

Hypergraphics for help documents

Improving the user experience
with
scalable vector graphics (SVG)

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About me

- Tech comm newbie
- Book editor ~ 10 years
(web writing, academic, legal)
- Freelancing - redrawing illustrations,
technical/scientific books
- XML for print/web > 6 years
(Docbook, DITA, XSLT/XSL-FO
stylesheets, and now SVG)
- Training workshops, conferences and seminars,
articles on XML for ebooks
- Studying tekcom first-level certificate in
technical communication
- Ancient history (>30 years) - mapping, spatial analysis,
scientific communications



Why you need to know this

- If you want more than just hypertext help docs
- If you need to produce mobile-first documents
- If you write for translation
- If you're looking for a more effective way to 'value-add' to graphics

Scalable vector graphics (SVG) is a 'lightweight' technology to produce visual help documents

How we write documents now

Technical communicators...

- Spend lots of time researching and writing text for users who have problems searching through all that text to find information

XML markup to edit

Chapter title pages are marked up using the `<chapter>` element, which is nested immediately inside the `<book>` element. Inside the `<chapter>` element you can optionally add an `<info>` element—this can contain chapter author names, and an `<abstract>` element for a chapter summary box.

Change section levels in chapter TOC. You can change the number of section levels displayed in the table of contents for a chapter page at stylesheet feature p7-370. You can use `<toc>` tags for all section headings in XML files (not `<section>` tags).

Positioning background image in an abstract. Cop-e-box lets you add a background image to the chapter summary box. A chapter summary box is marked up using the `<abstract>` element:

```
<chapter> <info> <abstract>Text in chapter summary... </abstract>
```

Immediately inside an `<abstract>` element, you can add a processing instruction that specifies an image that will appear in the background of the chapter summary box. This works for PDF books only. The processing instruction specifies:

- name of the image (directory and file name)
- width
- vertical and horizontal position.

An example processing instruction is:

```
<?dbfo bimage="images/background1.gif" bgwidth="170mm" bgposition="left 10px top 20px">
```

The beginning of the processing instruction, the letters `dbfo`, mean that the background image will appear only in PDF (or web) books. The attribute `bimage` contains the directory and file name (in quotes) of the image, the attribute `bgwidth` specifies the width of the image in any units of measurement. You can increase the `bgwidth` if you want to scale the image proportionately larger than its original size, or decrease `bgwidth` to scale it smaller.

The attribute `bgposition` specifies the horizontal and vertical position of the image. This attribute is based on the CSS3 `background-position` property. For general reference, the values you can use for this attribute are illustrated with examples at <http://www.w3.org/TR/css3-background/#background-position>.

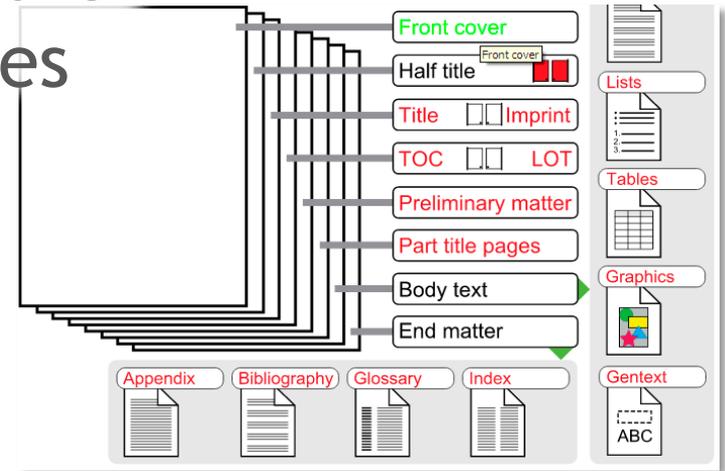
For the following example of how to specify the background positioning of an image in a chapter summary box, pixel values are used. There are two values in the `bgposition` attribute—the first value with a measurement is the horizontal (x-axis) position and the second value is the vertical (y-axis) position. In the above example, the first value is `left 10px`, which positions the image 10 pixels from the left margin of the summary box, and the second value is `top 20px`, which positions the image 20 pixels from the top margin of the box. The second value is `top 20px`, which positions the image 20 pixels from the top margin of the box. The following diagram shows how a background image is shifted relative to the margins of the chapter summary box.

PROBLEM

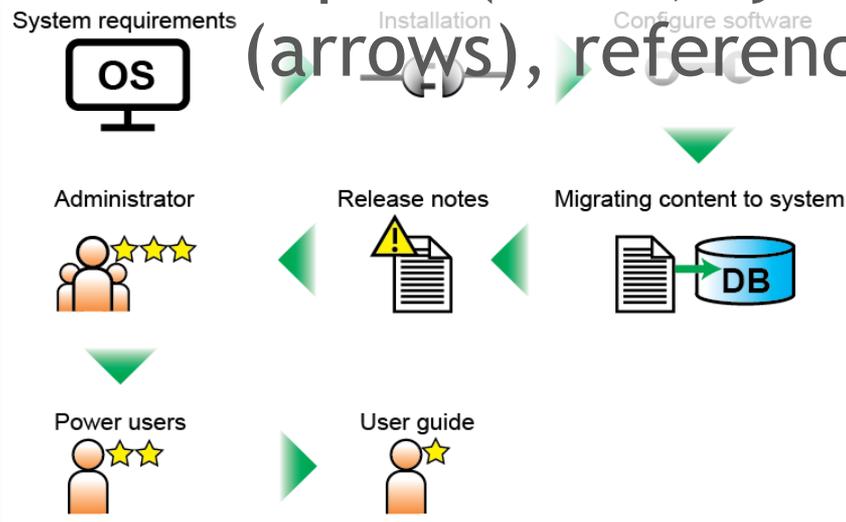
Key points (concepts, tasks) may be all that's needed > other text only provides context for key points

So... replace text with graphics

Infographics show overall structure of product components/processes



Topics (icons, symbols), tasks/procedures (arrows), reference info (links to web pages)



But...

We already do!

Conceptual diagrams show the
'big picture' of overall concepts
and procedures

How do users find information?

- TOC - document headings, subheadings, subsubheadings

- Copyright
- Introduction
- Installation
- Getting started
- Book templates
- Common styles
- Generated text (gentext)
- Front cover
- Setting up pages
- Running headers and footers**
- Preliminary matter
 - Half title pages
 - Title page
 - Imprint page
- Table of contents (TOC)
 - Change the order of book TOC
- List of titles (LOT)
 - Change the order of book LOTs
- Preface pages
- Part title page
- Chapter title page
- Section headings
- Text formats
 - Text formats for PDF
 - Text formats for EPUB and web
- Lists
- Tables
- Graphics
- Processing instructions
- End matter

Makes users think too hard

First need to navigate document structure > tap on what they want

Structure might not be task-based

PROBLEM

Why not have both?



Summary reference tables

Book formatting	Stylesheet	Style feature	
Paper type/size	p1-pagesetup.xsl	p1-5	
Page height	p1-pagesetup.xsl	p1-15	
Output double-sided pages	p1-pagesetup.xsl	p1-25	

But...

‘We need an alternative way
to display tables
on mobile devices’

Charles Cooper & Ann Rockley, STC Summit 2014

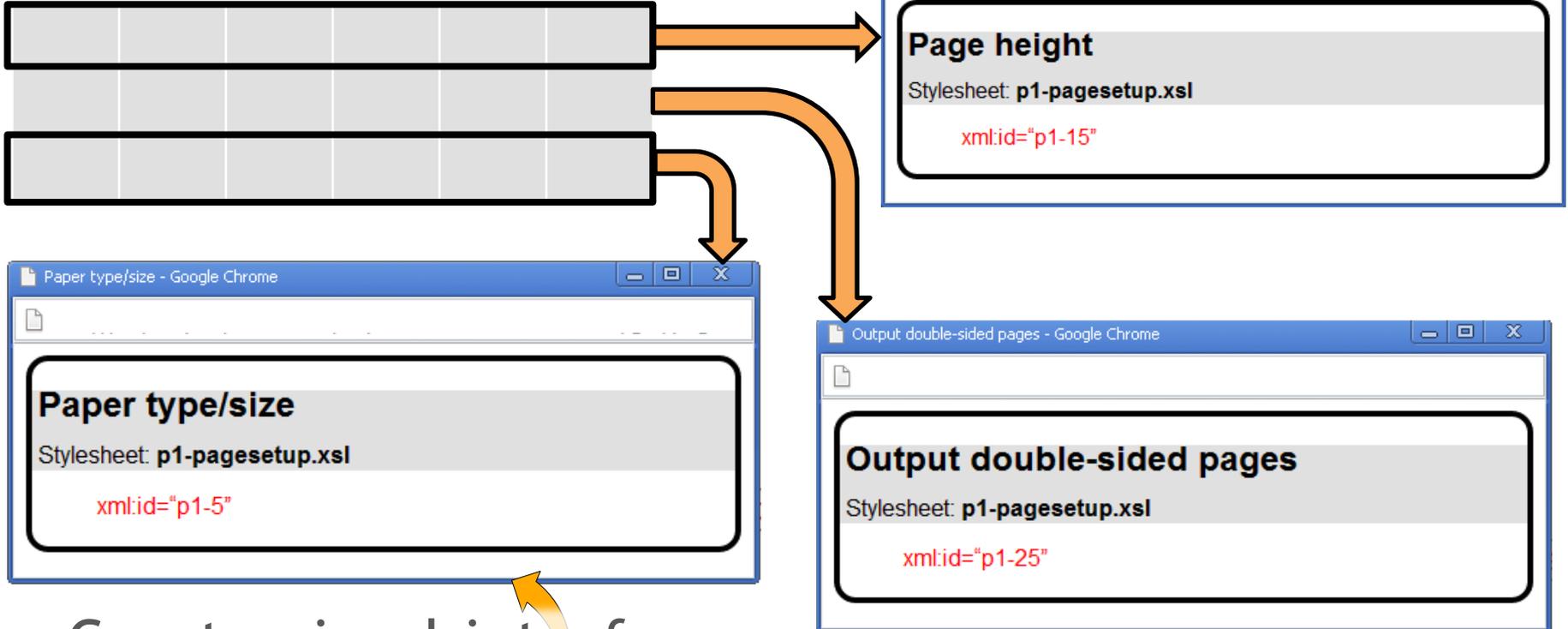
Otherwise...

Book formatting	Stylesheet	Style feature
Paper type/size	p1-pagesetup.xsl	p1-5
Page height	p1-pagesetup.xsl	p1-15
Output double-sided pages	p1-pagesetup.xsl	p1-25

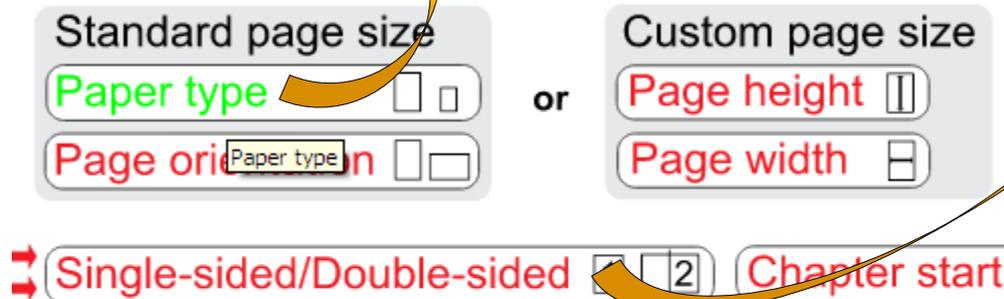
PROBLEM

Reformat tables

- Split into web topics



- Create visual interfaces



Graphics for technical documents

More pictures, fewer words

Eighteen principles for using illustrations
John Revington explores some principles for setting graphics to bridge the gap between text and images.

Design to illustrate
Adrian Williams describes how to bridge the gap between text and images.

Design decisions
Where do you start?

Images only: where is the line?
IKEA bases its assembly instructions on line drawings. In this article, Emma Bayne investigates the production of technical illustrations and gives an account of how animation is used in typical technical illustration workflows.

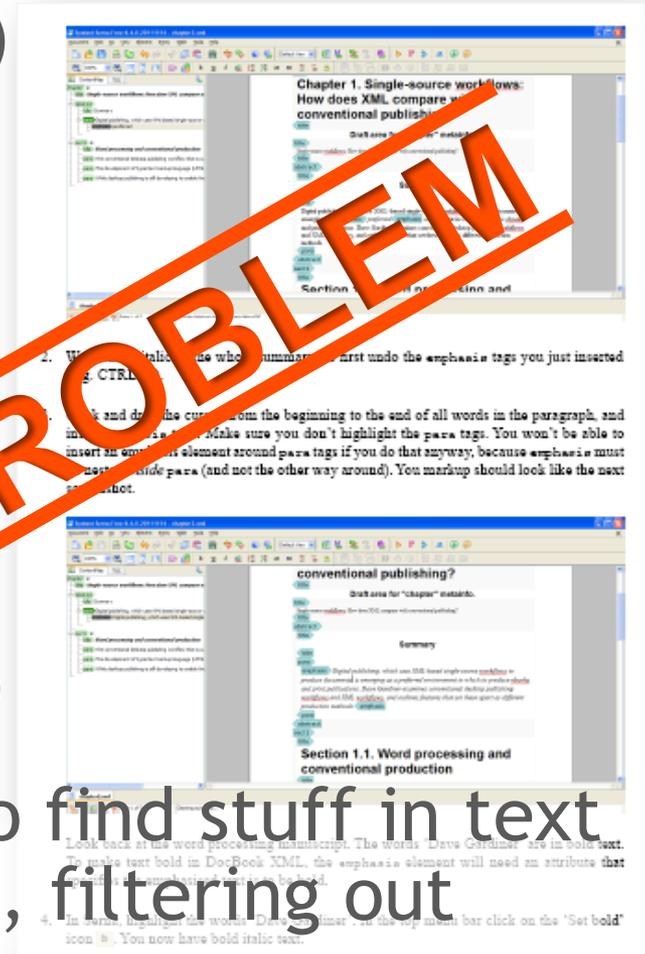
Creating good illustrations
Sue Rigby and Elise B. Translations, discusses the importance of good illustrations.

Turning photographs into illustrations
Bert Witsmeer describes how to use the phototrace technique to create illustrations in Arbortext IsoDraw/CADprocess.

(Article titles reproduced from *Communicator* journal with permission)

But...

- Graphics still *supplement* text - they don't *replace* text (e.g. screenshots)
- Effort to conceptualise and draw illustrations > still designed for passive viewing (not much interactivity)
- Graphics designed for print documents/pages (physical size limits, legibility)
- Users still need to work hard to find stuff in text (barriers - document structure, filtering out unwanted text)



Why use hypergraphics?

For users

- Remember well-designed visuals more readily than words
- Learn more easily, find information faster
- Interactivity is intuitive, fun and engaging for a good user experience (UX)

For technical communicators

- Visual interfaces are suited to mobile-first design
- Concepts and tasks may be easier to draw/sketch than to write
- If you produce web documents, you can produce SVG hypergraphics (part of HTML5)

How to use cop-e-box

Cop-e-box comprises:

- User's Guide** (/userguide/index.html)
An overview of XML publishing and how to use stylesheet features
1. Read this first to learn about XML publishing
- XML templates** (/xml/booktemplate.xml)
A complete book with examples of XML markup that matches features in the cop-e-box stylesheets
2. Create markup for your book using the templates
- Stylesheet Guide** (/gui/copebook.svg)
A visual overview of stylesheet features to set up PDF, EPUB and web document styles
3. Find out what features to set up in the stylesheets

1 Select a menu tab to find typesetting features for PDF, EPUB and web page

2 Use browser controls to zoom in and see more

3 Select text or graphics in the popup window tells the stylesheet name and the

Home page
Help (this page)
Web colour picker
PDF features
EPUB features
Web features

XSLT (/xml/stylesheets/)

Right Stylesheet xml:id

Screenshot hotspots

- SVG with CSS to control ‘mouse over’ events, visibility of text and hyperlinking
- Change the appearance of overlays/annotations ‘on the fly’

Name of feature: **DITA maps manager**

The screenshot displays the XML Editor interface with several key components highlighted by red boxes:

- Top Toolbar:** A red box highlights the 'Saxon-EE' dropdown menu.
- Left Panel:** A red box highlights the 'DITA Maps Manager' panel, which lists various actions like 'Commenting', 'Styling graphics', and 'Adding images'. A callout box labeled 'DITA maps manager' points to this panel.
- Bottom Left:** A red box highlights the 'Outline' panel, showing a tree view of the document structure with a search filter.
- Right Panel:** A red box highlights the 'Attributes' and 'Entities' panels, which are currently empty tables.
- Main Editor:** The central area shows XML code with a visual tree view overlay. A red box highlights the 'XPath 2.0' toolbar above the editor.

The XML code visible in the editor includes:

```
<imgdata fileref="images/worldmap.jpg" align="center" format="JPEG" width="700" />  
<imageobject> <textobject> phrase </textobject> Alternate text for the image in XHTML file </phrase> </textobject>  
<mediaobject> <sidebar>  
<para> indexterm { <indexterm> primary </indexterm> } footnotes { <primary> </primary> <secondary> bottom of page </secondary> <tertiary> how to generate </tertiary> } </indexterm> <indexterm { <indexterm> primary </indexterm> } footnotes { <primary> </primary> <secondary> bottom of page </secondary> <tertiary> wrapping text </tertiary> } </indexterm> This paragraph introduces how to generate footnotes at the bottom of pages. The first footnote  
<footnote> Footnote:  
<para> This is the text for the first footnote. You can set the styles of the separator line at features p9-525 to p9-545.  
<para> </footnote>  
is short and occurs within a sentence so you can modify the spacing before and after the footnote number. The second footnote is much longer, so you can experiment with different formatting styles to wrap text under the footnote number. You can also change the size of the footnote numbers at the bottom of the page at feature p9-465 (either as a superscript or normal first size).
```

Web app documents

- Online help document links to interactive visual procedures

Text formats for PDF

- general features for body text—font flow, typefaces, font sizes, font colour, first-line indent of paragraph, paragraph spacing
- block quotes—title, text, margins, padding
- book component titles—space before, text styles
- book component subtitles—space before, text styles, margins
- endnotes—convert footnotes to endnotes, title
- footnotes—numbers in body text, numbers at end of page, separator line
- highlighted text
- hyperlinks—display web address, colour and underline
- shaded paragraphs—background colour, text colour, margins, padding
- shade-and-border paragraphs—background colour, text colour, borders, margins, padding
- border paragraphs—text colour, borders, margins, padding
- sidebars—box, borders, margins, padding, title, text.

XML markup to edit

Linking to websites. You add a hyperlink to a website from any text in a document using the <link> element. The text inside the <link> element does not need to be a web address—it can be a description of a web address. The attribute `xlink:href` defines the full web address. For example:

```
<link xlink:href="http://www.mywebsite.com">Text describing mywebsite</link>
```

Hyphenation

Left margin of body text... Body text styles ...right margin of body text

Monotype styles Hyphen-ation Body text flow in multi-column layout

First-line indent of paragraphs Display hyphenation in body text

Block quotes

Title of block quote

Text for block quote...

Attribution for block quote

Emphasised text

Highlighted body text.

Hyperlink [web address] and colour

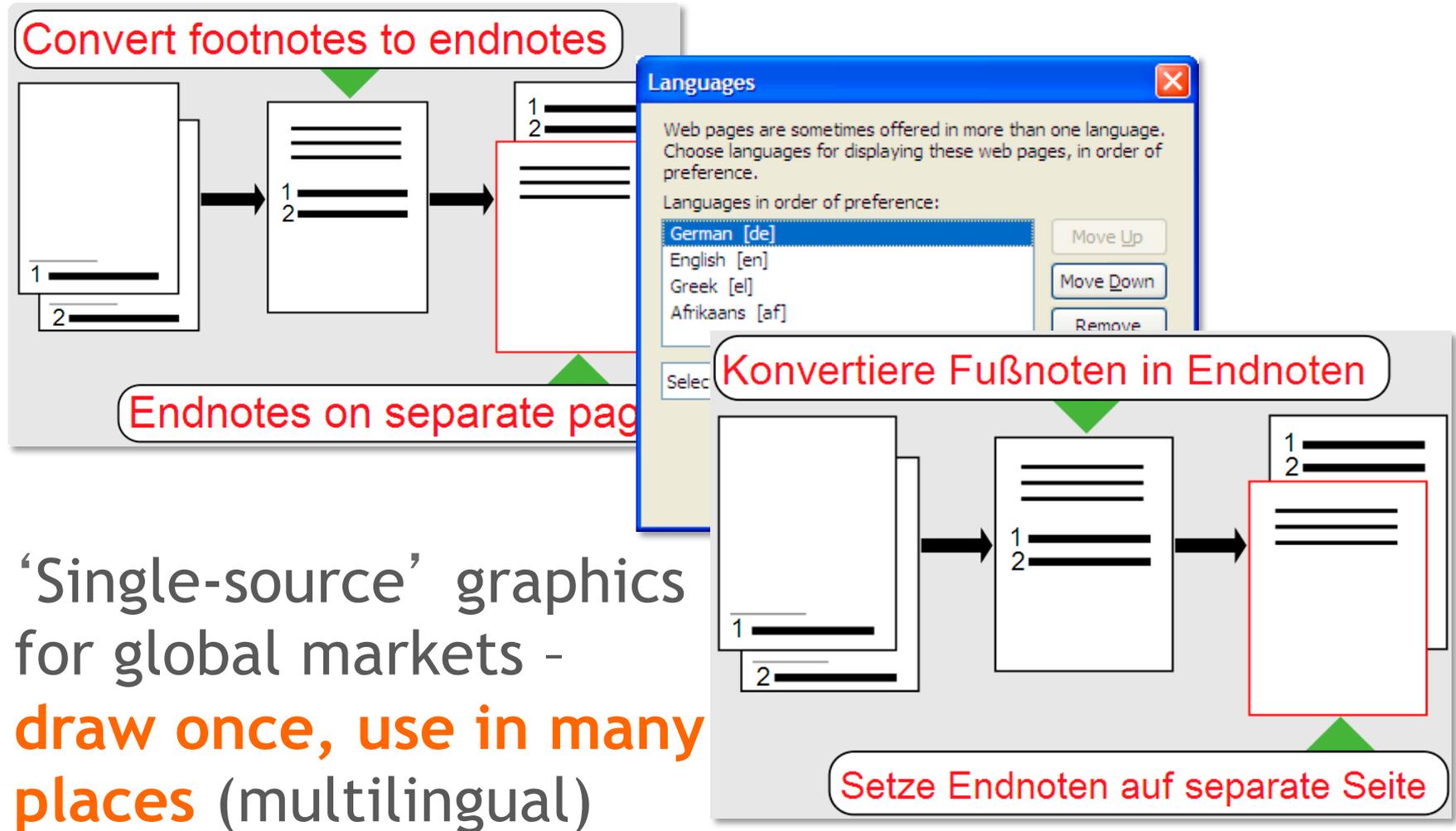
Email address

Punctuation for quotation and quotation within quotation in text.

- HTML 'a href' & 'target' links from:
 - > text to hypergraphics
 - > hypergraphics to text

Translation / localisation

- SVG <switch> element changes language based on a user's browser settings



- 'Single-source' graphics for global markets - **draw once, use in many places** (multilingual)

Video e-learning

- Embedded video player in SVG - MP4, MPEG, WMV, MOV...

The screenshot shows a browser window with the address bar displaying `file:///C:/xmplar/SVG-tests/video-test/process.svg`. The main content area contains a workflow diagram and a video player. The diagram is a 4x4 grid of task boxes. A red path highlights a sequence of tasks: Stage 1a, Stage 2b, Stage 3d, and Stage 4c. A green box on the left labeled 'Start of process' has arrows pointing to the first column of tasks. Below the diagram are two legends: 'Workflow activities' and 'Responsibilities'. The video player on the right shows a Windows desktop with a file explorer window open, and a progress bar at the bottom indicates 0:55.

Workflow activities

- ① [Workflow 1: Startup tasks](#)
- ② [Workflow 2: Pre-operational monitoring](#)
- ③ [Workflow 3: Operations](#)
- ④ [Workflow 4: Shutdown](#)

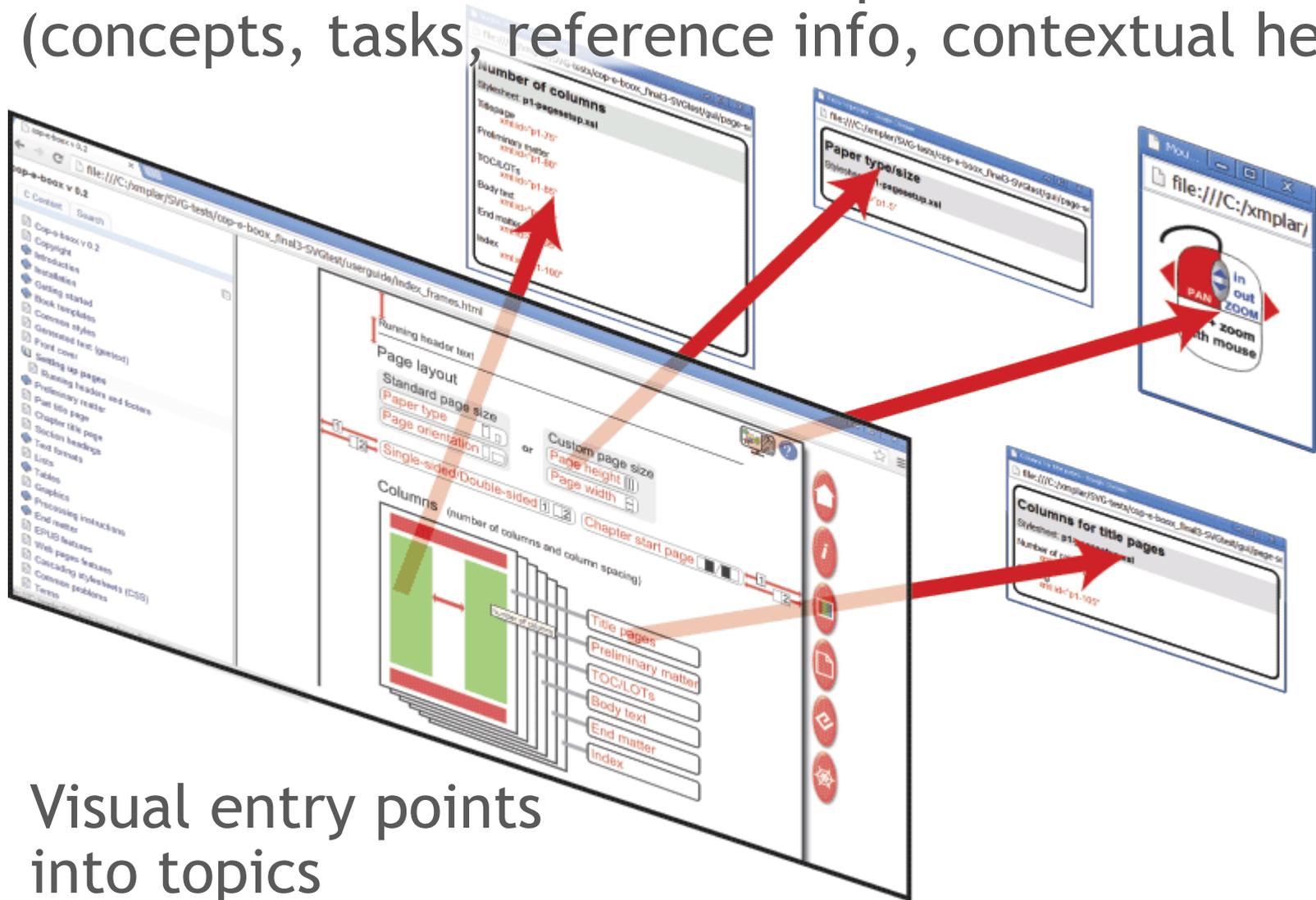
Responsibilities

- All staff
- Operations managers
- Contractors
- Administration staff

- Video supplements interactive visual instructions in same browser page/file

Visual-first document structure

Stand-alone topics
(concepts, tasks, reference info, contextual help)



Visual entry points
into topics

Practitioner's takeaway

Pictures you can poke a stick at

- Hypergraphics lead users to information they can dip into for an **interactive, engaging user experience (UX)** that is fast, fun and makes learning easy

Draw once, use in many places

- SVG markup creates **single-source graphics** that are 'value-added' for translation

Works for the web

- Hypergraphics integrate with HTML5, CSS3 and JavaScript, can include rich media that **work like web pages**



Questions?



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svgdocs.net