an organisation. I encourage you to read these articles and think about your views and experience. Send in your observations of how technical communication is being done in practice and how you see practitioners adapting to meet new requirements. What do you need from the ISTC and how do you think the Institute needs to evolve? I would be especially interested

to hear from readers whose jobs have broadened into multi-disciplinary roles (for example, to include testing), as we are considering a series of articles on this development.

All of this ties in neatly with the theme of this year's Conference, 'Expanding your Horizons'. This is a chance to meet other technical communicators and talk about the issues that affect you. Judging by the lively discussion, debate and even argument at the London Group meeting, people have plenty to say on what we do and what we should be doing. Conference offers a far larger forum for these discussions — the chance to meet people in your field and, perhaps still more valuable, people outside it.

I get the odd complaint that there is too much focus on tools in *Communicator*. I don't intend to apologise for carrying such content, firstly because the reality is that people are often employed on their tools skills (whether we like it or not) but, more importantly, because traffic on the online groups tells me that practical issues with tools consume members' time and threaten their deadlines. However, it's vital for us to reflect the wide (and growing) range of skills demanded of technical communicators beyond tools.

With that in mind, the rest of this issue focuses on ways of doing things. Horace Hockley award-winner Ron Blicq shares his experience of designing e-learning courses to be studied without tutor-support. In our central illustration feature, Philip Randall considers different techniques for adding graphics to websites. John Rogers then discusses how to make a business case for buying tools. Chris Pearson wraps up the parcel with brown paper in the second part of his series on how to map processes.

Our regular items look a little different, with no Word workarounds or Tools of the trade but an extended final part of our Publishing series on preparing images for print, in which Lewis Marshall investigates some of the problems that can arise in this process.

Citing your membership

Every now and again, there's confusion about the ISTC acronym and Carol receives e-mails on topics ranging from

teaching to swimming. We've even heard from some organisations that lay claim to exclusive use of the initials, even when they were founded after us and such acronyms cannot be owned.

Our standards correspondent, Richard Hodgkinson, reported that a contact investigating his FISTC suffix found the *Federation Internationale Sportive de Traineau à Chiens*, a group for sporting sled dog trainers — that took me back to our Spring 2001 cover picture! Still, at least Fellowship became a topic of discussion.

A report in the May ISTC Newsletter highlighted that job applicants are falsely claiming membership so do check when recruiting. Ask for a current membership card — not a certificate, which shows only that that a person joined at some time in the past. **C**

Feedback on our new look

The updated visual design introduced in the Spring 2004 *Communicator* met with uniformly positive feedback. Most comments came during telephone calls and at meetings but some were expressed in writing. For example, Paul Ballard, Managing Director of 3di Information Solutions, wrote to say: 'My colleagues and I at 3di really like the design changes you have made to *Communicator*. The rationale behind each change was also good to read.'

The Editor of The Nuclear Engineer, ISTC member Keith Simm, called with encouraging feedback. He, too, liked being given an explanation of the changes we had made. He also offered a suggestion, which was to change to a heavier paper stock to reduce showthrough. We had noted this problem, which is most noticeable on the reverse of advertisements.

Given that past feedback from ISTC members has shown support for using recycled stock, I'd already had sample pages printed on recycled paper of the same weight as our present stock. This proved to be more opaque, so we may be able to kill two birds with one stone on that score next year.

If you have any other ideas for further improvements, or comments generally, drop me a line.

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Reusability under the SCORM

Dirk Manuel MISTC

I enjoyed John Burns's article on the SCORM (Learning Objects and the SCORM) in the Spring 2004 issue of *Communicator.* However, I think that Mr Burns slightly mis-stated the reusability component of the SCORM model. Mr Burns states that 'learning objects…help users to define and construct their own e-learning courses', implying that the reusability is on the part of the user. As I understand it, the reusability is actually on the part of the author (or better, content developer).

There are two levels of re-use in a SCORM-compliant development environment. Content developers can combine previously created assets into Shareable Content Objects (SCOs), and can also combine SCOs into new courses (via a manifest — as described by Mr Burns). True, a user can choose which SCOs within a course they want to view, but they can still only select (or deselect) those SCOs that the content developer has thought fit to include in the course.

One of the interesting capabilities of SCORM, however, is exactly how the user 'chooses' which SCOs to view. With a SCORM-compliant course, it is possible for a user to take a 'pre-test' which assesses their existing knowledge, and then be presented (by the LMS) with only those SCOs within the (pre-built) course that contain material that they do not already 'know'. In fact, the user may not even know that the course contains any SCOs other than the ones they see. In this way, individual users can receive training specific to their individual needs, even if they don't completely know what these needs are themselves! This possibility, although not mentioned by Mr Burns, is one of the most powerful arguments for SCORM, and is what provides the user with the ability to 'build a course… in an almost tailor-made fashion'.

These minor quibbles aside, I thank Mr Burns for describing a complex, cutting-edge topic in such an accessible manner. **C**

The virtues of translation
Dave Cooper MISTC

The newly enlarged European Union now has some 20 official languages and there are many speakers of minority languages — such as Basque, Catalan, and Turkish — whose needs must also be addressed. As well as being an obviously good thing, providing documentation in the reader's language is, in some circumstances, a legal requirement. Clearly, organisations selling their products in the EU and beyond must plan for localisation and translation at the start of a project.

To help organisations market their products and services internationally, TCeurope — the umbrella organisation for European technical communication organisations — has produced *Usable and safe operating manuals for consumer goods: A Guideline.*

The Guideline helps producers avoid many of the legal and other pitfalls associated with documentation. I was one of several ISTC members involved in developing it and, although it is oriented towards consumer goods, communicators in other fields should find much of interest.

The Guideline is currently available in 11 languages. ISTC members can download a PDF file of the English version from the members' area of the ISTC website. I hope you will all take the opportunity to use the guidelines and send in your comments so that TCeurope can produce an enhanced version in a year or two. **C**

Note: Dave Cooper was the subject of the Member profile in the Spring 2004 *Communicator.*

We welcome letters of up to 200 words but reserve the right to edit to fit space available. Write to journal.editor@istc.org.uk or PO Box 522, Peterborough, PE2 5WX.

'It is clear that the Institute has reached a position of financial security.'

Leading by example

In my last notebook, I rambled on about goals and achievements, and concluded that I had managed to achieve my goal of stability and careful growth for the ISTC. For someone who is finishing his term as President at the end of the year, I should be satisfied with where we are. However, a recent decision has cast a different light on my situation. Council has very kindly asked me to consider extending my term as President and, after much discussion and planning with my family, I've decided to accept.

This decision leaves me with a new dilemma. If I have achieved what I set out to do nearly two years ago, where do I go now? As I said before, Iain Wright and his Council managed to halt the ISTC's decline, and the current Council and I have managed to give stability and gentle growth. So, the simple answer would be to take the bull by the horns and turn our Institute into the world leading professional association that we all know it can and should be. This said, the difficult question we then face is how are we going to make it happen?

With new member benefits like Oxford Reference Online and discounted British Standards, plus improved financial stability (to quote our accountants, 'It is clear that the Institute has reached a position of financial security.'), confidence is growing. Paul Ballard of 3di Information Solutions has joined Council in a marketing role and, for the first time I can remember, we have two Vice-Presidents — congratulations to Ian Wood and Alan Fisk. Even so, the difficulty that we now face is no longer lack of money but lack of volunteers. All our Council and Steering Group members are stretched to the limit, and unable to take on any more responsibilities.

I think you've probably guessed what I'm building up to — I've said it before but your Institute needs you! Even if you can only spare an hour a week or less, we can put that time to good use. Speaking personally, although my Presidency consumes a lot of my time for no financial reward, it gives me an enormous sense of satisfaction to know that I'm contributing to the ISTC's success. I can't say for certain but I'm fairly confident that it hasn't done my employment prospects any harm either.

I have been thinking about projects that we might undertake when we have the people to tackle them and I've had some suggestions from other people too. I must add that these are still just thoughts, not necessarily supported by Council, but here are a few ideas:

- **A new ISTC publication**. The idea of updating and rewriting the 1980s ISTC handbook as a textbook for students of technical communication courses has been suggested. An alternative might be a desktop reference book for practising technical communicators.
- **More ISTC events.** The annual Conference is popular and successful. Should we develop more events throughout the year? Perhaps we could work with other similar organisations to run joint events.
- **ISTC training and certification.** Past ISTC courses have had limited success but perhaps something new, like an entry-level distance-learning course for technical communicators could work better. Our friends and colleagues in tekom (Germany) have just established a certification scheme and perhaps we can learn from their experiences.
- **Working with related organisations.** Recently, there has been discussion about other trades that might also fit under the umbrella of scientific and technical communication. How about investigating which organisations already have scientific and technical communicators as members, people who might benefit from our associations working together? Examples include:
  ‣ For science: ICSTI (International Council for Scientific and Technical Information)
  ‣ For engineering: the Engineering Council, IIE (Institution of Incorporated Engineers), IEE (Institution of Electrical Engineers) and others
  ‣ For information technology: BCS (British Computer Society)
  ‣ For publishing: ALPSP (Association of Learned and Professional Society Publishers).

I'm sure that there are plenty I've missed, just as I'm sure that these organisations all have scientific and technical communicators among their members. I will be surprised if we don't find that there are ISTC members who are, or could be, members of these organisations too.

Anyway, there are some ideas for the future and I can assure you that Council will give them all thorough consideration before deciding whether to progress them. However, that's only a start. I'd welcome your views on these suggestions, not to mention your own ideas too. After all, the ISTC is here to serve you — why not tell us what you'd like to see?

Conference 2004

Finally, I'd like to remind you about Conference on 8–10 October. We will be offering an indexing workshop (run by the Society of Indexers) on the Saturday morning. Although it won't cost any extra to attend, places are limited so you must book your place in advance. If you take advantage of our 'early bird' discount (valid to 30 June 2004) at the same time, you will save 10% on Conference. There's a booking form enclosed with this issue so all you have to do is fill it in and post it! **C**

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Conference 2004

As you know, the ISTC has been working with Oxford University Press to introduce an exciting new benefit for members: access to Oxford online reference material through the ISTC website. I'm delighted to announce that this service went live in April as planned.

It provides access to a range of content from Oxford Reference Online: Core Collection (ORO), a facility launched last year and until now sold largely into libraries and educational institutions. Content is hosted by OUP, and updated when the source content changes, but delivered into an ISTC-branded template.

To use the service, log into the members' area of the ISTC website at www.istc.org.uk. Once you are logged in, click **Members' area** and then **Oxford Reference Online**. This displays a search page within the ISTC website. Enter your search term in the box and click **Go**. This takes you into the ISTC area of the Oxford website, giving you access to more facilities.

For example, entering 'XML' and clicking **Go** returns five hits, one from the *Concise Oxford Dictionary* and five from *A Dictionary of the Internet*. The last is 'XML Schema'. Clicking this displays an entry containing two terms in blue. These are cross-references to other entries. Clicking these takes you into the associated entries, which include cross-references to more terms. You can follow interesting lines of investigation until you find what you need. You can also highlight words that do not have an embedded link and click **CROSS-REFERENCE** to generate a secondary set of search results. You can move between adjacent entries in a book using the left and right arrow buttons above the entry.

For tips on searching more successfully, click **HELP** on the green bar near the top of the screen. To return to the ISTC website from the Oxford page, click **HOME**.

Please be sure to comply with Oxford's legal requirements when using the service. To view these, click **Privacy Policy and Legal Notices** at the bottom of the screen.

If you have any difficulty in logging in or using the service, please contact Chris Pearson at chris@chrispearson.org.

Marian Newell FISTC
E-mail: journal.editor@istc.org.uk

The 13th ISTC Annual Conference will take place on 8–10 October at the Oxford Belfry in Milton Common, which is near Thame in Oxfordshire. A stunning courtyard, complete with stone ornamentation and fountain, provides the focal point around which the conference rooms are arranged. Having undergone a multi-million pound refurbishment, the Oxford Belfry is a superb four-star hotel, conveniently situated just off the M40.

This year, our theme is 'Expanding your Horizons'. As always, Conference provides the perfect opportunity for thought-provoking debate, stimulating delegates with new ideas that will lead to long-term improvement. One of the best ways to make progress is to learn from the experience of others. With that in mind, imagine two days during which some of the best brains and personalities in the industry join together to share ideas and knowledge.

'Expanding Your Horizons' is designed to challenge every delegate to rethink and re-evaluate both their job and themselves, in the face of a fast-changing marketplace. In putting together the programme, we have tried to cover some of the strategic and everyday issues that we face, as well as covering technical communication as a whole.

A new item this year is an Indexing Workshop on the Saturday morning, hosted by Derek Copson of the Society of Indexers and aimed specifically at technical communicators. This promises to be a useful new addition to a programme that already includes presentations from speakers who are leaders in their fields. They will be addressing a wide variety of topics, for example:

- Expanding your writing horizons
- Standards in information and process management
- Document usability
- Presenting numbers, tables and charts.

Conference provides an opportunity for us to celebrate the very best in our field. Technical communication has never been an easy career choice and, as market conditions change, it will probably get tougher. So, there has never been a better time for us to get together and learn from one another or, in other words, to expand our horizons!

Don't miss out on a weekend filled with presentations, workshops, exhibits, receptions and much, much more — all in relaxed and carefree surroundings among friends. For more information, please contact me at:

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The heated indoor swimming pool at the Oxford Belfry

Document Design Conference 2004

Noel Reid offers highlights of the research presented on 22–24 January at the University of Tilburg in the Netherlands.

Six years on from the first ever Document Design Conference, the follow-up saw the presentation of more than 60 papers given by over 100 attendees from Europe, North America and South Asia. In the main, attendees were researchers.

The second conference continued to correlate research with practice in the field of document design. Accordingly, to provide perspective and achieve a balance, both researchers and practitioners presented papers.

In the words of the organising committee, the focus was on 'organisational communication from a cognitive-psychological, institutional and intercultural perspective'. There were four concurrent tracks:
- Methods for the study of document design
- Rhetoric and persuasion
- Institutional documents
- Electronic documents.

Reading and expertise: the impact of connectives on comprehension of texts in the financial field

Nicolas Roebben and Yves Bestgen, Catholic University of Louvain, Belgium
Studies have shown that high-knowledge readers learn more from low-coherence texts than high-coherence texts, whereas low-knowledge readers act in reverse. Low coherence texts force high-knowledge readers to use their prior knowledge to fill in the conceptual gaps.

Levels of coherence were measured by the presence of causal connectives. Subjects were divided into two groups, according to their niche of interest, and tested on four texts, the variables being the presence or absence of connectives and the exact subject of the text.

The conclusions of the study were:

1. High expertise level readers always performed better than low expertise level readers.

2. The presence of connectives in texts improved mental representation of low and high expertise level readers.

3. When participants are real experts, motivational and knowledge problems are reduced.

Methods for the study of document design

The lectures in this track were divided into seven threads, from Formative Evaluation Methods on the first day of the conference to Designing Instructions on the last. The ISTC Newsletter has already featured Hans van der Meij's *Design Guidelines for Procedures* (visit www.istc.org.uk/pages/newsletters.php for an abstract). Another highlight was a paper entitled *Ethnographic methods for evaluating document designs*. This lecture was in the Formative Evaluation Methods thread and explored the use of on-site observation and on-site interviews in testing survey questionnaires.

Rhetoric and persuasion

The second track gave insight into research on what makes persuasive documents effective, tracking the dynamics of advertisements and the preparation of publicity material, among other things. One highlight was a paper on *Rhetoric in advertisements: Towards a new taxonomy of rhetoric in word and image*.

Institutional documents

These are typically documents produced in the public sector. The papers presented encompassed communication in business, law, politics and education.

Particularly memorable was Judy Delin and Rob Waller's presentation, *Branding in relationship communications*. These two speakers are practitioners, working at the Information Design Unit in Newport Pagnell. Delin and Waller showcased a number of transactional documents such as utility bills, examining the use of 'language branding' in creating and maintaining relationships with customers.

Electronic documents

The seven threads in this track took attendees from commercial website design to designing hypertext menus and visual elements in electronic documents. Alfons Maes connected hyperlinks with cognition and usability research. Thea van der Geest and Nicole

The use of promotional language in press releases

Henk Pander Maat, Utrecht University
Writers of press releases are often advised to avoid explicit promotional language — it is assumed that journalists are wary of attempts to obtain free publicity and so this study addresses two questions: what linguistic elements can be considered as 'promotional language', and do journalists actually remove obvious (self) promotional language when rewriting releases for publication?

A coding scheme was developed, distinguishing between thirteen promotional devices. Examples were intensifying quantifiers and adverbs such as 'all' or 'enormously'. A corpus of 43 press releases in one niche market was assembled. The 847 sentences contained 557 promotional elements. A field study examined how journalists reworked these press releases into stories.

In about 80% of cases, promotional elements were retained or replaced by others.

Loorbach examined how visual elements such as font size and menu bar style contributed to the overall coherence of a webpage.

Keynote speakers

Six diverse speakers opened and closed the three days. A high point was Saul Carliner, former President of the STC, discussing 'The design of online documents and studying the various genres of online communication from a cognitive-psychological perspective'.

Finally, David Sless, Director of the Communication Research Institute of Australia, drew on 20 years' experience to discuss standards in the design of public documents. **C**

Noel Reid is an Associate of the ISTC and a co-opted Council member. E-mail: noelreid@yahoo.com

News from the ISTC Council

It was a dull day on 8 May, when eight people attended the 172nd Council meeting in the University of London Union in Malet Street. There was nothing unusual on the agenda, with the main business being concerned with the preparations for this year's Conference. However, thanks to encouraging financial news and progress on several initiatives and activities, it proved to be one of the most positive meetings we've had in recent times.

Oxford Reference Online

The OUP resources are now available on-line for ISTC members and have been well received. The other new benefit, discounted British Standards, is being taken up — albeit only slowly.

Articles of Association

Caroline Bucklow has carried out a review of the ISTC's Articles of Association. She has suggested a lot of changes but it is all quite complicated. This led to one of those perennial discussions about membership and the need for volunteers to take on specified jobs. Council is hoping to have the document written in Plain English but decided to seek legal advice before proceeding further.

Newsletter

Talking of volunteers, David Cooper is stepping down as Newsletter Editor and there is an urgent need for someone with the skill and time to take up this post. I think we can all agree that Dave has done an excellent job with the Newsletter, making it something to look forward to reading.

Finances

One bright spot was that the ISTC's bank balance, looked after by Treasurer Peter Fountain, is in a relatively healthy state compared to the recent past. It is sufficiently healthy to allow Council to consider new projects.

Courses guide

John Young, who looks after the Education Steering Group, is reviewing the list of courses. He is finding this slow work because many institutions don't seem keen to get in touch.

Communications courses, which seemed to be on the rise a few years ago, are not so common now. Although the City & Guilds 5360 modules are still available, they are not well publicised and students report difficulties in finding convenient exam venues. John suggested that this was due to a strange government funding system. If I understood correctly, colleges that offer a place to a student to take an examination will lose money if that student unfortunately fails.

ISTC handbook

There was a discussion about the ISTC handbook and its relevance to present examination syllabuses. The general view was that it needs to be completely rewritten, another project for an able volunteer to coordinate.

International

A discussion on international affairs, which are looked after by David Cooper and Alan Fisk, revealed that various guides for instructions are now available for viewing on the INTECOM website. Forum 2007 will be in Amsterdam.

Membership

The membership is still not as strong as it should be: just under 900 at the last count. In a general discussion, the Membership Committee, represented by Ian Wood, commented that CVs received from prospective members were, to put it gently, not very good. It is not that would-be members lack experience but that too many CVs contain spelling mistakes, typos and poor layouts. For applications to join a communication institute, this is not good. If present members are encouraging people to join, as I am sure they all are, then would they please stress the necessity of a well-presented application.

Documentation awards

Conference will host the ISTC's annual documentation awards. The categories are currently being reviewed to ensure that the awards offer an opportunity for as many ISTC members to enter as possible. Last year saw excellent entries in most of the categories.

If you are interested in entering, e-mail awards@istc.org.uk for details. If you would like to sponsor an award, please contact Carol Hewitt on 01733 390141 or istc@istc.org.uk. **C**

Les Best FISTC
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Taxing times

It's that time of year again — yes, tax returns. Don't forget that you can reclaim your ISTC membership fees against tax. Up to the last six years may be claimed (providing you have not already claimed them, of course), with the proviso that they were paid out of your earned income.

It may be wise to keep the invoices and membership cards for each year you are claiming, as they are proof of the amount you are claiming and that you have paid the money to the ISTC. You may be able to prove payments in some other way, such as your bank or credit card statements. It is not a requirement to send proof with your Tax Return, but such proof must be available if requested. Unfortunately, the ISTC cannot provide summary receipts so we ask you to maintain your own records.

The table below shows the membership fees for this and the previous five years. There is no VAT included in these rates (it is not required), so you cannot claim VAT back (that could be embarrassing if Customs and Excise decide to audit your books). As the ISTC is registered with the Inland Revenue as a professional organisation, you can claim with confidence and reap the benefit — I have!

	2004	2003-1	2000	1999
Fellow	80	70	64	60
Member	70	60	53	50
Associate	60	50	43	40
Student	30	25	24	22
Concession	20	13	13	12
Retired	40	30	–	–

Notes:
1. The concession rate is applied for the first year of student membership only.
2. Retired rate available on request to members over the state retirement age.

Peter Fountain FISTC LCGI
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ISTC Discussion Group

http://groups.yahoo.com/group/ISTC_Discussion

Language and symbols

Some discussion took place concerning how to include a tick (or check) symbol in HTML. Using Microsoft® Word, select the font Zapf Dingbats and depress the character 4 on the keyboard. Another way, using Word, is to select Insert on the toolbar, then select 'symbol' and the font Zapf Dingbats. On the 20th box of row 1 there is a different style of tick available. Click on this.

Another approach, which does not require a font to be available, is to select an image for the bullet. You can do this using a definition list (although you won't get a hanging indent): <DL><DD><imgsrc="yourimage.gif">text</DD></DL>

When to use the TM symbol

It is a good idea to include this to tell the audience that a term is the client's unregistered trademark and to respect that. There is then no risk of misleading a user and or antagonising companies that wish to protect their trademarks from falling into general use. If documents are to stay within the company, this safeguard is not needed. When writing the term for the first time, use the trademark symbol (CTRL+ALT+T in Word) but omit it afterwards to avoid reduced legibility.

Expressing degrees Centigrade

Pressing Alt-0176 in Word will give the degree sign and, in Windows, most fonts have the ASCII character 248 as the degree symbol. To obtain this, ensure NumLock is on, press the Alt key and enter 248 on the numeric keypad. Release the Alt key. For more information on derived units, visit http://www1.bipm.org/en/si/derived_units/2-2-2.html.

When to use 'data' and 'datum'

There was much discussion about which term was appropriate in which circumstance. It was indicated that 'data' is a collection of values, usually related, and is also treated as singular according to the Concise Oxford Dictionary. The term 'a datum' suggested to one author a discretely packaged object, possibly a point of reference from which measurements might be taken or comparisons

made. The term 'datum' is rarely used now in computing circles and the Microsoft Manual of Style says not to use it. The terms 'data' and 'information' are not synonymous. Data has no intrinsic meaning, whereas information does.

Another can of worms

Debate arose about whether to use 'a' or 'an' before the word 'historical'. *The New Fowler's Modern English Usage* (1966 edition) allows both. There is some guidance at www.english-usage.com/faq.html#fxaanbef.

Date formatting

Concerning turning off automatic date formatting in Excel 2003, the following advice was given: select the cell or column you want to format, from the menu bar click Format, Cells, select the Number tab, and click on Date in the category box, then select the date format you prefer.

Not just technology

Jeff Veen, consultant and author, says that technology is not the main part of a content management system but that editorship and a proper publications policy are the essential qualities. For details, visit www.adaptivepath.com/publications/essays/archives/000315.php

Converting PDF to JPEG

Paint Shop Pro™ 8 will open PDF documents and one can Save As in JPEG. Using this method, JPEG quality seems quite good compared with files produced using Adobe® Illustrator®.

Spam alert

Our attention was drawn to how spammers have taken advantage of 'non-delivery reports' to disguise their bulk e-mails. To find out more, visit:
- www.sophos.com/spaminfo/articles/ndrwp.html
- www.sophos.com/spaminfo/whitepapers/index.html

This can also be an efficient way of delivering viruses. ⓒ

Jo Wilson BEd (Hons) PgCTA
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Member news

New members

Member

Martin Andrassy	Grays
Stephen Angell	Gurney
Tony Bennett	Stroud
Jeannette Brown	Sudbury
Kevin Giblett	Cambridge
Peter Godfrey	London
Paul Llewellyn	Tetbury
Alan Maynard	Brixham
Sean Nation	Galway, Ireland
Elizabeth Nixon	Wokingham
Catherine Peters	Kingsbridge
Rhona Sampson	Bath
Andrew Simpson	Wolverhampton
Ken Stapleton	Exmouth
Susan Stocks	Royston
John Straw	Belper
Francis Wright	Bury St Edmunds

Associates

Carl Bernard	Coventry
Ann Marcus-Quinn	Ireland
Stewart Mills	Galston

Students

Graeme Bisset	Gosport
Steven Edwards	Bridgewater
Simon Oughton	Poole
Annette Sohor	Dublin
Peter Walton	Northallerton
Joanne Warmsley	Didcot
Tony Parr	West Wickham

Transfers

Fellow

Matthew Wailes	Nottingham

Member

Edmund Clayton	Godalming
Jeremy Delvarr	London
Keith Morrison	Boradstone
Adrian Toole	Welwyn Garden City

Associate

Trevor Gransden	Plymouth
Hugh Longlands	Bridgend
Paul Thomas	Callington

Obituary

The ISTC regrets to announce the passing of Lionel Lawson and offers its condolences to his family and friends. A new member of the ISTC, having joined in 2003, Lionel worked for IMPRO Technologies in South Africa, writing technical and operational software guides. A man of many talents, he held a pilot's licence and had won an Award for Excellence in the History of South African Literature.

Independent Authors SIG

http://groups.yahoo.com/group/ISTC_IASIG

A relatively quiet quarter saw 125 postings to the Group, but 12% of these were forwarded contract opportunities. Although most were from agencies, two direct opportunities came from the Quality Authors Website at www.qualityauthors.co.uk.

The site is now maturing nicely, with a good number of members and a variety of articles and book reviews. Anyone who is not a member should seriously consider joining. Clients looking for freelance authors do look at the site. If these opportunities are then posted to the list, it means that people already have enough work — a good advertisement for the site.

Leaving the rat race

An interesting thread arose from Mick Davidson's request for the latest news on the job market. Several authors announced that they have moved, or are planning to move, to the country from the cities.

Jane Dards moved from Hampshire to Wales to escape the high housing prices, deteriorating quality of life, and rising traffic levels. She wrote 'Thank heavens for the Internet, which allows me to work where I want to, irrespective of where my clients are'.

Greg Stevens is currently moving from Reading to Cumbria to a bigger and cheaper house, from which he can walk the fells. He wrote, 'I will be home-based and will initially continue my current contract.'

I am lucky enough to live in Cornwall and would not contemplate moving to an urban area. With the advent of broadband and good roads, one can work wherever one wants.

Budget

The last budget saw Gordon Brown's threat to tax small limited companies prove to be much less onerous than the accountancy profession expected, with a 19% tax on the first £10,000 profit. This reversed an earlier change, where the first £10,000 was tax-free, but the Treasury has yet to announce changes to the regulations on the distribution of shares between husband and wife for small owner-managed companies. The Inland Revenue recently interpreted an old tax law so that, if a husband and wife have equal shares in a company but only one of them earns the money, all the shareholders will be deemed to be working partners and taxed accordingly. There is a test case in June on behalf of a contractor who is facing a claim from the Inland Revenue for £43,000 in tax, back-dated for six years. The outcome of this test case could affect freelance technical authors who work through a limited company.

Raising our profile

On a more light-hearted note, Jean Rollinson wrote, 'Last week, I watched the Professionals version of University Challenge, and it occurred to me that this might be a way of promoting our profession among the general public'.

This drew a lot of interest and it looks like she has her team. We'll await an announcement of the team's first appearance on University Challenge!

Developers to authors ratio

Jane Dards asked 'Does anyone have any ball-park figures for the ratio between developer-days and author-days? (I'm feeling a bit outnumbered at the moment).'

This prompted numerous replies. It is a bit like asking how long is a piece of string, but David Farby wrote that Microsoft had a theoretical standard that, for every six developers, there should be three testers and one author. This is an ideal, probably rarely achieved, but all we overworked and underpaid authors can sympathise with Jane.

Touch screen

A posting from Stuart Miller brought one of the largest responses. He wrote, 'I'm writing a user manual for a piece of equipment controlled by a touch screen interface only — no keyboard or mouse. The user has to select a box on the screen and enter data using an on-screen keyboard. Does the user click, tap or press the screen?'

The variety of answers was overwhelming, but the overall favourite was 'touch the screen'. **C**

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Getting the most from customer visits

Francisco Abedrabbo and **Lypp-tek Khoo-Ellis** offer some tips on reaching a better understanding of your customers' needs.

Visiting your customers and evaluating their experience with your documentation is a valuable step in improving your documentation. Customer visits enable you to:

- Broaden your understanding of your users' knowledge and experience so you can prepare information at a level suitable for your audience
- Understand user expectations and difficulties with your documentation so you can create documentation that better meets their needs
- Discover the way customers use your products so you can create more realistic examples
- Learn how customers use and access your documentation so you can improve your delivery methods
- Improve your ability to evaluate the future direction for documentation
- Investigate your customers' satisfaction or dissatisfaction in different areas such as content, delivery, and navigation.

This article refers to templates that we have used with clients in the US. You may need to edit these to suit your target audience but they provide a starting point. You can download the templates from www.istc.org.uk/pages/members/resources/customervisits.php.

Ten steps for a successful visit

If you have received comments from customers who are unhappy with your documentation set, this might be the perfect opportunity to approach them to get their feedback. However, before you start calling, there are several steps that you need to take.

1. Gaining momentum

You need to talk to your top-level management to gain momentum and their approval in your effort. The most important item is to let management realise the benefits that customer visits will provide to the company. Write an executive summary explaining the benefits and goals. Explain that through this effort you will be able to understand the users' expectations and discover how they really use the product and documentation. This knowledge will

enable you to provide higher quality documentation, which will increase customer satisfaction with the company's products.

2. Understanding your budget restrictions

Explain to management that, since you already have the content for the questionnaire and templates for the contact letter (Figure 1), most of the preparatory work is done. However, you need their support financially. Ask them to cover the costs of travelling, lunches with the customers, and any small gifts for the customers. You might want to start with a site that is very close to you. This way, you can gain experience without too much expenditure. When you present your customer visit report to management and they realise the benefit to the company, management might be more willing for you to visit more customers.

3. Creating your customer visit committee

Once you have gained management's approval, you need to get the support from your peers. Tell your team what you are planning and get volunteers to form a committee to decide which documentation issues you want feedback on, which customers to visit, and the goals of the customer visits.

Include at least one product manager, a documentation manager, a sales representative, and a couple of writers. They can help you with identifying customers and areas of improvement.

4. Creating your customer profile

You want to find customers that can assist you in the areas where your documentation is lacking. It might take some time to find such customers. Work with your sales representatives and product managers; they might need to talk to the customers to get the initial contact

Customer Contact Letter

<Company> is a placeholder for the name of your company.

Subject: Customer Satisfaction with <Company> Documentation

My name is <First> <Last>. I am a <title> at <Company>. Our documentation team at <Company> is always working to improve our documentation. We obtained your name from <source (for example, conference, sales representative, product manager, reader comment form)>. Your input is very important to us because you mentioned that we need to improve our documentation. <Note that this sentence is applicable only if the satisfaction is low.>

Our documentation usability team is interested in visiting your site and talking with you about your satisfaction with the current set of <Company> documentation. Our visit would take at most two hours of your time. In appreciation, we will treat your group to lunch and give you a gift.

Some of the questions we plan to ask include:

- Are the manuals accurate? Are they easy to use?
- How do you like the format, size, and appearance of our manuals?
- How do you use our manuals?
- Do you use online manuals? If so, how do you like them?
- Are you satisfied with the existing methods of submitting comments and receiving updates for our manuals?
- Are your orders for documentation filled promptly?

Thank you in advance for helping us improve our documentation. I look forward to your response.

<FirstName> <LastName>
<Phone Number>

Figure 1. Customer contact letter

going and see if the customers are willing to participate.

After locating willing customers, send them an e-mail or letter of introduction (*Customer Contact Letter* template). If a customer wants to know more about the questions that you plan to ask, you can send them the questionnaire before the visit (*Questionnaire* template).

5. Deciding who goes

The writer of the book in question, the documentation manager, and a note taker should go on the visit. No more than four people should visit the customer.

You can rotate writers to visit different customers. On subsequent visits, make sure you have at least one individual who has done a customer visit and can take the lead.

6. Preparing for your visit

Here are some things to do:

- Identify the topics that you want to cover.
- Send a confirmation letter a few days before the meeting day (*Confirmation Letter* template).
- Bring the manuals that you plan to discuss with the customers.
- Bring the small gift for the customer.
- Plan ahead if you are taking them out to lunch. Ask the customers if they have a favourite restaurant.

7. Visiting the customer

Plan to arrive on time. Many companies are very big; never assume you have the correct building. It is beneficial if the entire team arrives at the location at the same time. Otherwise, wait until everyone has arrived before calling your customer contact.

During your visit, spend time listening. Let your customers discuss their issues. You are there to listen, not talk. So, the more they talk, the more information you get. Be an investigator. If they say to you, 'I do not like the *xyz* guide,' ask them which parts they do not like. Have they made any written comments on it? Can you see them? Do they have any notes they have created because the guide did not cover certain topics?

Do not make any promises that are beyond your control. If a customer tells you that it would be nice if the product had a specific feature, just tell them that you will pass that information to the development or research team.

If you are with several customers, make sure to get everyone involved. Taking the customer to lunch is a great idea. They will be in a more relaxed environment and willing to discuss the issues more openly. It is probably your best opportunity to get more information.

At the end of your visit, thank the customers for their time. Explain that the information they have provided will improve the documentation. Also, give them a small gift of appreciation for their time: a company mug, company T-shirt or gift certificate.

8. Presenting your findings

Do not wait long to write your report to management (*Customer Visit Report* template). It is a good idea for the team to meet and debrief after the customer visit to make sure you got the main points. Your report does not need to be long. Always include a one-page summary for the executives who do not have time to look at all the details.

9. Following up with the customer

Follow up with your customer. Send them a thank you letter (*Thank You Letter* template). If you promised that you would send some information or find out something, deliver on your promise. You will have gained a new loyal customer that will be willing to talk to you again.

10. Reusing the work done for your next visit

The final step is to learn from your visits and reuse what you have already done. The first visit is the hardest but you will learn a lot from it. Do not wait too long before visiting the next customer, so that you can gather more information and improve your sample data. Good luck and happy visiting! C

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Moving into usability work

Is it possible? **Florence Dujardin** argues that, yes, it is but technical communicators need some career development.

Many technical communicators report an interest in usability. In their yearly surveys of skills, the WritersUA association found that about half their respondents consider usability testing as 'invaluable' or 'very valuable'.

However, this interest is not matched by opportunities for usability work. This article seeks to make a case for technical writers' legitimate claim, by considering elements of their practice that are of direct relevance to usability, and by identifying areas for essential career development.

Start with user/task analysis

Can user/task analysis be a key to usability work? This may seem surprising since it is very obviously linked with the early phases of a project, while usability is traditionally (though mistakenly) viewed as a conclusive phase of product or document development. Yet, both rely on understanding users' behaviours and similar skill sets.

The objective of a user/task analysis is to 'understand deeply how users perform their tasks' (Hackos and Redish 1998, p7). Managers, clients, and sometimes technical communicators themselves, may object: 'users are all different', 'the product is so original no-one has any idea of how to use it', 'it costs too much'…

There are also clear benefits: 'the time you spend up front understanding users and the domain will save time during the design and development process by reducing guesswork, re-work, and exploration down blind alleys' (Calde 2003). To obtain these benefits, it is necessary have a good understanding and experience of information-gathering techniques — interviews, focus groups, user surveys, contextual inquiry (user observation), system evaluation, use cases and scenario-based evaluation, to name but a few.

Both the information gathered and the techniques used make it possible for technical communicators to:
- Offer knowledge of the corporate context to generate test scenarios
- Suggest what product features to test, and how they should be tested

- Gather information using techniques used for user/task analysis
- Provide document design expertise, for example to design questionnaires and reports.

Different meanings of usability

Technical communicators must have a good understanding of what the term 'usability' actually covers.
- **A philosophy**: 'usability must be understood as matching the needs of a particular user for a particular use' (Barnum 2002, p6).
- **A process**: this is sometimes known as participative design, usability engineering or user-centred design.
- **A result:** this produces 'usable products' or 'usable documents'; it is sometimes a synonym for 'user-friendly'.
- **A set of techniques:** these include contextual enquiry or think-aloud protocol.

This article focuses on process and techniques, to support career development.

Process — key stages

A product only becomes 'usable' if careful attention is given to usability throughout the development cycle.

Planning

Planning for usability means (among other things) developing user profiles, blueprinting the product around user-centred activities, identifying clear usability requirements, standards and criteria — while balancing constraints, costs and benefits.

There are opportunities for technical communicators: 'technically, requirements definers can be executives, product managers, marketing people, designers, or whoever. Their place within the organisation doesn't matter; what does is that they be trusted to fairly represent the needs of the constituent sides of the organisation, that they be given an appropriate level

of responsibility…, and that they be effective communicators and listeners' (Olshvsky 2002).

Designing for usability

Key design issues must be addressed.
- **Users**
  Involve around 8–10 users if you want to use statistics. Otherwise, you will get good enough results with 3–5 users by following Nielsen's 'discount usability engineering'. Also, remember that one user is better than none!
- **Tests**
  - Nielsen's discount methods (paper prototyping, scenarios, heuristic evaluation, simple thinking aloud)
  - De Jong and Schellens ('plus and minus' method identifying positive and negative features)
  - Formal usability testing methods, usually lab-based
- **Usability principles**
  Identifying principles may be more difficult as it seems, as different 'gurus' propound different sets of principles. I have chosen here a set of principles (Quesenbury 2003) which form a consistent, clear and concise system based on the ISO standard (Figure 1).

Quesenbury's mapping is flexible and allows for varying requirements. For instance, a website for a museum exhibition should be engaging to attract people to the exhibition, and very easy to learn since the audience
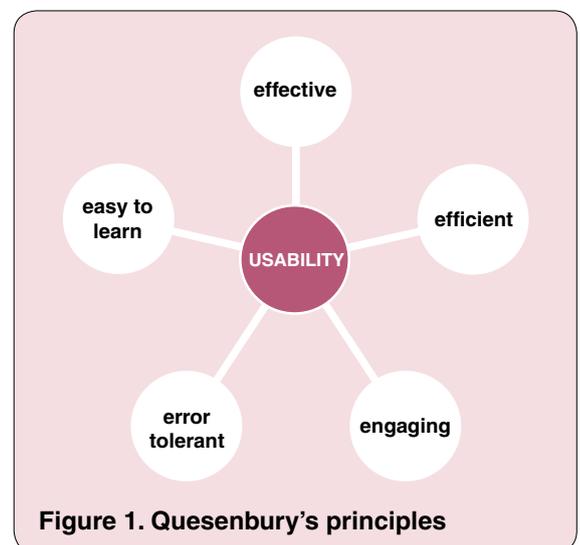
Figure 1. Quesenbury's principles

is the general public. In contrast, the major considerations for a website supporting online ordering could be efficiency and error tolerance.

Testing and measuring

Design principles should be used to assess the final product, and decide *what* to measure. In the example of the online ordering facility, a measure of effectiveness could be 'users must register without error'; the usability goal could be 'fewer than 5% of regis-trations require follow-up'. This will also help you decide *how* to measure effectiveness: time taken to complete registration or number of keystrokes. Obviously, this requires a working pro-totype of the website.

Analysing and reporting

Effective usability reporting involves:
- Capturing and categorising problems (predetermined labels or affinity matching: for example, concept and navigation)
- Determining the scope and severity of problems
- Recommending solutions
- Interpreting data using cognitive psychology and learning theory.

A word of caution: 'if testing takes place late in the lifecycle, then few changes may be permitted before the product releases' (Barnum 2002, p271).

To conclude

Technical communicators have a good case to be involved in usability work, based on their user-task analysis work. To extend their role, technical commu-nicators need to address a gap in skills and knowledge in the areas of:
- Research practices (such as heuristic evaluation, prototyping, think-aloud, use scenarios, etc)
- Relevant theory (learning theory, cognitive psychology)
- Statistics (depending on the formality of the usability testing). **C**

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The relationship between ILS and technical communication

Tom Nicholas and **Velma Parker** explain Integrated Logistics Support in simple terms and identify its relationship with technical communication.

This article has been written to support the case for admitting Integrated Logistics Support (ILS) engineers who practise technical communication as part of their role into the ISTC as full members. Without ILS, it would be true to say that, within certain markets, many ISTC members would have more spare time on their hands than they would wish. The reasons for this will become evident as you read on.

First of all, we need to clarify the viewpoint of the authors. This article draws upon the professional experience of TMS Support Solutions Limited (TMS), a company that provides both ILS services and technical documentation, particularly within the defence industry. The employment of technical authors, illustrators and multimedia developers plays an important role in meeting the requirements of 'technical communication'. However, this is not fully representative of the big picture.

Technical documentation and training material can take on many forms and be prepared for the purposes of different target audiences. These products will, in most instances be the result or output of an ILS process. This is certainly true of all projects undertaken in the defence industry and applies to an increasing percentage of projects undertaken in commercial industry.

To help you understand this relationship fully, we must take you on a journey into the world of ILS.

So, what is ILS?

For the purposes of explaining the ILS process and the elements within it, we will adhere to the terminology used by the UK MoD and the defence industry.

ILS is a structured and disciplined process devised to manage the Whole Life Costs (WLC) of any specified equipment or product. The objective is to optimise WLC by minimising the support infrastructure required for the equipment or product, through influencing its design for supportability and determining the support requirements.

To implement the ILS process, one must first recognise and understand the stages of logistic support for the life of the equipment or product. The life cycle is referred to as CADMID (Figure 1) — Concept, Assessment, Demonstration, Manufacture, In-Service and Disposal.

There is a series of ILS planning documents that must be produced and maintained through various stages of the CADMID cycle, including:

- Integrated Support Plan (ISP)
- Logistic Support Analysis Plan
- Training Plan
- Technical Documentation Plan
- Packaging, Handling, Storage and Transportation (PHS&T) Plan
- In-Service Support Plan
- Supply Support Plan
- Support and Test Equipment Plan
- Logistic Demonstration Plan
- Facilities Plan
- Software Support Plan
- Maintainability Plan
- Disposal Plan.

These planning documents will provide details of procedures and provisions necessary to meet the overall ILS requirement. You will note the references to a Training Plan and a Technical Documentation Plan.

What are the main elements of ILS?

As you would expect, there are detailed specifications in place that define these elements and the processes to be employed. The ILS Defence Standard (Def Stan) 00-60 lists the following elements:

- Logistic Support Analysis (LSA)
- Maintenance Planning
- Supply Support
- Support and Test Equipment (S&TE)
- Reliability and Maintainability (R&M)
- Safety and Testability
- Facilities
- Manpower and Human Factors
- Training and Training Equipment
- Technical Documentation
- Packaging, Handling, Storage and Transportation (PHS&T)
- Disposal.

ILS requirements are reduced (tailored) for each project to design support that is cost effective and ensure that services and spares are 'at the right place — at the right time' (Figure 2).

At this point, the relationship between technical documentation and training material (technical communication) and ILS starts to become apparent. We will now follow the process further to unveil
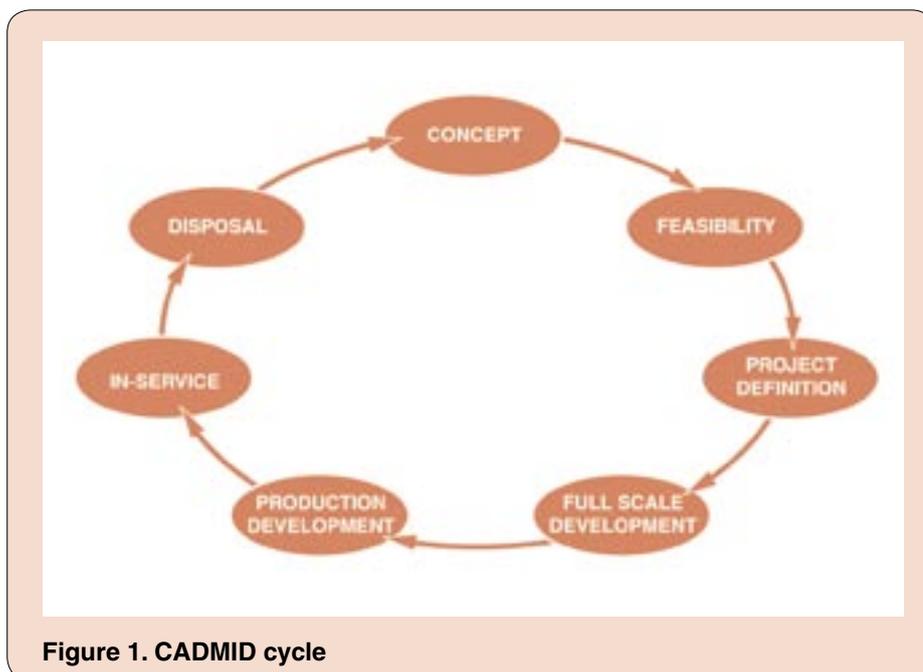
Figure 1. CADMID cycle

Figure 2. Tailored ILS requirements

the activities that both influence and generate the source data that will eventually provide the content for technical documentation and training material.

How is ILS employed?

The ILS process revolves around the Logistic Support Analysis (LSA), which employs set tasks with defined objectives or outputs. The LSA tasks will generate volumes of data that have to be managed as a single source to be available to all interested parties — the 'develop once, use many times' principle.

This is achieved through a shared data environment, commonly referred to as a Logistic Support Analysis Record (LSAR), a Common Source Data Base (CSDB) or a Supportability Data Base. By whatever name it is assigned, it is a data repository used by the engineering and ILS disciplines.

Def Stan 00-60 defines the logistic analysis process in what is known as the LSA 100–500 Task Series. Without going into great detail, let us just say that these tasks are fundamental to the planning, execution and documentation of the overall ILS/LSA programme.

Analytical techniques are employed in the development of data that influence the content of technical documentation and training material. Analysis includes, but is not limited to:

- Training Needs Analysis (TNA)
- Safety Case and Hazard Analysis
- Level of Repair Analysis (LORA)
- Availability, Reliability and Maintainability (AR&M) incorporating:
  ‣ Fault Tree Analysis (FTA)
  ‣ Failure Modes Effects and Criticality Analysis (FMECA)
  ‣ Reliability Centred Maintenance (RCM) Analysis

‣ Failure and Defect Reporting And Corrective Action Systems (FRACAS/DRACAS).

These tasks and analytical techniques feed the LSAR with valuable data that will be used to determine the level of support required to achieve the optimum WLC for the equipment or product. Figure 3 identifies typical LSAR outputs.

Is ILS necessary?

The short answer is yes. The UK MoD and US DoD will not purchase any operational equipment for In-Service use that has not been subjected to ILS analysis. Major goals achieved include:

- Increased reliability of equipment in operation
- Safer operator and maintainer interaction with equipment (hazard reduction)
- Ease of maintenance
- Greater availability of spares
- Clear and accurate technical documentation
- Correct level of training
- Reduction in equipment down-time
- Extended In-Service life
- Reduced WLC.

Commercial industry is waking up to the advantages of ILS and applying many of the task analysis techniques highlighted in this article.

The ILS process can get complicated, but, if you take a look at the simplified version of events shown in Figure 4, you can see that it makes a lot of sense.

Figure 3. Typical LSAR outputs
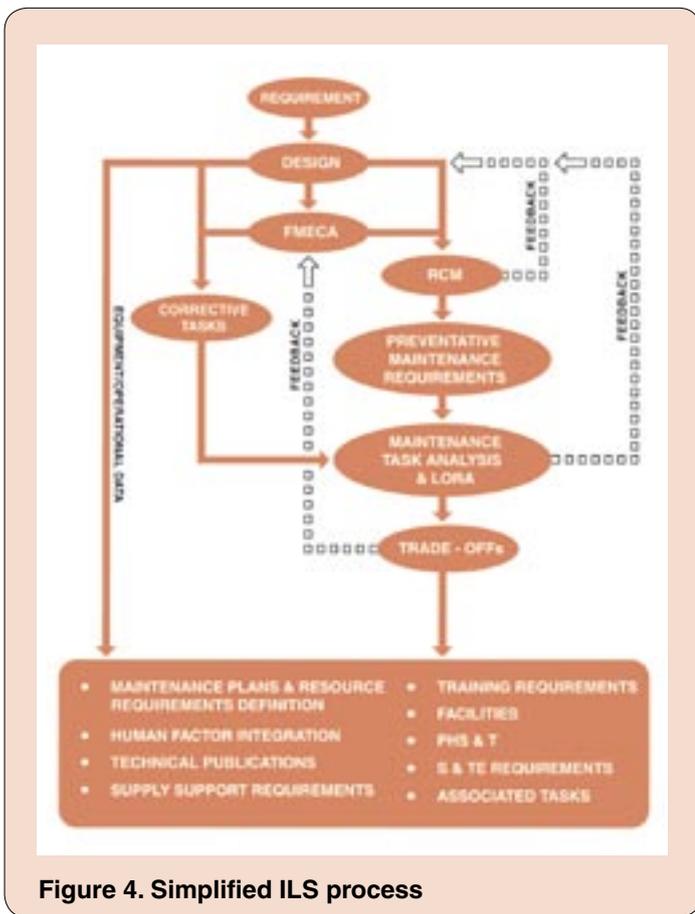
Figure 4. Simplified ILS process

Do we have a relationship?

The purpose of this article was to provide a brief explanation of ILS and its relationship with technical communication. Readers will be in no doubt that the preparation of accurate technical documentation and training material relies heavily on good source data. That data is now being generated more often than not, through ILS activities of one form or another.

ILS engineers who undertake the various analytical tasks that we have only touched upon are, in their own right, technical communicators. They will, I am sure, welcome the opportunity to join the ISTC. **C**

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The death of the technical author?

Ellis Pratt considers whether the role of technical author might disappear in the future.

Technical authors do not have high prominence in the workplace, and they do not have the best of images (as can be seen by the movie *The Technical Writer*). Today, a number of technical authors are struggling to find new employment in the current IT sector, and one can find messages on Internet newsgroups questioning the future employment prospects for technical authors in North America and Europe. Some wonder whether the role of the technical author will disappear, as other careers have in the past. In this article, we look at the problems faced by technical authors in defining their role, and make some recommendations for the future

The problems

Let's first look at a number of issues that technical authors face.

Overlapping technologies means overlapping job roles

Technologies and software are developing in a way that means the boundaries between the programmer, the technical author, the Web developer and the trainer are becoming blurred. For example, the online Help that will ship with the next release of Windows (code name Longhorn) may look more like a website or a Web-based learning system than the type of Help files we currently see. This means that some technical authors feel they are being 'crowded out' and losing their jobs, as their work is taken on by others within the organisation.

The work can be done in other ways

From time to time, new software or technology comes out that leads some technology evangelists to claim you can do away with the need for 'man-made' user assistance. Common themes appear and reappear with each technology wave, with people claiming that:

- Software can be made that is so intuitive to use that users will never need online Help.

- Programmers can write the documentation to the standard needed.
- Special software can be used to create user assistance by looking at the lines of code.
- Information can be dumped into an information store, and special search software can be used to retrieve the information that people need.
- Computer-based tutorials can provide all the assistance that people need.

It is a specialist and lonely job

Many are in environments where they are the only technical author in their organisation, and this can mean their career path is unclear (or limited).

Their contribution to the business can be uncertain

Some people perceive what technical authors produce to be a necessary evil: something that needs to be provided but is not actually of any great value. So they look to keep costs, and consequently the quality, to a minimum.

So what do technical authors do that is of value to the organisation?

We believe that technical authors, as well as specialist documentation companies, are valuable to the organisation in several ways.

Explain technical information to a non-technical audience in a clear and unambiguous way

This is a fundamental part of producing user assistance — enabling people to understand — and it is the authoring part of technical authoring. Moreover, as life is getting more complex, it seems unlikely that software will ever be developed that is so intuitive to use that users will never need any assistance.

Organise information so that people can find the information they need

We call this skill 'information design'. It is sometimes called (in Germany, for example) 'information development'. We

believe that these skills in information design have a wider application to the business than just the development of user manuals, procedures documents and Help files. These skills — organising information and providing the means by which people get that information — can help organisations fight and win the 'information overload' battle.

. . .some technical authors feel they are being 'crowded out'. . .

Our recommendations

Technical authors' skills need to be applied more widely across the organisation

In other words, create an Information Design department. We suggest that the role of the technical author should be redefined as an information designer and the Technical Publications Department should be redefined as the Information Design Department. Doing this should help to make it clearer to everyone where their specialist skills — making large amounts of unstructured information more useful — can be applied elsewhere in the organisation.

IT departments do not have information design skills. Quality managers do not have them either, and nor do marketing executives or Webmasters. The technical author (or information designer) does have these skills, and can offer them to anyone in the organisation who has to deal with large amounts of unstructured information.

Along with other similar organisations, Cherryleaf applies its skills outside the technical authoring and software development community. For example, we work with people who are interested in improving their intranets, quality management systems, sales proposals and training courseware. Therefore, there is good reason to believe that these newly named information designers could contribute in a similar way within their own organisations.

Carry out usability testing to measure the value of what technical authors produce
Some form of measurement needs to take place if you want to place a value on something. On www.useit.com, Jakob Nielsen has described how meaningful usability studies can be carried out for a small amount of effort. So, test to see what happens if users do not have any documentation, and how they react to different types of user assistance.

The role today requires more than just writing.

Get involved in the development of new software at an earlier stage
As online user assistance becomes more tightly integrated with the software, the technical author will need to be more tightly integrated with the development of the software, right from the beginning of the process.

Acquire the additional skills needed
The role today requires more than just writing. It requires skills in online information design and usability. In the future, it could require skills in writing JavaScript and developing e-learning content. However, some of the need to hack into code can probably be avoided if you use the most popular Help authoring tools. These developments in the role probably mean more training is required for technical authors.

Use the right tools for the job
The latest software from the main software vendors in this field provides more than just an authoring environment. Many tools now include content management, e-learning, scripting and support for output across a range of media. The vendors seem to have a good appreciation of the key issues surrounding the provision of user assistance and large documents.

Conclusion
The overlapping of technologies and the uncertainty of the contribution of the technical author means that the boundaries between this and other positions in the organisation are becoming blurred. However, technical authors have skills that organisations still need. Indeed, they can be applied to new areas. Cherryleaf applies its skills to other business areas and others can do the same. This means taking a new perspective on the role. So maybe we need to say, 'The technical author is dead. Long live the information designer.' **C**

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Creating web-based courses

Ron Blicq explains how to design an online programme that teaches professionals how to write well without an instructor monitoring their work.

Introduction

I have developed eight online courses that teach participants how to write e-mail messages, letters, reports and proposals without having an external instructor evaluate their work. Doing so, however, posed significant problems: I had to design the programme so that there would be a stream of interactivity between the course participants and their computer screens; I had to create 'learning loops' that would take participants through different routes to accommodate different learning capabilities; and I had to keep the cost low so that the programme would be within reach of a wide range of potential users. The course went online in 2001.

Here I will describe how the course evolved, some of the strategies I used in designing it, and our experience after nearly three years of operation.

Background

I first taught courses in technical communication for technical professionals in the mid-1960s, and have done so continually since then. In 1975, to meet the needs of engineers in remote locations in North America and Europe, I developed a correspondence course that had some 30 instructor-markers in widespread locations. This was followed in 1986 by a multimedia remote-learning course that was used until 1998. This was the precursor of the Web-based course described here.

In 1992, I teamed up with Lisa Moretto, who until then was a learning products engineer for Hewlett Packard Limited in the UK, and since then we have presented numerous workshop-type courses to major organisations in Canada, the US and Europe. Our objective has been consistent: to find ways that will help engineers and other professionals streamline their writing and present their information more effectively. By mid-2000, however, we recognised that the worldwide trend to e-learning meant we also had to deliver our courses through the Internet.

Establishing objectives

Early in our deliberations, we decided to eliminate the need for the user to interact with an instructor. This would not only reduce course cost but also permit users to access the course at convenient times rather than scheduled times. However, that decision meant we would have to develop a learning strategy in which course participants would have to evaluate their own work.

As just the two of us would be developing the course, we divided our responsibilities. As Lisa holds a Masters Degree in Interface Design from London Guildhall University, she would devise the interface and convert the courses from MS Word to HTML. With my previous experience in developing distance-learning materials, I would write the course content. Our objectives were to:

- Create courses in which the participants interact frequently with the information (we wanted participant-programme interaction to occur, on average, every fourth screen)
- Have the participants evaluate their own work and programme the system to 'score' the results
- Create a programme that can be accessed from any computer, and allow for users who do not have high-speed access
- Design courses that would suit participants with varying needs and skills
- Stream participants who demonstrate they need additional instruction through extra learning experiences, without letting them feel that they are slow learners
- Provide additional assignments for participants who want to send them in to gain feedback from us as instructors, even though the courses are intended to be 'stand alone'.

We thought initially that we could purchase existing Web delivery software to bring our courses online. This, however, proved impossible because no software we evaluated could integrate the complex measurement techniques and 'streaming' principles we planned to use. We consulted with a software development team in Rochester, New York, and asked them to identify whether it would be more practical to modify an existing program or develop a new software engine. They recommended designing software that would meet our unique needs, and we elected to follow their advice so that we would not be limited when we came to develop future courses.

Programme design

We realised that a single course embracing all the topics we needed to include would be uncomfortably large. It would contain over 1100 screens of information, which would result in lengthy download times for participants. Consequently, we chose to create eight courses, each of approximately equal length.

Foundation courses

The first three courses are core units that every participant entering the programme has to complete before going on to the more advanced courses.

Get to the Point! introduces course participants to a technique that will help them to develop a cogent opening statement that will focus their readers' attention on the primary information they have to convey.

Organise the Details shows how to develop the remainder of the message so that it effectively supports the opening statement.

Effective E-mail Techniques teaches how to write short but properly developed e-mail messages, and how to be an efficient e-mail communicator.

(We chose to insert e-mail as a core course because, in business today, it has become the most frequently used — and the most often misused — method of communication.)

Advanced courses

There are five advanced courses:

Sharpen Your Language Skills covers techniques for using the active voice, removing ineffective words, maintaining

parallelism, creating abbreviations and acronyms, and writing numerals in narrative.

Business Letters and Memos explains how to write informative and persuasive types of correspondence.

Short Reports teaches how to organise and write coherent incident, field trip, inspection, progress and project completion reports.

Formal Reports covers planning and writing investigation and evaluation reports, feasibility studies and comparative analyses.

Business and Technical Proposals covers planning and writing informal and semi-formal proposals.

Embedded methodology

Recognising that e-learners work alone, and need to feel comfortable with the on-screen information, Lisa created a design plan that would encourage participants to continue working on the courses. Here are some of the key techniques we built into the learning experience:

- Limiting the amount of information on a screen so that users have to scroll down only occasionally.
- Presenting information in short chunks (that is, short paragraphs).
- Inserting user activity at least every fourth screen.
- Keeping word choice simple (without 'talking down'), to allow for a wide range of users.
- Stating the approximate time required to complete each course on the first

screen, to help users budget their time.

- Dividing the material in each course into approximately 30-minute segments, with a 'Pause Point' screen inserted at the end of each segment. When they reach the 'Pause Point', users would be told the length (in time) of the next segment and asked whether they want to take a break or continue.
- Having the programme automatically return users to the same point in the course when they return after taking a break or shutting down.
- Creating an easy-to-follow navigation method, with readily recognised icons.
- At the end of each course, summarising the key points onto a closing screen that users can print out as a one-page reference sheet.

Teaching methodology

I wanted to devise a teaching method that would take course participants through a series of screens containing information and instruction, and then intersperse them with questions to test ongoing learning. I also wanted participants who have understood a concept quickly, and have demonstrated they know how to apply it, to work through fewer screens than participants who learnt the concept more slowly. To achieve this, I developed the 'streamed' learning process shown in Figure 1 and described below.

Assume there are three course participants — Roger (R), Sam (S), and Trevor (T) — who enter a particular segment of the overall learning sequence at the same time, and the sequence has between 18 and 22 screens. Roger progresses through only five screens, whereas Sam works through nine and Trevor works through either 11 or 13 screens, depending on his understanding of the concept toward the end of the segment. Here is how it works:

Example 1. A typical question (Step 2)

Select the correct statement:

The opening paragraph of an incident report must always contain two brief pieces of information:

- A What happened + the result
- B Who was involved + what happened
- C Place, date and time + the result

Step 1 comprises two or three screens of information and general instruction. **Step 2** asks a question to test the participants' understanding. The question has three possible answers from which to choose (see Example 1). **Step 3** takes the participants to one of three responses, each corresponding to the answer they select:

- Roger selected the correct answer (A) and so goes to the 'Correct' screen. The screen informs him that he selected the correct answer and then, in case he was unsure and selected the answer randomly, it explains why
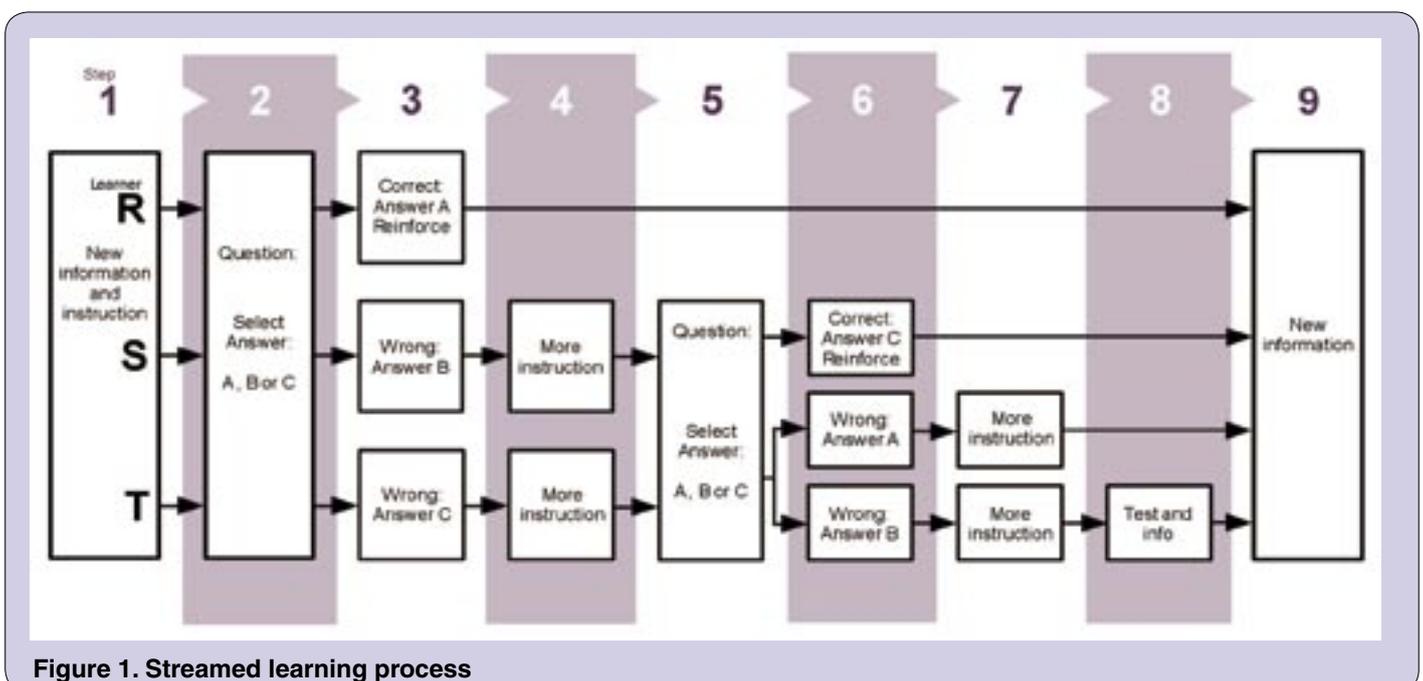

Figure 1. Streamed learning process

the answer is correct, thus providing additional reinforcement. The programme then takes him directly to Step 9, which provides information on the next concept he has to learn.

- Sam and Trevor both selected a wrong answer (Sam chose B, while Trevor chose C), and the programme takes them to the appropriate 'Wrong Answer' screens. The screens inform each of them — with a different message — that their answer is incorrect and explains why. It then takes them to the appropriate 'More Instruction' screen in Step 4.

Step 4 provides one or two screens of additional information designed to help the participant understand the topic better. Sometimes a common screen follows both wrong answers. More often, however, a separate set of information is provided following each wrong answer, to correct the inaccurate understanding identified by the participant's choice of answer in Step 2.

Step 5 asks a second question, again with several possible answers. This rarely repeats the question posed at Step 2; rather, it tests how well the participant has learned the new information. This time answer C is correct.

Step 6 again takes Sam and Trevor to a particular screen, depending on which of the answers they select:

- Sam selected the correct answer (C) and so is taken to the 'Correct Answer' screen, which tells him that his answer is correct and provides reinforcement in case he randomly chose that answer. From there he is taken immediately to Screen 9, where he starts learning a new unit of information.
- Trevor selected an incorrect answer (A) or (B) and is taken to the 'Wrong Answer' screen that responds to his choice. Each screen tells him his choice is incorrect and explains why. It then takes him to Screen 7.

Step 7 provides more information to improve Trevor's learning. The example in Figure 1 shows how the programme adjusts according to the participant's response. If Trevor selects the correct answer, the screen reinforces the learning and then takes him directly to Screen 9 (the new unit of information). However, if Trevor selects Answer B, he is given further information and taken to Step 8.

Step 8 provides two screens, one containing another test question and the other giving further information to reinforce the learning. It then takes Trevor to Step 9.

This multiple-route process demanded considerable initial programme development. For each unit of information and the consequent tests and responses, I had to create a detailed, intricate storyboard showing the numerous screens needed to accommodate different participants' needs. In the unit shown here, there are 22 screens; participants work through as few as five and as many as 13, depending on how rapidly they learn and how accurately they respond to the questions.

I should add that the 'Wrong Answer' screens tell participants they are wrong very gently; they never say 'You are wrong'. They provide a response that first supports the chosen answer and then brings in additional factors that should be considered. Here is an example:

You were correct to identify that what happened should be stated in the opening sentence. However, readers also want to know what the result or effect was, and that information also should be up front to satisfy their curiosity.

Measuring performance

In any course in which participants respond to a question that demands a quantitative or definitive answer, determining whether the answer is correct, and scoring it, is relatively straightforward. Measuring participants' **writing** capability is significantly more difficult. Our programme does this in several ways, two of which I describe here.

Course 5 teaches how to write a complaint letter. It describes a situation that calls for participants to make a claim or lodge a complaint. The course does it in two ways.

Measurement by selection

To demonstrate that the participant has understood the information and concepts, the program questions the participant separately about each part of the complaint letter:

1. The Opening Statement.
2. The Background to the situation.
3. The Complaint Details.
4. The Action Statement.

For example, to test how the Opening Statement should be written, the programme presents between four or five possible openings and asks participants to select the most appropriate. Their choices identify their level of comprehension.

This process is repeated for the remaining three parts of the letter. In each case, the software counts the choice and progressively accumulates a score that is used to measure whether they should go on to the next unit or be given additional instruction.

Measurement by comparison

To test course participants' ability to write their own complaint letter, I present a new scenario and provide a blank screen on which to type it. I have anticipated the various ways they might write each part of the letter and, for each, have created three or four sample paragraphs, of which only one is correct. For example, the participants are asked to compare the Opening Statement they have written against the first set of sample openings and select the one that most nearly matches their words.

This process is repeated for the three remaining parts, with the software counting their selections and, at the end of the exercise, directing them to go on to the next unit or to be given additional instruction.

Evaluating the programme

What have we learned about our e-learning programme since it went online? There have been four main outcomes:

1. Companies who have evaluated the programme for their employees find it an efficient learning environment since, compared to classroom-teaching, it does not take employees away from their desks for full-day periods. They have also found that a good percentage of employees prefer to access the programme from their home computers, where they can have an uninterrupted learning experience.
2. Our unique software has proved to be educationally sound, but it has created a problem for other organisations that want to adopt it (or, to be more realistic, it has created a problem for us!). For example, several major organisations in Europe and the US have wanted to purchase a licence to include parts of our programme as a new component among their course

offerings. The difficulty is that the software they use for their courses cannot accommodate our unique learning approach (that is, it cannot measure performance and stream participants through appropriate screens). In some cases, we have had to modify the courses to work with their software, which unfortunately reduces the effectiveness of the learning experience; in others, we have been unable to satisfy their needs.

3. For some organisations that have bought a quantity of courses for their staff, we have had to adapt the control software to co-habit with their control software. In other cases, company firewalls have inhibited some employees from accessing our courses. At first, the problem was thought to be at our end and fairly lengthy communications ensued before the source of the problem was identified and rectified.

4. Although we provide opportunities for users to send in assignments for instructor evaluation — and

expected this to be a popular choice — to date (April 2004) few users have done so.

Are we happy with the programme? Yes, it effectively achieves what we set out to do. However, we are still experiencing reluctance on the part of business and technical professionals to enrol. This is partly because many people are concerned that e-learning will be a dull, static experience. It is also part of a worldwide problem: people simply do not want to enrol in any writing course, fearing it will be similar to the writing courses they experienced at school. We have yet to discover a way to overcome that reluctance.

Conclusions

This brief article covers just a few of the factors affecting our development of a stand-alone e-learning programme. One aspect is immediately evident: writing a highly interactive, self-evaluated writing course demands a significant amount of time and imagination, and results in a large number of screens (over 1100 for our eight courses). The result, however, we feel has fully justified the effort. **C**

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Preparing winning images for websites

Philip Randall outlines the essential points to consider when incorporating photographs and graphics into websites.

This article provides website builders with guidance on how to manipulate images (photographs and graphics) easily and effectively for inclusion in their web pages. I say 'builders' because I am not discussing here the skills or the tools that would be used by professional website designers, since they are creating the kind of websites that require big budgets and lengthy timescales to develop.

The subject of image manipulation is as broad as it is deep; it covers such considerations as image size and format, colour models and depth, composition and cropping, image effects and transformations, and much, much more. Each of these topics merits an article in its own right and, indeed, several have been admirably covered in recent issues of *Communicator*.

Preparing an image for use on a web page sometimes requires in-depth knowledge of these topics and, also, access to appropriate tools. However, this article concentrates on the basics needed to illustrate a simple website like the one shown in Figure 1.

The first question

Before incorporating an image into a web page, it is vital to answer one very important question: do I really need this image on this page? Remember that images (especially photographs) increase the loading time for the page and make it appear busier. It is vital to balance the download time 'cost' and the clutter that images produce against the value that each image will bring. The points to consider in answering this question fall outside of the remit of this article so, in order to proceed, we will assume that you have decided that one or more images are essential and that you are ready to go.

Choice of tool

It is tempting to seek out the most powerful image manipulation tool available to prepare your images but, in fact, simpler tools usually do it just as well, they do it more quickly and they have the added value of being easier to learn and use. Although website designers tend to use complex applications like Adobe® Photoshop® and Illustrator®, the imaging application of choice for many website builders is Jasc Software's Paint Shop Pro™. This can be used for manipulating photographs and for creating graphics. Some treatments (such as cropping, rotating and simple air-brushing) can even be done in Microsoft® Paint, which comes as part of all Microsoft operating systems.

Preparing an image for use

Photographs and graphics can be obtained ready-to-use from several sources, perhaps the most accessible of which is Microsoft's excellent online clipart gallery. This mostly contains graphics (such as the horse logo used in Figures 1 and 2 and the map itself in Figure 2) but there are photographs too. These are all provided at no cost and without usage restrictions. For more sophisticated (photographic) material, try the online galley of Getty Images (www. gettyimages.co.uk); the photography on this site must be paid for but is of the highest quality.

Whether the image is a photograph or graphic, the method of preparing it for use is broadly similar and described in the following sections.

Crop the image
The first step is to obtain exactly the image that you want to use. There is no point in resizing and manipulating an image, only to find you then need to

crop it for composition purposes and it ends up smaller than you require. The art of cropping images was thoroughly covered in the illustration showcase in the Autumn 2003 *Communicator*; I strongly recommend you follow the advice given there. You can crop graphics and photographs as required.

Calculate required image size
The size needs to be measured in pixels and will be dependent upon the viewing size (screen resolution) of the typical site visitor's computer. Usually, any single image (especially one on the home page or a key navigation page) should not be more than one quarter of the total screen size — preferably smaller, as you need some text and white space as well.

Viewed on a typical visitor's web browser running at 800×600 pixels, an image will be no more than 400×300 pixels. Calculate your required size and use the value in the next step.
**Note:** Many websites now assume that the 'typical' site visitor is using a screen resolution of 1024×768. You must decide what your typical

Figure 1. Using simple graphics on a web page

Figure 2. Using a map to show geographical locations

horizontally or vertically). Specify only one dimension (for example, width) and then crop the height as required after resizing is complete.

Resizing is irreversible, so work on a copy of the original image. Be wary of resizing graphics, especially screen captures, as many contain inadequate detail to produce satisfactory results.

Sharpen the image
Sometimes a picture needs sharpening after resizing to enhance its clarity (as described in 'Better Screen Captures' in the Autumn 2003 *Communicator*). Do this at this stage, if necessary. Most imaging applications offer other image manipulation tools and, if you need to use them, now is the time to do so. For example, you might remove the background of the image and flow the text around the subject, as shown in Figure 1. Some tools enable you to add special effects to an image, such as the pixelation applied to the photograph on the cover of this issue.

Set the transparent colour
Many images on websites are transparent. Figure 2 illustrates this: the horse icons on the left-hand side of the map are not transparent and the ones on the right-hand side are — and look better for it. Photographic images do not work well with a transparent colour but graphics often do. Your imaging application will provide a facility for setting a transparent colour; doing this will mean you must save your file in GIF format (which supports transparency) so you will be limited to 256 colours in the file (see below).

Save the image to disk
Decide on an appropriate format for the image. Typical formats for web pages are GIF or JPEG but be aware that they are very different.

Graphics images (like the map in Figure 2) should be saved as a GIF file. This produces a small file size and no image information is lost (GIF is said to be 'lossless'). This format is especially efficient when large numbers of pixels within an image are of the same colour (typical of screen captures, graphic buttons, separator bars and logos). JPEG struggles with the hard edges that are common in line drawings and graphics, tending to blur them. GIF only supports 256 colours (8 bits/pixel, unsuitable for photographic images) but this should be sufficient for most graphics that will appear on a web page. A GIF file should be smaller than a JPEG file for a typical graphic image.

Photographs should be saved as JPEG, since this format supports full colour (24 bits/pixel) yet still produces a reasonably small file. JPEG can easily achieve 20:1 compression but the compression process loses some of the original data (described as 'lossy'). However, it is selective and removes colour-related subtleties that the human eye cannot detect (especially on a computer screen).

Be aware that, every time you save in JPEG, you lose data. Therefore, try to keep your images in a lossless format until you have finalised the image that you will use. Most of the leading image manipulation tools have their own native image format that is lossless; use this to maintain your image library.

GIF supports transparency but JPEG does not, so you are limited to having 256 colours in a transparent image. A new format, PNG (Portable Network Graphic), supports both transparency and 24-bit colour. This format is likely to replace GIF in the future but should be used with caution at present, as only the latest browsers support it.

For more detail on file formats, refer to 'Better Screen Captures' in the Autumn 2003 *Communicator*.

Insert the image in the web page
Now you are ready to incorporate the image into a web page. It is correctly composed and cropped, sharp and clear, and the file is as small as possible.

visitor is likely to have and adjust your image sizes and web page layout accordingly.

Resize the picture
Resizing (also called resampling) involves removing or adding pixels to decrease or increase a picture's size. For websites, we usually want to remove (from large pictures) detailed information that will be too small for the human eye to discern at the size viewed on screen; this leaves us with a clear, sharp image that fits neatly on a page and is fast to download.

Each imaging application has its own way of resizing but, typically, they enable you to specify a new size for the picture measured in pixels. Make sure that you maintain the aspect ratio of the picture or it will be distorted to achieve the specified size (stretched

Figure 3a. Create a rounded rectangle
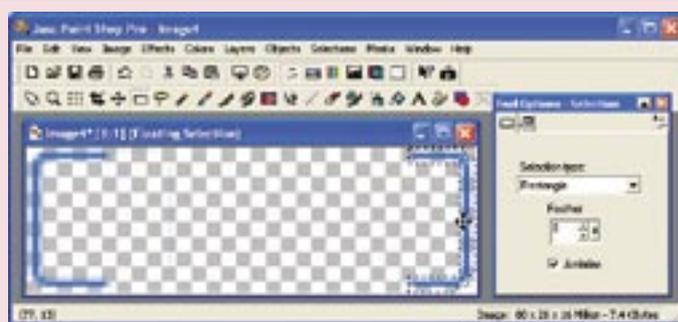

Figure 3b. Drag half the image to the right
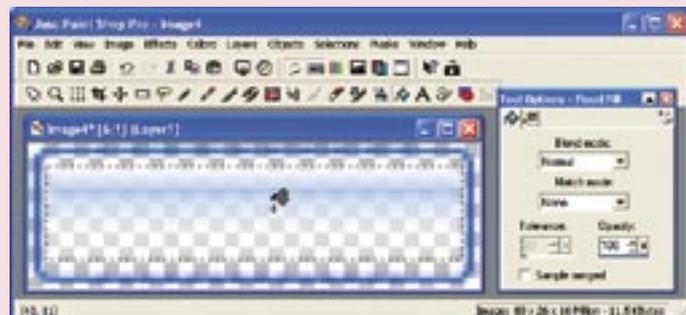
Figure 3c. Join the two halves and fill with a tint

Figure 3d. Label the button

Creating a graphic

You are unlikely to find all the graphics you need for your website from clipart galleries, so you will need to create some of your own. Here, as an example, we look at a common requirement: creating a custom-designed button for a hyperlink (as used in Figure 1). This task uses many of the skills you need to master to create graphics generally.

All popular imaging applications provide the tools needed to create graphics of this type; these instructions relate to Paint Shop Pro but equivalent tools exist in other packages.

1. Decide the size, shape, design and colour(s) of your button.
2. Create a blank document (drawing canvas) of the correct size and **Zoom** in so that it fits comfortably onscreen. If necessary, set the colour depth (the number of possible colours in the document) to 16 million colours (although we will eventually save the document as a GIF with only 256 colours). By working with lots of colours at this stage, we can use shading tools that only work at this colour depth.

   Select the **Preset Shapes** drawing tool and then select the rounded rectangle shape (Figure 3a). The Preset Shapes tool allows you to create a wide range of geometric, vector shapes that are instantly converted to a bitmap image when sized and placed on the canvas.

Note that **Anti-alias** is turned on in the control panel to the right. This feature feathers the edges of the rectangle into the background (by using shades of the selected line colour); this gives a neater edge to curved and diagonal lines when viewed onscreen. It is also used to make text clearer on screen (anti-aliasing can be seen at work on the edges of the square drawn in Figure 3a and in the text in Figure 3d; note the results in Figure 1).

On the canvas, draw a square to the full height of the canvas and to the left side. Check the pixel guide at the bottom left corner of the screen to ensure the shape is actually square — this will produce correctly rounded corners.

3. Use the **Select** tool to select the right-hand half of the image and drag it across to the other side of the canvas (Figure 3b).
4. Use the **Clone** tool to extend the top and bottom bars. The **Clone** tool works by replicating a chosen section of the image in another location. Here, we select existing sections of the horizontal bars and clone them across the canvas to complete the rectangle. By using the **Clone** tool, we can reproduce the anti-aliasing effect of the line in a single operation.
5. Select the central area of the button and use the **Flood Fill** tool to give a light, graduated fill (Figure 3c). The example uses a graduated,

semi-transparent fill in a shade that complements the button border colour but you can adjust this to suit your preferences.

6. If you need more than one button, save your work at this point to create a master. Use a lossless file format such as BMP, GIF or Paint Shop Pro's native format.
7. Use the **Text** tool to add the button text (Figure 3d). For best results, select a sans-serif font and anti-aliasing of the text.
8. **Save** the graphic as a GIF file to preserve the sharpness of the edges.
9. (Optional) Create additional tinted versions of the button for use on the web page to indicate that the button is 'live' (see the button under the cursor in Figure 1). The browser will change the tint of the button when the cursor is hovered over it or when it is selected. Use the **Colorise** menu option to alter button colour in a single operation.

Designing your own buttons and other graphics in this way enables you to make your website more individual and more appropriate to its content. **C**

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Choosing the right tools

John Rodgers looks at a simple analysis technique to help in selecting the correct documentation tools for your organisation.

When approached to solve a problem in an organisation that involves the use of new or existing computer tools, we can be tempted to say that our favourite tool can do the job. This sort of decision-making process, based on gut feeling, is not very rational or business-like for several reasons:

- There is no attempt to quantify how the tool is used and by whom.
- We have not looked into the problem we are trying to address in detail.
- We do not know the full requirements for the tool.
- We have not justified its purchase on the basis of its benefit to the organisation and end users.
- We may be able to use existing tools but have not investigated their use in a quantifiable way.

So, how should you approach this problem? To describe the method that I find most useful for large capital investment projects and long-term strategic planning, we need an example situation that many of us will be familiar with or have experienced.

Documentation library

In many organisations, there is a need to control the documentation through a unified, cohesive, user-friendly and accessible library. At first glance, this looks like an easy exercise and your

Figure 1. System design flowchart

first thought may be to put the entire document set into a database. Well, as you will see, you might be wrong.

Systems design

A library of company documents is essentially a system, and quite a complex one at that. Documents are being created, revised and edited most of the time. There are different types of users, all with their own reasons for using the information. We might have sales and engineering users, each of whom have different needs from the documentation.

Figure 1 illustrates a systems approach, using a flow diagram to show each stage in the process.

Requirements

The first step is to decide on the requirements for the documentation library. There are two types of requirements: user and system.

User requirements

We start with the user requirements, which define how users will interface with the system. I always find it useful to start by brainstorming, to determine a list of user types and then define how each type will interface with, or use, the system. A set of users for the library might include:

- Sales person
- Sales engineer
- Design engineer
- Production engineer
- Technical author
- Graphic designer
- Project manager
- Senior manager
- Printer.

Each of these types of user will use the library in various ways and this will be reflected in the requirements.

We need to record the requirements using a simple method, such as a spreadsheet or a table, and number each one so that it can be cross-referenced from other requirements.

We do not want to be excessive in defining the requirements; we are using the method to enable us to make a better assessment of the tools we need

to accomplish a task, not conducting a full system design.

We need to consider how each of the user types will use the system. Some will create documents and need a method for depositing their work. We must also establish whether we need to control work in progress, manage changes and issue documents at new versions. Some users will need only to view documents, in which case how do we control their access? The best way to ensure that you have fully understood your users' requirements is to interview each of them. If you are going to get them to use your new tool or system, you need to get them involved from an early stage.

System requirements

Now we need to think about how the new system and its tools will operate by defining how it interacts with its interfaces. This may seem odd, but any system interacts with its users and other interfaces. In our example, the system could also interface with the computer system through a local area network and more widely through an intranet or the Internet. We therefore need to check whether there are any specific requirements for this, such as choice of operating system. In the user requirements, we established access privileges for each type of user but, at this point, we need to think about how such restrictions will work in practice.

Analysis of the requirements

Once we have a clear understanding of the requirements for the project, we should be in a better position to start building a picture of what is required of the tool or tools. I do this by looking at the results and working out what kinds of tools will accomplish the requirements. For example, you may conclude that you need a database, version control software and a distiller to generate PDF documents. You then need to decide which particular tools best meet the requirements identified, not forgetting to take into account tools that are already in use within your
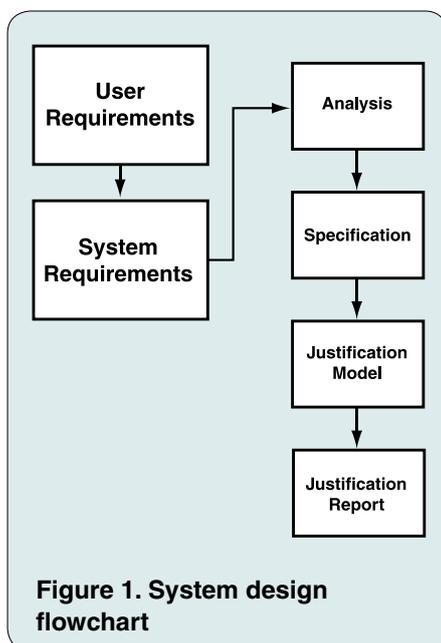
organisation as well as others available on the market.

Business decisions

Once armed with this information, we have to think about the business case for purchasing new tools. If your investigations indicate that this is an appropriate solution, you will have to justify the purchase. The justification should make good business sense, rather than simply claiming, 'We have this problem and this tool will do the job so I say we should purchase it'.

This may sound amusing but I have seen justifications put together on that basis and some have even persuaded people to part with good company money to purchase the requested item.

A good justification should show not only the results of your investigation and why you selected the tool but also how the tool would benefit the company from a monetary perspective. Describe the added value it will give to the company and how it will pay back the investment. If you cannot do this, you will instead have to devise a set of procedures for using existing tools to achieved the required result, educate users in the use of the new system and put the relevant controls in place.

Business justification

The management of a company will always look for Return on Investment (ROI) when assessing the business case for spending money. It is your responsibility to present this case clearly, concentrating on cost savings. Savings may be tangible or intangible.

- **Tangible cost savings.** These can be physical, for example lower paper, printing or storage costs. They can also relate to people, for example fewer staff or increased productivity.
- **Intangible cost savings.** These include less quantifiable benefits, for example easy access to documents, better control of the documentation process, fewer mistakes, improved customer satisfaction and less wasted time.

Modelling

The next step in justification is to put together a financial model. I usually use a spreadsheet such as a Microsoft® Excel Workbook and build in all the likely costs. Then I can adjust the figures as I get more accurate data. Using our example project, the model may consist of interlinked sheets covering the costs of generating new documents, maintaining existing documents and employing staff.

If you have the skill to write some Visual Basic for Applications (VBA), you could customise the Workbook with ActiveX Controls to adjust some of the variables in the sheets. Alternatively, you could directly change values to undertake your 'What if?' analysis.

Justification report

Once you have all your requirements and your final justification analysis, it is time to compile all this information into a report. The report might justify capital expenditure on new tools or instead focus on changing procedures.

The final document should be brief, giving a synopsis of your investigations rather than a full account of all your results. You can always reference the detailed work and its location, so that it can be consulted if required.

However, you should state your conclusions in full because you need to convey the whole of the justification in monetary and efficacy terms. Ensure, too, that control of the new system and any changes in responsibility are covered thoroughly. Specify any management-related changes, because you do not want there to be any surprises, but be careful how you write this information — be diplomatic. Bear in mind that you may not have the final responsibility of implementing the suggested changes; you are only the advisor or consultant.

If you work in an ISO 9000 environment, that will offer a basis for making changes to procedures. If you succeed in justifying the purchase of a new tool, the new procedures will also need to comply with the requirements of quality management

Appropriateness of approach

As I stated in the introduction to this article, I use this method for major capital investment and long-term planning. Some of you may think that it is not really necessary for short-term requirements, where you need a piece of software to fix an immediate problem or want to make a small purchase of, say, £50. However, I suggest that the method helps to ensure that sound business decisions are made on all tool purchases.

If we are to be businesslike and remain involved in the long-term strategic planning of a company, we must plan for all those small purchases because they soon accumulate into a large capital spend. Working as a business consultant, I have been shocked by the number of redundant tools in organisations — tools which were unlikely to be used again.

Finally, I am aware that ISTC members come from diverse backgrounds and have been trained in many different disciplines. I was trained as a design engineer myself, and initially thought that the business side of the organisation had little to do with me. However, I soon discovered that I could not think like that in an increasingly competitive world.

If businesses are to remain competitive and keep their customers, the people responsible for the design and support of the products need to become more business aware. In short, we must all broaden our thinking and consider how the tools that we buy support the development of the company's products and services. We cannot evaluate tools in isolation, without considering the full impact of our selections. **C**

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Process mapping

Chris Pearson looks at the practical aspects of running a process-mapping session and creating process documentation.

In part one of this series, we looked at some situations in which we might map a process, how we might map it and the process elements that we can represent. We also considered how the process detail that we capture can be used in the context of a wider process documentation exercise. In this second part, we will look at mapping in practice. In the sequence of activities that makes up process documentation, the steps we need to take are:

- Preparation
- Discovery
- Mapping
- Documentation.

The approach described is very pragmatic. It reflects a number of lessons that were learned the hard way.

The discovery phase takes the form of a *brown paper mapping session*. This involves bringing together a group of people and drawing a map of the process onto a long roll of brown paper. Apart from its practicality as a mapping medium, brown paper around the walls has a wonderful effect on a mapping session's participants — especially since most of them were probably expecting some high-tech approach.

Preparation

Preparation is essential to effective process mapping. There are two parts to preparation: the first involves having the right tools and materials to hand; the second involves having the right people in the right frame of mind, in the right place at the right time.

Putting together a process mapper's toolkit (Figure 1) takes care of the first part of preparation. We'll consider how the tools are used when we look at the discovery session. More difficult to get right is preparing attendees before the session and then getting them to the discovery session, keen to participate.

Firstly, we need to decide who are the right people. Attendees should:

- Know (all or part of) the process
- Want to improve the process
- Be available on the day.

It is essential that all participants have the same perspective and the preparation must ensure that their viewpoints,

understanding and aspirations are aligned. For these reasons, preparation is often referred to as *pre-positioning*.

A consistent feature of preparing groups of people for discovery sessions is that more senior members of an organisation often require far more pre-positioning than those working at the coalface. Preparation should include discussing some basic rules that will be strictly enforced on the day:

- How the map will be created
- Conventions to be used
- Commitment to the discovery session:
  ‣ No drifting in and out
  ‣ No phones
  ‣ No messages
  ‣ No interruptions
- Safe environment, with respect for confidentiality
- No judgement
- Unresolved issues will be quickly parked
- The session will be enjoyable.

Ensure each attendee has a written reminder of the discovery session: where, when and how long. Phone them a week before and then again a day before.

If you have an art tube (a telescopic art carrier made by Staedtler, Linex and others), use that to bring the paper to the session and to take it away at the end.

Process mapper's toolkit:
- Brown paper
- Scissors
- Knife
- Masking tape
- A4 paper
- Spray mount
- Marker pens
- Pens and pencils
- Rule
- Art tube
- Flip chart or whiteboard

Figure 1. The right tools

Before the attendees arrive, make ready the venue:

1. Take down any pictures from the walls and unroll the brown paper.
2. Test the masking tape on an inconspicuous part of the wall to ensure that the room doesn't require redecoration at the close of the mapping session. The brown paper should be stout, heavy-gauge parcel-wrapping paper, partly for durability but also to prevent marker pens damaging the wall surface beneath.
3. When juggling a large (surprisingly heavy) roll of brown parcel-wrapping paper, using a knife to cut the paper is much easier than using scissors.
4. Tape the paper to the walls and, at the far left-hand end, write the name of the process as a working title.
5. Lay out the rest of the room so that materials and documents are easily to hand and a flip chart or white board is accessible. Where possible, ensure that any refreshments are accessible but do not require attendees to walk between the paper and other people. Often, a useful layout consists of an island in the centre of the room — a table for documents and materials, and perhaps another for refreshments — with a clear path around it and the brown paper on the walls.

Discovery

With everything planned, a properly prepared team and an organised venue, the discovery session can now start.

The purpose of the session is to gather accurate information to create process documentation. If you know that your skills lie in documentation, not in organising and motivating, consider using a skilled facilitator to run the session while you concentrate on recording it. You may need to create one or more of three broad types of documentation (Table 1).

The session's key aim should usually be to create a full process map, which includes all the process elements needed to complete the cross-functional and relationship maps. Having specified the scope of the discovery session

in advance, on the day you should always strive to cover the breadth of the process. It is easier to follow up for more detail than it is to identify a missing process step.

Some process mapping tutorials suggest using PostIt™ notes: attendees write process detail onto PostIts and place them onto the process map. A key feature of PostIt products is, of course, that they are removable.

In practice, PostIt notes tend to remove themselves from the brown paper in a haphazard way; attempting to take down and store a process map that has PostIts attached is an impossible task. Anyone who does this is destined to spending a lonely session attempting to recreate the process map from a sheet of paper and a pile of no-longer sticky PostIts.

The facilitator should take instructions from attendees and write up the process (Figure 2). Seeing specific documents often acts as a trigger for more detail; including documents at the discovery stage provides evidence and familiar touchstones for the participants. When documents are provided they should be included in the brown paper by the facilitator. The facilitator should catalogue each document (a simple serial number will suffice) before attaching it to the map using spray mount or sticky tape. When documents are bulky (more than two or three pages) stick the cover (or a copy of the cover) onto the map and store the rest.

Gradually a detailed representation of the process will develop, probably with individual participants becoming more enthusiastic, adding detail and depth as disagreements are argued through.

The facilitator is an essential element in directing this process and maintaining order and focus. The facilitator may need to excel in the role to resolve

Figure 2. Mapping the process

disputes between people carrying out process tasks and managers who think they know how the tasks are handled. In this instance, diligent preparation and pre-positioning will pay off.

When a process becomes intricate — or apparently incoherent — making a few *ad hoc* sketches on a separate piece of paper can be a useful technique. Do not, however, be drawn into using alternative, convenient symbols or logical constructs on the process map itself: stick with the seven basic symbols shown in the previous article.

Sometimes there will be issues that cannot be resolved. They should be parked and the session allowed to move forward. Making a record of an issue ensures that it is not forgotten; giving it time and recognition also ensures that participants who feel strongly one way or another will consider it properly dealt with, not swept under the carpet.

At the close of the discovery session, you should have a detailed representation of the process on a length of brown paper, a collection of documents and, perhaps, notes and issues that have, thus far, not been included in the map.

Mapping

As with any voyage of discovery, the discoveries are made out in the field; notes are made, and samples and artefacts are collected along the way. After the voyage comes consolidation, when the maps are drawn and the books written. Process mapping follows much the same path.

When the discovery session ends and the participants go back to their process tasks, the process mapper must take down the brown paper, roll it up and take it back to create a series of manageable process maps.

A process will usually divide into quite logical segments, each of which contains a number of process elements that may be sensibly aggregated. In the last article in this

Type	Full process map	Cross-functional process map	Relationship map
Shows	Tasks Inputs Outputs Sequence	Tasks by function	Process as customer-supplier transactions
Focus	Process detail	Tasks and roles	Context of the enterprise
Level	Most detailed	Some aggregation	Least detailed, big-picture map

Table 1. Types of process maps

series, we will look at ways to create different types of map.

Ideally, the discovery session will use the same symbology as will be used on the prepared process maps. The seven element symbols can be used in full process maps and cross-functional maps. However, relationship maps use a reduced symbol set of blocks (boxes) to represent process participants and arrowed lines to show their inputs and output.

Documentation

In the first article in this series, we considered the final documentation as being the graphical map or maps combined with structured process descriptions.

Ambiguities arise in natural language. These are the bread and butter of many comedy scripts but the purpose of process documentation is to represent a process accurately and concisely, without ambiguity (or jokes).

One solution is to use structured language — in our case, Structured English. This replaces loose verbal descriptions with a stricter, tighter syntax. It benefits from using an accessible English narrative to describe a series of logically related activities.

To illustrate the transition from a graphical process map to a Structured English description, let's consider a process segment from the *Required reading* process (Figure 3). The *Buy a book* segment was created after being told, 'We do a search on Amazon for each book left on the list [after borrowing as many as possible] using the ISBN and if it's in the search results buy it with one-click.'

Figure 4 shows this expressed in Structured English. We have included the sample document BOOK LIST in the documentation and have listed the
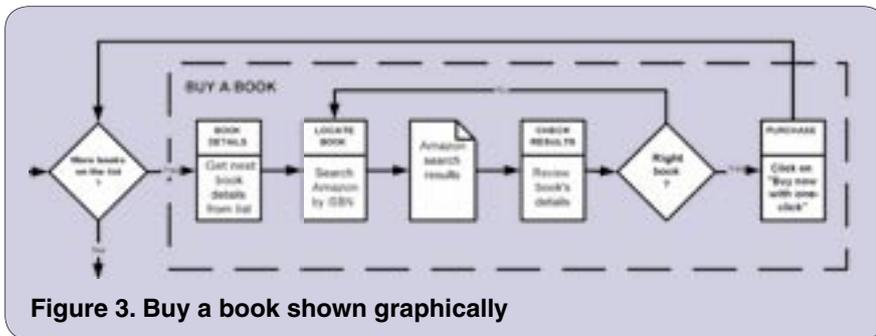
Figure 3. Buy a book shown graphically

```
BEGIN buy a book
  get BOOK from BOOK LIST
  search AMAZON for BOOK by ISBN
  FOR EACH SEARCH RESULT
    IF SEARCH RESULT matches BOOK DETAIL THEN
       click on 'Buy now with one-click' button
    END IF
  NEXT SEARCH RESULT
END buy a book
```

Figure 4. Buy a book in Structured English

contents of each BOOK entry, including ISBN in each BOOK's BOOK DETAIL.

The tight syntax and the layout of Structured English is similar to a programming language and its appearance will be familiar to anyone who has even glanced at code for software. It is intended to be clear, concise and unambiguous, and may be refined for particular usage.

The key unit of Structured English is known as an imperative sentence. This consists an imperative verb followed by one or more process objects linked by connectors on which the verb operates. A common convention is to use lower case for these words.

It is advisable to define a list of these verbs and stick with them, rather than using unspecific terms and catch-all verbs such as:

- Process
- Handle
- Deal with
- Eradicate
- Understand.

Defining a list of verbs enables you to select relevant verbs for the context, perhaps using industry-specific terms

to make the documentation clearer and more concise.

Imperative sentences that represent individual process elements are often grouped together into process segment blocks, usually using a BEGIN and END construct. For example:

```
BEGIN order update
. . .
END order update
```

Since a process is triggered by an event, a construct is required to represent the trigger and terminator shown on a process map. There should be only one trigger–terminator block in any process description, with the terminator construct immediately following the description of the last element in the process.

The constructs ON and END can be used. A process begins ON an event and its END follows the last event. For example:

```
ON customer notifies changed reqt
      BEGIN order update
            . . .
      END order update
END
```

Concluding article

In the final article in this series, we will look at creating relationship maps and cross-functional maps. We will also review some of the software that can help with process maps and process documentation, together with some helpful resources for process mappers. C

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The writing process: planning

In the second of a series of four articles, **Damien Braniff** looks at the planning stage of the writing process.

Introduction

In this article, we will be looking at planning in the project management sense, rather than planning the content of a document. The latter, planning how to present the information that you gather to the user, will be covered in the next article in this series, on the 'writing' stage.

Planning any project, documentation or otherwise, involves:
- Capturing therequirements and, from them, defining the scope.
- From the scope, working out the types of resource and how much of each is required.
- Deciding how the project will be managed and controlled.

There is also a broader aspect to planning, called strategic planning, which looks into the future to determine the direction that an organisation needs to take to meet changing requirements and prosper in the future. This applies to us as individuals as well, influencing how we plan our careers and develop our skills.

Project planning

The level of involvement that the writer has at the planning stage can vary greatly — anywhere from 0-100%!

In a large organisation, there will probably be a project manager with responsibility for this activity and usually 'all' the writer has to do is provide time estimates, meet the deadlines and follow the standard templates. If you work for a small company, perhaps as the sole writer, then you will probably be more intimately involved in the planning process.

Planning, no matter how informal it may be, is crucial to the success of any project. Hackos (1994) says that good planning and management is needed to keep 'projects under control and profitable'. Project management is a huge subject, with books written on every aspect of it, but here we consider only two:
1. Scope — what the project will cover
2. Schedule — when the project will be delivered.

Scope

The scope basically defines how big and complex the project is and exactly what it covers. This is, to a large extent, determined by the research done in the first stage of the writing process and also by what the customer wants.

As part of the research phase, you carried out a task and user analysis so you should know roughly what type and level of documentation is needed. For example, there might be an Installation Manual, System Administration Manual, Quick Reference Guide and User Guide. If you're anything like me, you will also have started, mentally at least, to sort the information you have gathered into the various documents needed. You may even have gone so far as to create outline manuals with chapter headings and a brief synopsis of what each will contain.

All this gives you a feeling for how 'difficult' each document will be to produce and how much work is involved. It also allows you to create a ballpark figure for the size of each document and to produce a rough estimate of the number of pages that need to be produced.

Schedule

This is a bit of the process with which the writer often has too little involvement. In many places I've worked, scheduling has ranged from 'we need it by…' to 'do you think three weeks will be enough for this…?' Oh, and by the way we need everything delivered at the same time!

To create a workable schedule, you first of all need to know how long it will take to produce the documents. Van Laan and Julian (2001) state that the time to create any given document can be calculated using the formula shown in Figure 1.

If you've got your estimates fairly close (that comes with experience), you'll have a good idea of how long the project will take (always err on the safe side). As a general rule of thumb, for creating new documents through first draft to final version, Van Laan and Julian suggest:
- Ten hours per page for highest quality documentation
- Seven hours per page for documents people 'need and use'
- Three to six hours per page for minimally usable documentation.

Now you have estimated the time it will take to produce the documents, you can create your schedule. This can go one of two ways:
1. **Fantasy land**
   You know the amount of time needed, you know the resources available, you allocate the resources accordingly, you say when the

---

Time = Size x Scope x Quality

where:

Size = estimated page count

Scope = complexity:

1	=	fairly straightforward; familiar product; developers available
1.5	=	more complicated product; learning curve; one review cycle
2	=	complicated product; no specifications; more than one review cycle
2.5	=	new product; changes ongoing; multiple reviews needed

Quality = what is acceptable:

2	=	information must be complete
2.5	=	as 2 plus more than bare minimum; proofed; style guide
3	=	as 2.5 plus indexed; edited; additional information added
3.5	=	as 3 plus illustrations and graphics; structured; task-based
4	=	as 3.5 plus layout designed for maximum usability and tested

Figure 1. Formula for calculating time required to create a document

documentation will be ready and everyone says, 'Fine'. (I've never actually seen this happen but maybe I've just been unlucky!)

2. **Real life**
   You know the amount of time, you know your resources and you know when the documentation is needed. You then work out what you can deliver by the deadline, given the resources you have, and then compromise where you can.

You can compromise by:

- Pushing for additional resources to get everything done by the deadline
- Prioritising the documentation and offering the 'main' documents by the release date, with the others to follow
- Agreeing to release draft documents
- Scaling down the scope of the initial release
- Moving the deadline.

The number of options available will vary from project to project but, almost inevitably, some compromises are needed. If the technical writers are involved in the early stages of a project then, assuming their estimates are taken into account when scheduling the project as a whole, compromises can be kept to a minimum.

Document plans

When the schedule for the documentation has been agreed (including any compromises), then you can start to formalise it by creating a document plan for each manual. This is to ensure that there is no confusion about what is to be produced, with each plan specifying what the document is, the content, the delivery date, who will produce it and any milestones along the way (first draft, final edit and so on). A document plan for a product will, ideally, consist of the following sections:

1. **Title page:** identifies the product and the current version number of the plan.
2. **Overview:** details what the plan is for (producing documents for project X) and who it is aimed at (management, customer and so on). It should specify the scope of the documentation and any assumptions made or constraints to be met.
3. **User profile:** identifies who the user is for each document. Remember that not all documents will have the same readers.
4. **Existing documentation:** identifies any existing documentation for

the product. This may be existing manuals that are to be updated or specifications if it is a new product.

5. **Documentation needs:** identifies what documentation is required, for example manuals or online help.

6. **Publication plan:** this is essentially a list of the documentation needed as determined by the user and task analysis in the research stage.
7. **Process and schedule:** identifies the milestones, review process and approval or sign-off procedures.
8. **Resources:** identifies the technical writers, designers and graphic artists available. It also includes any other groups that need to be involved, such as quality assurance or testing, and any tools required.
9. **Issues:** any issues that may affect delivery should be raised, such as insufficient resources to meet the deadlines.

Budget control

A vital part of the planning process is getting the budget right — the aim is not only to produce excellent documentation on schedule but also to make money!

Costing

Excluding printing, the main cost factors that need to be considered are:

1. **Direct labour costs** such as writers, CAD engineers, illustrators, technical clerks and administration staff
2. **Materials** such as paper and CDs
3. **Office overheads** such as PCs, software and other equipment that might be bought or hired
4. **Indirect labour costs** such as holidays and sick leave.

Documentation is labour-intensive and by far the major cost is the manpower. To calculate the cost of the project, you can create an 'estimating table' in a spreadsheet package like Microsoft Excel. Down the left-hand side of the table, list each document and the chapters in it. Across the top of the table, list everyone who may be involved — writers, illustrators, administration staff, managers and so on. Then fill in

the number of hours for each person, add these up and multiply by the appropriate hourly rate.

Of course, the basic hourly rate is not the true cost to the company. Taking into account all the overheads, Hackos

If the technical writers are involved in the early stages of a project then, assuming their estimates are taken into account when scheduling the project as a whole, compromises can be kept to a minimum.

estimates that the actual cost for most US companies is 2.5–3 times the rate paid to their employees.

Generally speaking, the cost to the customer is the sum of the costs listed above, plus a profit margin and VAT (if applicable).

Control

Once you've worked out the budget and started the job, the aim is to ensure that you stick to it — if you don't, then there may not be any profit!

To keep control, the project must be regularly monitored and supervised to ensure that those working on it are operating within the specified cost and time constraints. Any deviation must be dealt with as soon as possible and the project steered back on course. There will usually be some slippage (and you should have allowed some leeway in the estimates) but time lost in some areas may be made up in others. If the slippage is due to the customer (for example, changes to the specification), it is legitimate to charge for the changes, as they were not what the original estimate was based on. If the slippage is due to internal factors, these should be noted and built into any future estimates.

Strategic planning

While it might be said that strategic planning is not, at least directly, a part of the writing process, it is integral to the providing customers with what they need and, indeed, to the continued employment of technical writers. We have all heard the saying, 'anyone can write' and, too often, this is taken to be true; the documentation is produced by whoever happens to be free when it's needed.

When we think of strategic planning, we tend to think of large companies planning for the future but it's not just

for large companies. It is equally important for everyone, right down to sole proprietors. Some stages apply to all organisations, whatever their size:

1. Know the marketplace.
   - Who is using technical writers and in which industries?
   - What are the others doing? Outsourcing? Using non-writers? Do they know technical writers exist?
   - What do customers want and are we supplying it?
   - What are our competitors doing?
2. Identify trends: what is going to affect technical writing over the next five years? Factors may be:
   - Economic, such as outsourcing to cheaper workplaces and replacing hard copy with online information.
   - Environmental, perhaps making paper a 'minority' medium.
   - Political, perhaps regulations (from the European Union, for example) will require more or better documentation.
   - Technological, perhaps products becoming so user-friendly that less documentation is needed.
3. Communication: talk to the customers — we are, after all, professional communicators. Are they happy with what we do? Does our documentation enhance the product? Ideally, we need to communicate at two levels:
   - With the 'real' customers — the people who will use our documentation — so that we provide what they need and want.
   - With the 'paymaster' — the person who places the orders. If you are lucky, this may be a customer but, especially in larger organisations, this is often not the case.

In some ways, this is the most important point because we deal with people and it is often our interactions with them that make or break a good working relationship. I remember a talk at Conference that described a large contract which was awarded not on price or quality (obviously important and taken into consideration) but on the fact that the customer felt that they could 'do business with' the supplier.

4. Determine what is needed to survive and flourish:
   - How much will it cost and can we do it cheaper?
   - If the cost is acceptable, can we provide added value through better quality?
   - Which competitors are doing well and what are they providing that we don't?

All of this takes time and we must be prepared to spend the time doing it. If we do it well, it could give us an important competitive edge and even keep us working when times get tough. If we know where the market, and clients or potential clients, are going, we can prepare ourselves to go with them. So where might this lead us? Perhaps to:

- Learn new skills (programming skills seem useful at the moment)
- Enter a niche market with little competition
- Try other types of writing, such as marketing, science or journalism
- Branch out into related areas, such as testing or web design.

I could go on but the options will be different for every company and individual. One thing is sure: in an ever-changing workplace, these are issues that we all need to consider.

The next stage

In the next article, we'll look at the 'writing' stage of the process. This will cover how the information gathered is presented to the user. **C**

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Cognition and diagrams

Miles Richardson discusses how current research in cognitive psychology can inform the design of diagrammatic instructions.

For many years, psychologists have studied instruction design and considered the media and methods used to convey information and, in particular, the relative benefits of diagrams and text. The addition of diagrams that depict operational, spatial and contextual information improves performance and facilitates learning, although textual information is important for accuracy. Despite the benefits of textual information, illustration-only or diagrammatic instructions have become increasingly widespread because they reduce translation costs.

Cognitive scientists and psychologists have investigated the general role of diagrams and the cognitive processes involved when people use diagrammatic representations of a task. This research into 'diagrammatic reasoning' is based on the work of Larkin and Simon (1987). Recently, a few researchers in this area have begun to consider the role of diagrams in instructions, such as those used to explain mechanical systems or assembly tasks.

This article deals with the more recent work, which considers the role of diagrammatic instructions. Before detailing how this research can inform the design of instructions and diagrams, it is worth introducing some terminology and explaining what happens when people use diagrammatic instructions during three-dimensional or spatial tasks such as assembly.

How people use diagrams

During the initial phases of a three-dimensional task, the instructions or diagrams must be comprehended. Cognitive psychologists agree that this requires people to indulge in mental imagery or in the construction of three-dimensional mental models (Hegarty & Just, 1993). The construction of a mental representation requires time and mental effort, and it is affected by the difficulty of the problem and the design of the instructions. Poor materials that require information to be inferred add to the difficulty (Novick and Morse, 2000).

These mental models are held in Working Memory; this is the short-term memory used for things like remembering directions or phone numbers for a short period. Working Memory has a limited duration and capacity, which differs between individuals. It is a critical factor in instruction design; if the instructions or diagram present too many elements of information at once, this can overwhelm Working Memory and decrease performance and the effectiveness of instructions (Marcus *et al* 1996, Kalyuga *et al* 1998). The individual differences identified in Working Memory also occur across many other human aptitudes and abilities. These differences influence the effectiveness of instructions. For instance, diagrams in assembly instructions are particularly effective

. . .a critical factor in instruction design. . .

for people with low spatial ability (the ability to mentally rotate objects or read maps). However, research into diagrams of complex systems (for example, a car brake system) shows that people with low mechanical ability are not aided by diagrams when required to make inferences beyond what is explicitly communicated in the diagram (Heiser & Tversky, 2002).

A further issue is that we know people think about objects in terms of the parts that are functionally significant and perceptually salient (Heiser & Tversky, 2003). Research has shown that assembly performance is improved if the assembly structure depicted in the instructions matches the structure expected by the user, particularly when the order of assembly can vary (Zacks & Tversky, 2003). The problem is that it is difficult to measure what structure the user expects and this differs between individuals.

Understanding how people use diagrams and instructions can help us to improve their design. However, the difficulty in producing instructions that can work for a range of users with differing aptitudes is also apparent.

How cognitive psychology informs instruction design

From the details above it is clear that instructions and diagrams should assist people in creating a mental model and therefore reduce the demand on mental resources. The design principles presented below are based on this premise. The bulk of research produced in this area has been published very recently and comes from a small group of researchers.

The following design principles are adapted or taken from Agrawala *et al* (2003) and are combined with research by Heiser and Tversky (2003). Although originally specific to assembly diagrams, these principles can be applied to instructions for other tasks.

- **Grouping of parts:** Assemblies are broken into a hierarchy of parts separated by clusters of components that stand out visually or are grouped by functions, for example, the back of a chair. It is proposed that instructions should deal with parts within a group either in sequence or at the same time.
- **Step-by-step instructions:** Procedures should be presented in a series of diagrams with a clear and explicit order. However, having too many steps should be avoided by detailing repetitive actions once only.
- **Significant parts:** When an assembly (or task) contains a number of significant procedures, a step in the instructions should be devoted to each procedure. Several different non-significant procedures can be shown in a single diagram. Based on research by the author, a significant procedure in assembly includes unique procedures that have not previously been performed in the assembly process (Richardson *et al*, In Press).
- **Structural and action diagrams:** Action diagrams (exploded views), with arrows and guidelines to indicate attachment, are superior to structural diagrams as they specifically depict the fastenings required in the assembly procedures. Structural diagrams present the components in their final positions, so diagrams

have to be compared to infer which components have been attached.

- **Orientation:** Large items, such as a wardrobe, may be orientated to lie horizontally to ease the physical aspects of assembly. Most objects have natural orientations that facilitate object recognition. Natural orientations can minimize component positioning errors. If these orientations are not used, measures should be taken to assist the user in identifying the orientation of the object.
- **Visibility:** All new components added during a step in the instructions must be visible. However, in circumstances where there is symmetry, there can be exceptions as long as there is confidence that the user is aware of the symmetry. Similarly, exceptions can be made where multiple identical assembly procedures occur. Visibility also requires context for positioning new components, therefore features of the overall assembly object must be visible.

Some of these guidelines can conflict, for example, the orientation might have to be changed to improve visibility of a new component. This leads to another guideline:

- Ensure a stable orientation and perspective (Heiser & Tversky, 2003). Constant changes in orientation to improve visibility may be counter-productive.

In addition, two further guidelines can be identified:

- Ensure information required for a procedure is explicit and does not have to be inferred, as inferring adds to the difficulty (Novick and Morse, 2000).
- Do not present too many elements of information at once (Kalyuga *et al,* 1998). Based on the author's research, this can be clarified: do not present too many unique elements of information at once (Richardson *et al,* In Press).

These design principles are the results of recent research and can be evaluated and improved. Professionals working in the area may already know some of them from direct experience. However, the principles do demonstrate how cognitive experiments can inform design by revealing how people think about a task.

Finally, the design principles from Agrawala *et al* (2003) have been used to write software to automate the design of instructions; this is also detailed in the paper by Agrawala *et al.* Their system uses an algorithm based on cognitive design principles and thus the effectiveness of the instructions is ensured. A study comparing computer-generated instructions with factory-provided instructions showed that the computer-generated instructions reduced assembly time by an average of 35% and errors by 50%. For details of this and similar research, visit http://graphics.stanford.edu/~maneesh/

...automated software for instruction design...

Summary

Designing instructions based upon general design principles derived from cognitive science has demonstrable advantages. These principles can provide a starting point for the designer that restricts the number of possible design options and informs particular decisions. However, this top-down approach is not sufficient, as it cannot identify the trade-offs that will occur in some situations. The design may have to accommodate particular circumstances, in which case a bottom-up approach can also be appropriate.

Understanding how people perform tasks does inform instruction and diagram design, but it also demonstrates the difficulty in producing instructions that can work for a range of users with differing aptitudes. Where the benefits justify the costs, the most powerful approach is to combine design principles with sound empirical iterative design (Zacks & Tversky, 2003). **C**

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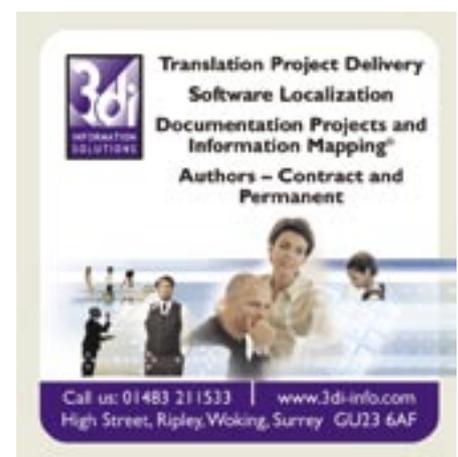
Quadralay launches WebWorks FinalDraft

‹w› WebWorks®
from **Quadralay Corporation**

This new software aims to give writers a tool for gathering and managing feedback, and incorporating changes from multiple reviewers. The functionality that FinalDraft offers is designed to address the entire edit-and-review process from first to final draft, giving accurate and complete documents at lower cost and less effort.

FinalDraft distributes drafts, manages discussions and incorporates reviewers' feedback. It enables the author to distribute drafts in a browser-based interface through which reviewers can add comments, start discussions and reply to existing discussions. Instead of printing out numerous documents, keeping track of colours or e-mailing different versions to multiple reviewers, all drafts are automatically generated from a single Microsoft Word or Adobe FrameMaker document: this enables the writer to retain editorial control. Using an e-mail-based system, drafts are sent as WebWorks Archive files (HTML). This requires only a small plug-in installed into Microsoft Internet Explorer, which is available at no additional cost.

Reviewers using FinalDraft can participate in discussions about an online version of a document under review. Their job is quick and easy, using fully featured navigation, multiple-discussion views and search functionality. A single mouse-click sends a reviewer's comments back to the author.

'WebWorks FinalDraft is a new and exciting solution that finally addresses one of the biggest challenges in content development: getting documents thoroughly reviewed in a timely and cost-effective manner. It streamlines the entire edit-and-review process, helping organisations to improve the quality of their content and accelerate the document-production cycle,' said Michael E. Fabry, CEO of Quadralay Corporation.

FinalDraft costs US$399, plus shipping, from www.webworks.com or, in the UK, from www.mekon.com. For more information, e-mail info@mekon.com.

European Information Development Conference

One of the most important meeting points for the technical communication industry in Europe takes place on 10–11 November, in Wiesbaden, Germany. As with the inaugural event last year, it is linked to the Tekom conference which takes place on 11–12 November.

The conference theme this year is, 'New challenges and new solutions in an evolving professional environment'. Other subjects being discussed include online Help, localisation, XML, usability and content management.

'Our aim is to create a high-quality event for specialists who are responsible for the development of multilingual product information, especially technical writers, editors, web designers, online Help designers, usability specialists, information managers, translators and localisation experts,' said Tekom's Managing Director, Michael Fritz. 'The EIDC is an excellent opportunity for networking, presenting your solution to a specialised audience and exchanging knowledge with experts from all parts of Europe.'

For more information, visit www.tekom-webforum.de or www.tceurope.org.

Talking our language

SDLX 2004 provides a complete and secure translation environment for those wanting to boost the quality and productivity of their translation activities.

SDLX is a computer-aided translation (CAT) tool with an easy-to-learn interface and scalable performance. It is compatible with other systems based on modern technology and open standards such as TMX. TMX, or Translation Memory eXchange, is the vendor-neutral, open standard for storing and exchanging translation memories created by CAT systems sanctioned by the Localization Industry Standards Association (www.lisa.org/tmx). SDLX dramatically improves productivity of the total translation process, from project creation to translation and quality assurance.

For more information, visit www.sdlx.com.

g GOWER

Are you experienced?

Many ISTC members spend years accumulating information about the business they work in and documentation in particular.

Apart from using this expertise in your normal work, what else can you do with it? How about writing a book for one of the world's leading publishers of business and management titles? You could team up with Gower Publishing.

'We are always on the lookout for new ideas and new authors', said Jonathan Norman, Publisher. 'Marketing is the biggest challenge facing publishers, particularly since the number of books published on every subject has grown year-on-year. Gower's solution to this problem is to find highly distinctive books within a variety of key areas, including internal and corporate communication.'

If you have an idea for a book on communication, or something on a particular industry or process, you can contact Jonathan by e-mail at jnorman@gowerpub.com.

For more information, visit www.gowerpub.com/potent.htm. You can read several reviews of Gower books at www.qualityauthors.co.uk.

Employment news

Word from ISTC members shows growing optimism in the job market.

Individuals and documentation companies, permanent staff and contractors, all shared a cautious confidence. That said, some members felt that many of the opportunities lay in the south-east and that the future is not so good further north.

Others said they had decided to improve the quality of their lives by moving away from the south-east and

had no problems finding work.

A disturbing development experienced by one member, currently living somewhat north of Watford, shows there is perhaps more truth to the north–south divide than we'd like.

He said, '…employment agents keep asking whether they should put you forward for a job in the south because you might not be able to purchase a property due to high house prices. Even if you have an interview and know that you can do the job, you are confronted with the question "Can he afford to move south?"'

We hope this was a rare incident: please let us know if you have experienced anything similar.

There also appears to be a divide between manufacturing and software. Manufacturing is suffering, with many companies unable to compete with third-world prices, and so projects are going abroad and the number of opportunities for technical authors has fallen. This appears to be worse in the north of the country. In comparison, the IT industry seems to be picking up after last year's low and there are more opportunities for technical authors in this industry.

New president for TCeurope
Congratulations go to Hanna Risku, who was recently elected President of TCeurope.

Hanna is Finnish but is based in Austria, working at the Danube University Krems near Vienna, as Head of the Centre for Knowledge and Information Management and Deputy Head of the Department for Telecommunication, Information and Media.

An expert in vocational education and the training of technical communicators, Hanna has received six research awards. She is also a freelance translator and has carried out research and written publications on the cognitive foundations of intercultural communication, translation, knowledge management and usability, and on the role of information technology in translation and terminology management.

Her other interests include playing the violin, cycling, trekking, canoeing, skating and skiing (though presumably not all at the same time).

For more information, visit www.tceurope.org/index.htm and www.ida.his.se/ida/staff/hanna_risku_eng.html.

Our men in the Middle East
At the request of a member in the Middle East, there is now a new ISTC discussion group.

Called ISTC_Middle_East, the group is primarily intended for ISTC members working in, or from, the Middle East. However, as the number of members in the Middle East is limited, it could also include those in the Far East as well.

For more information, visit http://groups.yahoo.com/group/istc_middle_east or e-mail istc_middle_east-subscribe@yahoogroups.com with 'subscribe' as the subject.

Top of the popcomms
Organised by popcomm training, the Communication Bonanza is a new and instructional awards evening to be held in London on 22 September 2004. At the event, you'll be able to enjoy a convivial evening, buffet dinner and even have a say in the final judging.

The awards are open to all organisations producing corporate communications of any sort and the closing date for submissions is 6 August. For details and entry forms, visit www.popcomm.co.uk.

Hot potato!
Congratulations go to William Waddilove, who recently won the title 'Spud Brain of Britain 2004'.

William battled through to the final where, as he puts it, 'I won the tie breaker for being less wrong than the other person'.

The prize was a magnificent cup, a food hamper, vouchers and an invitation to visit quite a few potatoes on the Waitrose Farm near Cambridge.

I hope that William will now receive the appropriate deference from other ISTC members. ☐

Affiliate news

Ellis Pratt, Sales and Marketing Director of Cherryleaf, talks about the future of the technical documentation business and what we will need to know to survive.

How do you see the business of technical documentation in the future?
'It's clear that more software development will be "off-shored", that is, carried out in lower-cost countries. If a project were to move to another native English-speaking country, it would be likely that the authoring work would go there as well. However, if the work were to be done in emerging countries such as India or China, where English isn't the mother tongue, then I believe there is a good chance that the writing part would stay in the UK.

'From a technical perspective, the most likely and significant change will be towards unified content solutions, where sentences, paragraphs and other content are re-used across documents. It's something that might be taken up by a whole organisation. As for online Help, this will obviously be affected when Microsoft's new Help standard, Longhorn Help, arrives.'

What will a business like yours be doing in two years' time?
We will be connectors linking prospects to experts. We will also be seen as "mavens" — information conduits for single sourcing, reusable content solutions, unified content solutions, online Help and other important topics. If people want to know anything, they will come to us.

'We also aim to be champions of and experts in written corporate documents. As only 60% of online Help files are written by professional writers, there's an opportunity to increase the amount of work carried out by technical authors. I've been collecting examples of what I call "diabolical documentation" to use in talks about the common mistakes that non-professional writers make.'

What will the average technical author have to know to survive?
'Well, it's not necessarily what you know, but whom you know. The most successful writers I meet are not the most knowledgeable but the most connected.

Solving your image problems

Lewis Marshall concludes his series on using images in print with a look at the sort of problems that typically arise.

'Why doesn't the printed image look like it did on the screen?' and 'Why do I have so many last-minute problems with print projects?' Many of us have asked these questions, as we reflect on disappointing print results.

Most of us would probably say that pictures are desirable in many published documents and essential in some. However, there is no doubt that pictures can cause as many problems for a document's creator as they solve for its reader. In this article, we explore the reasons behind some of the most common complaints when printed documents fail to meet expectations. We will look at how we can control the materials we use for print and how we can optimise the way we view images and documents for print.

Print materials

Problem

When an RGB (red, green, blue) original is printed using CMYK (cyan, magenta, yellow, black) inks, the inks may not be able to reproduce the saturation (colour purity) seen on a monitor. This effect may be exacerbated by the use of uncoated or off-white paper, which can suppress colour saturation or introduce a colour cast.

Solutions

- Speak to your print provider about the inks being used: in previous articles, we discussed printing inks and how conversion for print is dependent on materials like inks.
- Ensure any colour space conversion is optimised for the print process. Try to ensure that documents are processed according to the paper to be used; this helps to achieve the closest possible approximation to the original on-screen design.
- Consider carefully the paper you use: glossy, coated papers tend to give the best results but you can save money by using a machine-finished paper. Paper qualities that influence colour reproduction are the:
  - ‣ Smoothness of its surface
  - ‣ Brightness of its surface
  - ‣ Opacity.

Viewing environment

Problem

The user's monitor does not show a realistic representation of the image. The colour balance, brightness and contrast of a monitor may distort the colour values in a displayed image.

Solutions

- To optimise the monitor:
  - ‣ Set the display to True Colour. Depending on the operating system, this may be referred to as 32-bit colour or 'Millions of colours' or '16.7 million colours'. It means that the monitor can display 256 greyscales for each colour in each pixel.
  - ‣ Set the background to a neutral colour: ideally, select a neutral mid-range grey (using RGB values of 128 for each colour). This reduces the likelihood of introducing colour casts while working with colour.
  - ‣ If the digital controls of your monitor permit it, set the white point to 6500 Kelvin.

Note: Make sure the monitor has been turned on for at least half an hour before adjusting the display.

Note: CRT monitors respond better to this process than LCD panels. This is because CRTs have a higher level of illumination than LCD and can, therefore, display effectively when the white point has been adjusted.

- Use a software calibration tool to neutralise the colour balance of the monitor display. An example is Adobe Gamma, which is installed with Adobe Photoshop. This tool calibrates and characterises your monitor and creates an ICC profile — a set of instructions that describe the performance of devices like monitors and printers. You should select 6500K as the white point and use the default gamma for your operating system (1.8 for the Macintosh and 2.2 for Windows).
- If you deliver print-ready PDF files, use the **Preview** and **Overprint** functions in Adobe Acrobat (not the Reader) to see an approximation of

the final printed appearance. To use these functions effectively, you **must** optimise your monitor as described above and configure Acrobat for colour management:

- ‣ Select Edit > Preferences > General.
- ‣ Select Colour Management.
- ‣ Unless you have a specification for the print process, select 'European Prepress Defaults' or another generic standard.

To use Preview, select: Advanced > Preview. This approximates the appearance of the printed work and can give a good indication of how bright colours may become de-saturated during printing.

To use Overprint, select: Advanced > Overprint. This shows how the inks used in printing behave when they are superimposed on the page. Because the inks are designed to be transparent, we can create a vast array of colours by overprinting cyan, magenta and yellow. For example, we can create red from magenta and yellow. However, because inks do not behave in an ideal way, overprinting can produce slightly unpredictable results.

Press-ready workflow

Problem 1: enhancing with colour

If you are using Microsoft Office applications or authoring programs such as Adobe FrameMaker on a Windows platform, all PDF and PostScript files are stored in RGB. This is because such applications rely on the system-level printer to generate PostScript output, rather than generating their own. As the Windows graphic display interface (GDI) only understands the RGB colour space, it converts other colour spaces (like CMYK or spot colours) to RGB. This conversion is complex and can distort the colour values.

If your images consistently use highly saturated colours, you may need to consider using a specialist print provider. A print provider who has skills in Hi-Fi colour or using special ink sets may be able to improve the colour reproduction.

Note: Conventional colour printing uses cyan, magenta and yellow to reproduce colour information. Hi-Fi colour systems add green, orange and sometimes violet to reproduce colours lost when converting from larger colour gamuts, such as RGB.

Solution
Establish a managed workflow, where PDF files can be converted to press-ready CMYK. Products such as Enfocus PitStop can perform this type of conversion at the PDF stage.

Problem 2: making paper proofs
If a small-scale ink-jet printer is used as a local proofing device, this may suggest a closer match to the monitor image than seen in the final printed document. This is because such printers are not PostScript devices and tend to expect RGB colours; they make the conversion to CMYK on output.

Solution
Use a PostScript software Raster Image Processor (RIP) for the inkjet printer.

PowerRIP 2000 Pro is a print driver and software RIP that intercepts print code and sends colour-managed CMYK to the printer. It offers an excellent low-cost solution to accurate local proofing. Try to ensure that you use a proofing paper that is similar to the final printing material.

Press-ready documents
This section looks beyond the handling of image files. As most image use involves a combination of graphics and text, it is more practical to consider how to handle final files for print.

Problem
One of the biggest headaches of working with print is the last-minute problems that are uncovered by pre-press departments. To content creators who are not familiar with the print process, these can be difficult to solve, and sometimes impossible to explain or avoid in the future.

The usual solution to this is preflighting or postflighting. These processes involve using software applications to interrogate print files for potential problems.

Preflighting is a term reserved for checking the native design or creation software (such as Adobe InDesign or Microsoft Word). This type of test is used in a workflow that involves submitting the original authoring documents to the printer for processing. Common problems flagged by a preflighting test include:

- Use of fonts that may not be shared across organisations and that are not embedded in the documents
- Use of graphics for which an original source is not available
- Use of other referenced assets that may extend outside the limits of the printable area (such as spreadsheets)
- Page and margin setups that are inconsistent or impractical to print
- Graphics that are in an RGB colour space
- Graphics that have been rotated within the document.

Postflighting describes the process of checking final files that have been created for the printer (usually PDF or PostScript). Common problems identified during a postflight test include:

- Colour objects that are not suitable for the print process (RGB, LAB or Index)
- Image files with inadequate resolution
- Image files with an excessively high compression setting
- PDF or PostScript level that may be incompatible with the final output device
- PDF security that may inhibit document changes or high-resolution printing
- Other graphic or textual objects on the page that may not reproduce correctly in print (for example, line weights in illustrations set to hairline or less than 0.25pt, and text set to less than 4pt)
- Fonts that are not embedded or may substitute on the output device
- Printable PDF annotations.

The distinction between preflighting and postflighting is subtle and both are commonly referred to as preflighting. Use of either or both is a safeguard against re-work and lost deadlines, and both raise issues to consider:

- **Preflighting**
  Preflighting checks can offer valuable warnings that can be corrected by the document creator. However, there are few off-the-shelf products on the market, especially for authoring applications such as Microsoft Word or Adobe FrameMaker.
  Adobe Acrobat Professional includes preflighting checks but offers

Glossary
Bleeds: a printed image that extends beyond one or more of the page margins; this is later trimmed so that the image 'bleeds' off the edge of the sheet.
Colour separation: the act of separating a document into components for printing, usually four parts for process printing.
Double page spreads: two facing pages that allow common objects to fall across the inside margins of both pages. Double page spreads are supported by most DTP tools, including PageMaker, QuarkXPress and InDesign.
Four-colour process: full colour simulated by over-printing cyan, magenta, yellow and black.
Gamma: a measure of brightness for the mid-tone values produced by a device (often a monitor).
Hairline: a variable line weight defined by the output device (it creates the lightest line weight supported by an output device).
Hot folder: a folder that periodically checks for the presence of new files and then carries out a defined process.
Imposition: positioning pages on a press so that, when the sheet is folded, the pages fall in sequential order.
Lithography: a common printing process in which image and non-image areas are distinguished by their attraction or rejection of oil and water; the image area attracts oil-based inks.
PostScript: a language for describing text, graphics and page information to output devices.
Printer's marks: marks used by printers to process pages during and after printing; these include trim marks to cut over-size paper to final size.
RIP: Raster Image Processor; software or hardware that converts PostScript operators into final high-resolution one-bit raster data for printing plates or film.
Spot colour: a custom colour that is specially mixed and not created by combining other inks; spot colours can be used to reproduce corporate colours accurately or to embellish single colour printing by adding one or more colours. Spot colours are often selected from custom libraries like the Pantone range.
White point: coordinates (measured in the CIE XYZ colour space) at which red, green and blue phosphors at full intensity create white. This is measured in degrees Kelvin and is often known by the temperature; for example, D65/D6500 and D50/D5000 are preferred white points for western prepress associations.

no correction facilities. Products such as Markzware FlightCheck offer support for design-oriented applications such as QuarkXPress, Photoshop and Illustrator but minimal support for Word and FrameMaker.

Customised applications, such as MDocChecker created by Mekon Ltd, allow bespoke checks to be made to Microsoft Office documents.

- **Postflighting:**
Postflighting checks often offer a more practical solution than preflighting, as the final format can be limited to PDF. The single file format has meant that software vendors have been able to make products that can perform extensive checks, irrespective of the original creator application. However, if serious issues are found, there is less scope in the PDF file format to correct them. Products such as Enfocus Pitstop provide a means of checking PDF files and a limited ability to make corrections.

Solution 1: single user test cycle

One user creates one document that contains text, graphics and images.

- The user creates PDF files and then runs a postflight check using either:
  - **Enfocus PitStop Professional.** This is a plug-in product for Adobe Acrobat and checks are made from within Acrobat.
  - **Markzware FlightCheck.** This is a standalone product for preflight and postflight testing of documents.
- The user responds to the postflight report and decides whether to:
  - Correct any errors on the source documents and re-create the PDFs.
  - Use PitStop's editing tools to correct the error at PDF stage.

Note: The user continues to use his or her original authoring application and Adobe Acrobat. PitStop or FlightCheck are both powerful products that can be customised through scripting and macros (by the user or a third-party developer).

Solution 2: PDF server workflow

Multiple users create documents and send PDF files to a 'hot' folder.

- A server product detects new documents and automatically runs postflight checks. Documents are passed to other folders where PitStop then applies PDF editing routines to correct pages or to make changes to

documents that were not possible in the source application (for example, converting colour to CMYK or adding printer's marks to the page).

- Checks are made with:
  - **Enfocus PitStop Server.** An offline, automated PitStop service, this can be configured to intercept documents using hot folders to check and correct PDF files.
  - **Markzware FlightCheck Workflow.** Again, this is a server product with the same functionality as the desktop alternative. It differs from PitStop in that, although it allows checks to be made on source documents, it does not provide PitStop's PDF editing capabilities.

Note: The user continues to use his or her original authoring application and Adobe Acrobat with these products. Again, the user or a third-party developer can configure PitStop or FlightCheck.

Solution 3: the preflight and postflight server workflow

Multiple users submit source documents to a server process that runs checks.

- Depending on the severity of any errors found, the author may be asked to correct and re-submit the document, or the document may be passed to an automated PDF creation tool.
- The PDF is checked and feedback may be sent to the user. Alternatively, the document may be sent to a prepress specialist for modification or sent to an automated process for correction.
- The user may have to consider using an alternative authoring application, one that is supported by preflight applications.
- Checks can be made with:
  - Mekon MDocChecker and MPDFMaker
  - Markzware FlightCheck Workflow and Enfocus Pitstop Server.

Bringing it all together

In this series of articles on preparing images for print, we have considered:
- Characteristics of raster files
- Resolution issues
- Colour issues
- Print issues
- Workflow issues.

The following section is a brief exercise that brings small aspects of all of these issues together, in the form of a PDF postflight workflow.

Document creation

For the purpose of this exercise, it is assumed that the user creates documents in Microsoft Word. These documents contain black and coloured text, raster images and business graphics (such as charts).

Output requirement

One of the required output media is professional print, using medium- to long-run printing on a lithographic printing press.

The problem

Most of the users are proficient in Microsoft Word but they have no practical knowledge of preparing documents for print. In addition, Microsoft Word does not offer any of the prepress functionality that design-oriented applications offer, such as:

- Formatting features to support four-colour process or spot colour printing, such as CMYK colour palettes and spot colour libraries (such as Pantone)
- Printing functionality to support process colour PostScript; Microsoft products use the system-level printer to create PostScript, which for Windows users means that all colour is converted to RGB
- Support for page bleeds, printer's marks, imposition, double page spreads or colour separation
- Integrated preflight functions.

The solution

A simple, single-user, non-automated process is a good place to start. Before server solutions are implemented, a cheap and flexible, partly manual, process can help enormously. Using Enfocus PitStop can help transform a word processing application into a useful pre-press tool.

The two-page document shown in Figure 1 is a typical document designed for print: multi-column, coloured text and coloured graphics. A PDF file is made and run through a PitStop preflight test. Ideally, a customised test is configured to suit your specific needs, but one of the generic tests shipped with PitStop can be used.
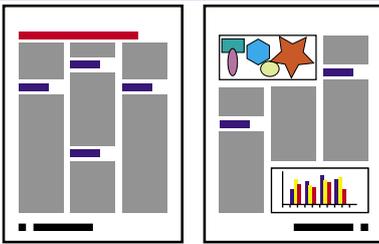
Figure 1. Original document
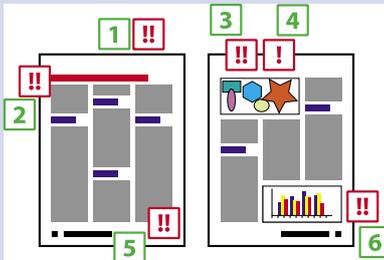

Figure 2. Checked document

Figure 3. Final document

Note: Some of the generic tests are configured to support industry standards. One is PDF-X, which is an international standard (ISO 15930-1:2001) created by the Periodical Publishers' Association (PPA) and now supported by the job options in Acrobat Distiller.

Preflight tests can be configured to return feedback on errors to the user, or to correct errors automatically where possible.

Results

Figure 2 shows the problems identified by testing the document in Figure 1. Most preflight applications categorise problems as errors and warnings. Errors are serious; they should be corrected or the document may not be processed. Warnings are cautionary; final results may be disappointing. The highlighted problems are:

1. **No printer's marks.** Error: a print workflow requires page marks to help control the processing of the document. See Actions a–d.
2. **RGB colourised text.** Error: Text is formatted using an RGB colour palette and must be converted to CMYK before the PDF is processed for printing plates. See Action e.
3. **RGB colourised graphic.** Error: A graphic may have been created in CMYK with a design tool but was converted to RGB when the PDF was made. Like text, the graphic must be converted to CMYK. See Action e.
4. **Stroke weight less than 0.25pt.** Warning: A lower limit is placed on the stroke weight of rules used in graphics and tables. This is because very light weights may not be printable within the tolerances of the printing process. See Action f.

   Note: The stroke weights may be correctly applied in an illustration program but be careful how you scale graphics within authoring or DTP applications — the stroke weight will be scaled in proportion.
5. **TrueType font use.** Error: Most printers can process PDFs created using TrueType fonts. However, be aware that the TrueType file format includes a setting that allows the type designer to prevent the font being embedded in another application, including the PDF file format. Many Microsoft fonts do not allow embedding and so PDFs that use these fonts will have substitute fonts. Fonts can be forced to embed but be aware you are breaking the license of the font creator. Unless you are happy for font substitution to take place, you will have to change the font.
6. **Hatched pattern.** Error: the hatch patterns used by Microsoft art (including charts and Word Art) cause problems for print providers. This is because the pattern is generated by using low-resolution graphics that are superimposed to create the hatch effect. Not only does the low-resolution image produce coarse results in print but the hatch pattern can also cause interference patterns on the printed page. See Action g.

Actions

Now the errors have been identified, what can be done? The good news is that you can rectify most errors at the PDF stage using Enfocus PitStop. Of the actions listed below, all but two can be rectified using a PitStop Action or Global Change. Actions e–f can be rectified as part of the preflight check.

a. The PDF page size should be extended by 30mm to accommodate trim marks.
b. A step wedge should be added to aid the on-press checking of tone reproduction.
c. Registration marks should be added to aid on-press registration checking.
d. Colour bars should be added to aid on-press ink density measurement.
e. All RGB colourised objects should be converted to CMYK.
f. All stroke weights should be increased to press tolerances.
g. Hatch patterns should be removed and replaced with flat colour.

Once you have made these changes, your document is ready to print (Figure 3). By building preflight and postflight testing into your workflow, you are able to transform documents created in applications with little or no print functionality into press-ready files.

I hope you have found this series of articles useful. The technical issues associated with creating press-ready artwork are complex but, as technical communicators often produce files for printing, it is worth familiarising yourself with the basics at least. Be aware of the stages at which problems can arise and never assume that the printed output will automatically match what you saw on your monitor. **C**

Useful websites

http://ep.pennnet.com
http://graphics.agfa.com/packaging/workflow/apogeex_light
www.adobe.com
www.creativepro.com
www.enfocus.com
www.iproofsystems.com
www.markzware.com
www.mekon.com
www.pdf-x.com

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Forming plurals in English

Nick Robson looks at how plurals are formed, depending on the ending of the singular form.

The English language being what it is, the formation of plurals can be a minefield and, added to this, tastes change. Once one's own preferences have been added in, confusion can easily reign. Logical, English is not.

The following top ten is only a sample of the variations that you may encounter. In practice, be consistent with endings if there is a choice, especially if your writing is to be translated.

1. A, ex, ix, on, um and us

Annex: annexes.
Antenna: antennae or antennas.
Appendix: appendices (UK English), appendixes (US English).
Apex: apexes.
Bacterium: bacteria.
Criterion: criteria (often used wrongly as a singular).
Datum: in the sense of reference points, use datums. In the sense of information, use data.
Forum: strictly fora, but this can sound pretentious, so go for forums.
Formula: formulae or formulas (the latter generally in US English).
Helix: helixes.
Index: indices (in maths), indexes (in publishing and US English).
Millennium: millennia.
Phenomenon: phenomena (again, often used wrongly as a singular).
Referendum: referenda or referendums.
Terminus: termini. Adding 'es' here makes for quite a mouthful.
Vertex: vertices or vertexes (the latter generally in US English).

2. Ease

Axis: axes.
Parenthesis: parentheses.

3. Ee and ess

Ass: asses.
Box: boxes, but ox: oxen.
Dish: dishes.
Latch: latches.

4. Eff and vees

Beef: beefs or beeves (cattle, archaic).
Hoof: hoofs or hooves.
Leaf: leaves.
Roof: roofs (older rooves).
Turf: turfs or turves.

5. Eye ee ess

Community: communities.
Family: families.

6. Oh ess

Cargo: cargoes.
Dynamo: dynamos.

7. Ou to ice

House: houses.
Louse: lice.
Mouse: as in the animal, mice; as in the pointing device, mouses.

8. Collective words

Aircraft: aircraft, singular or plural.
Data: data is, not data are.
Equipment: generally collective but, according to circumstance, can take an 's'.
Media: increasingly, the media is.

9. Odds and ends

Agenda: agendas, although strictly agenda is already plural.
Child: children (note the possessive children's books).
Court-martial: courts-martial.
Passer-by: passers-by.

10. Punctuation

Abbreviations and acronyms: use CDs, not CD's.
Dates: use 1960s, not 1960's. **C**

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Chicago Manual of Style (15th edn, 2003), University of Chicago Press.

Hart's Rules (39th edn, 1983), Oxford University Press.

Oxford English: A Guide to the Language (1992), Oxford University Press.

Webster's Dictionary (1999), Landoll.

After 23 years as a contract software technical author and editor, **Nick Robson FISTC** is Customer Information Manager for De La Rue Identity Systems in Basingstoke, Hampshire.
E-mail: Nick.Robson@uk.delarue.com

International English

For those who have not yet downloaded *Guidelines for Writing English-Language Technical Documentation for an International Audience* from www.intecom.org, here is a flavour of the project's findings.

- *–ize* endings to words like 'organize' are acceptable everywhere, although increasingly *–ise* is preferred in UK English.
- Although there is generally a UK–US divide on pairs like *–our/or* and *–re/–er*, there are exceptions. For example, both **glamour** and **theatre** are seen in the US.
- Vowel pairs for a single syllable are less common in US English; for example, the UK **manoeuvre** translates into the US **maneuver**. Even in UK English, the use of ligatures (æ and œ) to represent such sounds is fading.
- Consonants are doubled less often in US English; for example, the UK **modelled** translates into the US **modeled**.
- Rarer differences include **bureaux** (UK) and **bureaus** (US), and **mollusc** (UK) and **mollusk** (US).

Other English variants are influenced by history and geography. Places like Australia and New Zealand tend to adopt UK conventions, while parts of the Far East show more US influence. Canada is a special case, with historical British influence but close American links. Several times, checking one of the larger local dictionaries showed that a word variant, while not common, was grammatically correct in a region. The Guidelines are intended to develop to address feedback from technical communicators around the world. Please send your comments to Ron Blicq at ronblicq@cs.com

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ISO/IEC 15910:1999
Software user documentation process.

Although international standards can be prepared as new documents, they can also be adapted from existing national or industry standards. For example, ISO/IEC 18019:2004 – Guidelines for the design and preparation of user documentation for application software, was developed from two British Standards that addressed software documentation: BS 7649:1993 and BS 7830:1996.

Similarly, ISO/IEC 15910:1999 – Software user documentation process, was adapted from the Australian and New Zealand Standard AS/NZS 4258, which was published in 1994. Phil Cohen FISTC, of HCi, in Sydney, Australia was the editor of ISO/IEC 15910, which is currently under revision by ISO/IEC JTC 1/SC 7/WG 2 – System software documentation.

What is ISO/IEC 15910?

Documentation is often considered as something to be produced after the software has been developed. Quality documentation has to be planned and prepared as an integral part of the software development process. The main purpose of this standard is to provide guidance on the creation of a comprehensive plan for developing software documentation, by specifying what needs to be done and by whom.

To conform to ISO/IEC 15910, the plan must include a style specification. The standard describes what the style specification must cover, together with what forms of information the acquirer is to make available to the documenter, and who is responsible for reviewing and reproducing the documentation.

ISO/IEC 15910 specifies the minimum process for creating all forms of user documentation for software. It can be applied to both printed and on-line documentation. It is intended for use in a two-party situation by anyone who produces or purchases user documentation; it can also be used to form the basis of a business contract.

Clause 9 contains conformance requirements in two sub-clauses.

9.1 The documentation process
This sub-clause covers:

- **The provision of source material**: Details the material to which the acquirer shall provide access to the documenter, including specifications, the software, developers and typical users (for analysis and testing).
- **The documentation plan**: Outlines the documentation's title and scope, together with audience definition, objectives, draft tables of contents, deliverables, ownership of copyright, translation requirements, procedures and controls, production methods and tools, team structure, estimates of time and costs, change control and review, and a schedule.
- **Review**: Covers responsibilities for the documentation plan review, the first and second draft, and proof reviews.
- **Usability testing**: Addresses usability planning and objectives, test subjects, responsibilities and the process for determining the need for additional testing.
- **Documentation subcontracted to other companies**: Identifies the conformance needs for the subcontracted documentation, and assigns the roles of the documenter and subcontractor.
- **Change control and document maintenance**: Describes the four types of changes possible in the documentation plan and how those changes can be incorporated.

9.2 Content of style specification
This sub-clause covers:

- **Writing style**: Identifies the language and spelling dictionary to be used, along with grammar and usage.
- **Paper documentation**: Includes paper sizes and quality, orientation, print resolution, margins, ink colours, dividers, reproduction and binding, page, table and illustration numbering, footnotes, headers and footers, captions, foldouts, front and end matter, typography, graphics, tables and illustrations, screen dumps, warnings and cautions.
- **Electronic documentation**: Describes several types of Help and other on-line information, tools, typography, the use of colour and rules for the use of navigation and keyboard usage.

Informative annexes
Several annexes provide further supporting material, including:

- **Calling the standard from a contract**: Contains a sample contract clause and comments on 'tailoring' the standard for this purpose.
- **A sample documentation plan**: Addresses the scope and limitations, layout and writing style, audience, a draft table of contents, deliverables, copyright, translation, development process and controls, production, project team responsibilities, resources, requirements for usability testing and the schedule.
- **Relationships**: Defines relationships between audiences, tasks, and paper and online documentation.
- **Writing in English for translation**: Provides specific guidance on terminology, style (abbreviations, confusing words, syntax and punctuation), physical factors, on-line information and cultural factors.
- **Estimating**: Addresses estimating, including what activities are likely to be involved with each draft.
- **Assessing the documentation plan**: What to look for in the plan.
- **Sample style specification**: Provides a table of style elements and values, and includes an index specification addressing content and references.
- **A bibliography** of standards and other useful publications. **C**

Richard Hodgkinson FISTC works in User Technologies at IBM UK. He has been involved in the development of ISO IT standards since 1990, and represents the UK on three international committees. Richard is currently the convenor of ISO/IEC JTC 1/SC 7/WG 2, and is the editor of several ISO IT standards addressing software documentation, icons and accessibility. Email: Richard_Hodgkinson@uk.ibm.com.

Trooping the colours

**Color Harmony
A guide to creative color combinations**

by **Hideaki Chijiiwa**
Publisher: Edition Olms AG Zurich
ISBN: 3-283-00390-4, 158 pages, paperback, £14.99

Reviewed by **Malcolm Beaumont MISTC**

A few years ago, I wanted to use colour to make some screen documents more attractive but didn't know how to work with colour effectively. My visit to the local university's library uncovered numerous books that just made things more complicated but it also introduced me to a book that provided solutions: *Color Harmony*. At the time, it wasn't possible to order the book in the UK but that has changed and it is now available in the UK and Europe.

Professor Chijiiwa keeps theory to the minimum and he puts the emphasis on showing combinations of two, three and four colours, demonstrating and explaining the successful combinations and also the unsuccessful ones. He shows how colour harmony follows specific rules, observing that it is part science and part art: the science is knowing which colours to use, the art is knowing what order to put the colours in and what proportion to use for each.

The starting point is to appreciate that every colour has three characteristics: hue, lightness and saturation. The hue is a colour on the colour wheel; lightness and saturation are adjusted
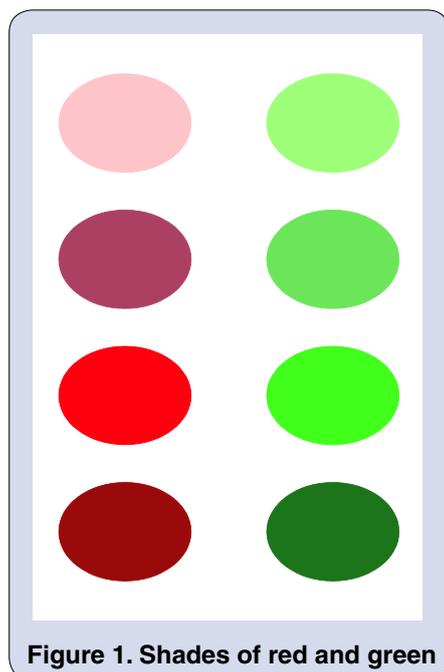
Figure 1. Shades of red and green

to give different shades of the hue. The book's examples mainly use eleven distinct hues, with four shades for each. These 44 colours, plus 17 others, form the book's palette of colours. For two hues, Figure 1 shows, from top to bottom, the following shades: light, dull, vivid and dark.

For my documents — policies and procedures — I didn't want anything fancy, just two colours to break the monotony of black text on a white background:

- a darkish colour for the headings and the navigation icons
- a lighter colour for the panel that contains the icons

Working through the book's samples, I experimented in my documents with combinations of two colours that had either the same hue, similar hues, complementary hues, or contrasting hues. It is essential to test colour schemes in context: some combinations I tried were pleasing aesthetically but they didn't meet my specific requirements. This confirmed the author's advice that a colour scheme should always reflect a design's purpose and its intended audience — a concept that is familiar to technical communicators.

Figure 2 shows some of the combinations that worked well for my documents. For most of them, I needed to lighten the lighter colour slightly, demonstrating that the book's samples are only starting points. The author emphasises that varying the shades is more important than varying hues, and suggests that varying both might give too much contrast. My experiments confirmed this: the bottom two combinations in Figure 2 were certainly not as relaxing as the other four.

Colour schemes are important for many things; for example, adverts, book covers, products, packaging, clothing combinations, interior and exterior decorations, and plant arrangements. Any scheme defines a mood, so it's important to select colours that give
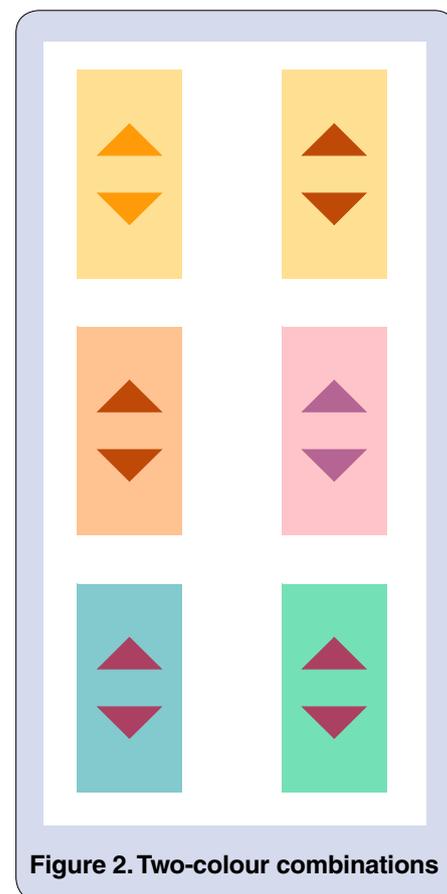

Figure 2. Two-colour combinations

the intended mood. The book contains examples of colour schemes suitable for the following moods: striking, tranquil, exciting, natural, warm, cold, young, feminine, and surprising. There are also some colour combinations from national features, including Chinese porcelain, Incan textiles, African masks, Greek pottery, and British Wedgwood porcelain.

Getting started with using colour effectively can be daunting: just think, with 24-bit colour on a computer, there are nearly 17 million colours to choose from. It's hardly surprising that the professor says there is a fine margin between colour harmony and colour chaos. We definitely need some help — and this book provides it.

Confident and inspired, I'm now going to dig out my paintbrushes and attack my bathroom. **C**

Hideaki Chijiiwa is head professor of psychology at the Musashino University of Fine Arts, Tokyo, Japan. A few years ago, he conducted a research project that investigated how colours are perceived by university students in 20 different countries across five continents.

A blunt tool for sharp craftsmen?

Graham Cross, ISTC Member and freelance technical translator, reflects that words are seldom enough — even in translation.

'Words', said the English philosopher and scientist-before-his-time Francis Bacon over 300 years ago, 'are the first distemper of learning'. Here is an early recognition of the fact that although language is the prime means for communicating and transferring knowledge, it frequently fails to do so. The main reason is that language is by nature suggestive rather than explicit, less a technical drawing or blueprint and much more an impressionist painting. Words evoke rather than define. In those documents where language has to be used in a precise way, for example within patents, contracts or legal acts, the first thing we find is a careful definition of what specific words mean. The same applies within a specialist field: the first thing a student in any discipline has to learn is its specialist vocabulary — or its specialist use of ordinary vocabulary.

Use of words alone is not the whole problem, however. As the old saying goes, 'a picture is worth ten thousand words' (and even the writers of the pop song thought it painted a thousand words). Anyone who has had to read a patent specification will readily vouch for the truth of that. The intellectual effort needed to understand the meaning of a thousand grammatically linked words (and the incomplete or even inaccurate impression that often results) is wholly out of proportion to the much fuller understanding provided by just a glance at a good drawing.

Lost for words?

So, although words can be defined in an effort to increase clarity, situations can arise where the right words simply do not exist. Imagine the problems a colleague of mine faced when she had to translate a tourist brochure about North Wales into Dutch; a language honed in an environment where there is hardly a hill to be seen is ill-equipped to wax eloquent about the varieties of mountain scenery…

There can be a great gulf between even closely related cultures; the British and the Americans frequently

fail to understand each other, and these are two cultures that separated only some 200 years ago, and have kept closely in touch ever since. The longer it has been since a common base was shared, the greater the disparity becomes in the use of language. English shares about 60% of its vocabulary with the Latin languages, but it is dangerous to assume that apparently identical words have the same meaning. Take, for example, the Portuguese word *identidade*: it means 'identity' in English and in many cases it is used exactly like its English counterpart. Consider, however, a Portuguese sentence that translates literally as 'The report proves the identity of A and B'. The English reader understands that the report proves who or what A and B are. Right? No, sorry: wrong. What the sentence means is that A and B are proved to be *identical,* that is, the same.

. . .anything that causes hesitation or a stumble will damage their confidence in the writer.

Readers' expectations

Cultural and linguistic differences aside, context and expectations can be just as important, even when the two parties are not divided by culture or language differences. Language relies, to a degree of which we are largely unaware in common use, on the prior knowledge and expectations of the hearer or reader. To be understood fully and clearly, information has to be couched using the style and vocabulary specific to the recipient. I found a classic example of this on a large box containing a domestic appliance. The English version of the text on one end of the box read 'Do not stand on this end', which means, of course, that that end of the box should not be placed on the ground. The French version, obviously translated by someone given the words but no context, instructed the reader not to stand on that end of the box, a translation so laughable that it risked diluting the serious message.

The communicator, whether a technical author or a translator, needs to be sure that readers understand

the context in which information is communicated and that he or she is 'on their wavelength'. Context can alter the meaning of words, especially where words in normal use have specialist meanings in a particular discipline. Even experts struggle when a text simply doesn't 'speak their language', even though they are fully familiar with its technical content.

In all these ways, then, if a text does not meet readers' expectations, anything that causes hesitation or a stumble will damage their confidence in the writer. The initial response may only be a raised eyebrow, but persistent failure to meet expectations will eventually elicit a hostile reaction in which the reader expects not to understand and may even almost deliberately fail to take in the message.

Both technical writers and translators face these difficulties and problems. Translation is often made the scapegoat for poor communication, and people like to make much of the humour in 'bad translations'. But such translations are not **bad** translations, they are **grossly incompetent** translations. Good translation, like good technical writing, happens when a skilled professional considers the knowledge and expectations of readers, evaluates the situation in which they have to take in information, and uses familiar language, taking care to anticipate any ambiguities. **C**

Graham Cross MSc MISTC FITI is a freelance scientific and technical translator from the Latin languages and former Chairman of the Institute of Translation and Interpreting. E-mail: graham-trinity@btconnect.com

How long have you worked in technical communication?

I've been a professional technical writer for just over nine years. As a freelance, I tend to call myself a technical writer or technical author; it's the term that my potential clients understand.

What do you do?

I help software companies to reduce their customer support costs. How? By writing clear instructions for their software. The result is that customers don't call the help desk as often as they used to. There's a case study on www.techscribe.co.uk/techw/cssdl.htm.

How did you start as an author?

It's a third career for me. I left school at 16, and started my working life as an industrial paint chemist. I later went to university, decided not to return to chemistry and taught English as a foreign language instead, which took me to Turkey and Saudi Arabia.

Eventually, my interest in computing took me back into full-time education, studying an MSc in Software Systems Technology at Sheffield University. By chance, I then had the opportunity to pursue a PhD in theoretical computer science; my thesis on file partitioning in multi-processor database machines is at www.techscribe.co.uk/thesis/thesis.html.

I fancied staying in academia, and was involved with an English-Japanese language translation project while trying to get more papers published, but funding ran out and I spent three months on the dole. It was not a nice place to be. On the strength of my academic work, I convinced the MD of a software house that I was just the person he was looking for. The combination of English language skills, teaching ability and technical competence is powerful, and it puts TechScribe in a strong position.

What is the most rewarding aspect of your work?

When customers and their clients praise my work, I get a real buzz. It's nice to know that the documentation I produce helps people get on with their work. The other thing that gives me great pleasure is when I finally understand the system, and see how all the bits fit together. It's like completing a jigsaw puzzle or crossword. And, of course, seeing a finished artefact, be it a printed manual or a piece of online help, is very rewarding.

What is the hardest aspect?

Gaining new clients — it takes a tremendous amount of time and effort.

What have been the biggest changes in the last five years?

Remote working is the biggest change as far as I'm concerned. Much of my work is for a fixed price, so there's no issue about hours worked (which you may have if you are a freelance who works through an agency). That means clients are generally quite happy for me to work away from their site.

I think another big change is the move from paper to online materials.

What do you see as the biggest changes in the next five years?

There's growing pressure to get products to market in ever shorter timescales. That will affect the kind of documentation that can be produced and it may also have a detrimental effect on its quality. On the other hand, the documentation that is produced might be qualitatively better. It's the old 80:20 rule: we focus on the small bit that most people use (and do it well), and leave the rest undocumented, for the help desk to pick up.

What do you like most?

It's like playing with Lego® all day, and then getting paid. Great!

What do you like least?

People perceive us as nerds. I think that's a harsh judgement. We must combat this by being business aware, learning how to demonstrate the value of our work in terms of cost savings and enhanced customer satisfaction.

How do you find operating as a small business in Britain?

I think there is too much confused and conflicting regulation, and the Government could be more supportive and consistent. For example, Gordon Brown suggested two years ago that sole traders should incorporate to reduce their tax bill but now he is changing the system so that small incorporated businesses 'pay the right amount of tax' (which is, of course, more). It looks like a stitch-up to me; read more at http://news.bbc.co.uk/1/hi/business/3535749.stm.

Another example is unsolicited commercial email (UCE), which has been the subject of EU regulation. Now we have guidelines under which we can legally send UCE to businesses. However, I haven't been able to find a single ISP that allows me to send UCE under the terms of the contract. So, what is the point of the bureacrats spending my tax money to define rules when contract law prevents me from sending UCE?

How would you like to see the ISTC develop?

I think the Institute needs a greater focus on business issues, faster response times and less reliance on volunteers. It must grow and reach out to more technical communicators.

Why did you upgrade to Fellow?

In a competitive market, you need an edge. It's great that I can tell potential clients I'm a Fellow — it shows that I'm serious about being the best I can be.

What might you rather do?

In my fantasy world, I would be a boat-builder (wooden craft). I really like wood — the feel, the smell. Putting it together to make a big toy would be good fun. **C**

Had enough of...

Document Review

Draft V6 Proposal No. 29289

From John D to Adam F

Paragraph 4 p 6 word 9,14,17,33,68, 43 spelling. Paragraph 4 product name excludes moD No. This applies to paragraph 7 p 13, paragraph 3 p 15, paragraph 14 p 22, paragraph 1 p 29, paragraph 4 p 43. Paragraph 4 p6 word 3,7,9,18,24,40 spelling. Paragraph 5 p 22 client name spelling? >Paragraph 4 p 27 do we have to say services are 'limited'…see what James, ed, Sophie, Julian, Mike, Charlotte, Chrissie think when they send comments; oh and let me know. P 52 data: no source for stats, applies to tables 8,9,14,15,16 (p 22,23,25). Spelling paragraph 6 p 58 words 4,9,15,16. Product data previous model number paragraph 6 page 16 >see mike re new mod and cat number. Do we have to use verdana, this is going external, refer to style guide (k:MKT_style_guide_2004.doc)….

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